



**SAM project**  
Global Competencies

Student Mobility through international multidisciplinary project based learning

# Southeast Asian Mobility for 21st century skills





# *Southeast Asian Mobility for 21<sup>st</sup> Century Skills*



*Building  
Future  
Leaders*



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA



# **Southeast Asian Mobility (SAM) for 21<sup>st</sup> Century Skills**

**Funded by**

**Universiti Teknologi Malaysia,**

**Universitas Negeri Jakarta,**

**King Mongkut's University of Technology Thonburi and**

**University Mobility in Asia and the Pacific (UMAP)**

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# Contents

	Page
Prologue	4
List of all staff and participants	5
<b>SAM Participants' Photo</b>	9
<b>Overview of SAM for 21<sup>st</sup> Century Skills</b>	23
<b>1<sup>st</sup> Phase Activities in Malaysia</b>	31
<b>2<sup>nd</sup> Phase Activities in Thailand</b>	47
<b>3<sup>rd</sup> Phase Activities in Indonesia</b>	55
<b>The Scrapbook Project</b>	73
• FOODFIT	75
• FRT (Foldable-Resizable Table)	83
• ALLOY	97
• SAMAZING	109
• BIOPLASTIC & SMART CUSTOMER APP	114
• MABA Apps	123
• INFINITY	128
• SAKO	146
• YUMMY Apps	153
• 4-Tune	159
Epilogue	177

# Prologue



This record is the students' projects and their reflections on the activities and training programs for the Southeast Asian Mobility (SAM) for 21<sup>st</sup> Century Skills: 3 phases in Malaysia, Thailand and Indonesia in 2017. Students had to do the design thinking in the first phase, make their projects' realization through modeling in the second phase and finally create the business in the third phase. Not only science and engineering contents, but also the project aims to enhance the students' 21<sup>st</sup> century skills. Hope that the students' ideas of their products and reflections from the training would not only benefit themselves but also inspires the readers of how important of program to enhance their soft skills. Hope you enjoy reading the students' journal and realize how students enjoyed their works during the program.

Editor  
November 2017

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Karima Fachrani Putri	Dwi Ayu Oktaviani
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Jatuporn Saetang

Prompron Poonpraseart

Nutchapol Jeerawattana

Warochar Wanna

Mata fongfoung

Sirapop Nuannimnoi

Ratchanon Kulchanimit

Warunyou Niminram

Weerit Danboonruang

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# SAM PARTICIPANTS' PHOTO





## SAM participants' Photo



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# SAM project

Global Competencies

# OVERVIEW of SAM for 21st Century Skills





# Overview

Adapted from the book series “A Step toward Internationalization” published by Faculty of Science  
KMUTT

The Main purpose of SAM project can be divided into four objectives as follows:

- 1** *To identify elements in team dynamics* that contribute to better collaborative works among cross-cultural teams.
- 2** *To identify which 21<sup>st</sup> century skills could be developed* among the students according to this cross-cultural program.
- 3** *To identify similarities between different cultures* that can bring a team together.
- 4** *To suggest a method/framework/policies* to enhance global competencies among student from different nationalities.

As the project objectives, various activity approaches are intentionally designed into three phases. In each phase will focus on different activities, different working sites, and different purposes as picture below:



Phase	Details
<b>1</b>	<p><b><u>Activity in Malaysia: Design Thinking and Team working</u></b></p> <p>All students will be introduced and learn about “Design Thinking and Teamworking” and will include minutes of meeting, notes from design thinking exercise and design sketch.</p>
<b>2</b>	<p><b><u>Activity in Thailand: Technical Engineering</u></b></p> <p>All students will learn how to use Internet of Things (IoT) sensors, transducers, and simple sensors. Assignment for this includes basic prototypes according to design in 1<sup>st</sup> Phase.</p>
<b>3</b>	<p><b><u>Activity in Indonesia: Project Management, Communication, Prototype Completion and Presentation</u></b></p> <p>All students will learn about tools and methods for good project management and best practice for communication. This phase will be the time for completing the prototype and prepare for presentation.</p>

This 1<sup>st</sup> phase in Malaysia was the first time that all students could meet to each other under workshop of “Design Thinking and Team working”. These activities were held within Universiti Teknologi Malaysia (UTM) at the Centre for Student Innovation from 10 to 12 March 2017. All Participants would experience a step by step process focusing on customer centric design process to ensure solution proposed fits the customer requirements. Teamworking and Thinking skills was also embedded in this module to strengthen important 21<sup>st</sup> century skills among the participants.

This workshop brought all participants all around the world who had the similar passion to work together. As a result of this workshop, the “**Southeast Asian Mobility for 21<sup>st</sup> Century Skills Project**” was substantially happened by collaboration among three university partners; Malaysia, Thailand, and Indonesia.



SAM for 21<sup>st</sup> century skills project was led by Dr.Fauzan (Malaysia) as the Principal Investigator of the project; in the meantime, Dr.Tula (Thailand) and Dr.Yuli (Indonesia) are the vital contributors to sharpen and fulfill this project completely by getting partial budget reinforcement from University Mobility in Asia and the Pacific (UMAP). All in all, this long-term project aims to improve 21<sup>st</sup> century skills through using the various types of media both of online and offline activities as project collaborative works, design thinking, and other trainings in order to identify which 21<sup>st</sup> century skills could be developed among the students according to this cross-cultural program.

Based on 21<sup>st</sup> century skills' development, the interesting research questions were “**What are the critical factors?**” and “**How are the procedures?**” to improve 21<sup>st</sup> century skills through student mobility activities across countries and multi-cultural teamworking.

To understand how team dynamics works in a multicultural setup, the whole program schedule was therefore designed based on the multicultural elements. The project is divided into three phases and in between each phase students will need to complete an assignment including peer assessment within teams. The three phases are as table below.

**Whole activities' schedule of SAM project**

<b>Date</b>	<b>Activities</b>
September 2016	Discussion about the implementation plan
September 2016	Research objective and plans presented at the UMAP Board Meeting
Sep 2016 - Jan 2017	Promotion of the program
March 2017	1st Training in Malaysia
March 2017	Interim research outcome presented at APAIE 2017
May 2017	2nd Training in Thailand
May - June 2017	Online phase: Students remotely works on specific projects.
July/August 2017	3rd Training in Indonesia
August 2017	Complete the final report
November 2017	Submit the final report to UMAP
March/April 2018	Final report delivered at the UMAP Board Meeting



# Southeast Asian Mobility for 21<sup>st</sup> Century Skills

Registration  
**WEBSITE**  
& More Information



www.utm.my/sam21

This program will provide students with the opportunities to meet new people from different cultures, exchange ideas and viewpoints, gather new insight on the most relevant skills required for the 21st century. Students will experience design thinking, team working, critical thinking, communication, management, presentation, and use of modern technologies.

Selected Students will be supported by the program.

## Student Qualifications

- Student must be in Bachelor's degree
- CGPA must be greater than 2.5
- Ability to communicate in English
- Confidence and eager to learn new things
- Eligible Participants : UTM, KMUTT, and UNJ

## Great Chance for joining the program

- Working in group with students from different countries.
- Learning & Training through multidiscipline field of study
- Being able to get the important global competencies

## Program's Flow



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# 1st PHASE ACTIVITIES in MALAYSIA





## **DAY ZERO** (Friday > 10 March 2017)



Dr.Yuri's students from Universitas Negeri Jakarta (UNJ), Indonesia, prepared to take flight from the airport in Jakarta to Senai Airport, Johor Bahru, Malaysia, in order to join SAM project at UTM.



Dr.Parinya & Dr.Tula including all Thai students from KMUTT prepared to take flight from Don Mueang Airport to Changi Airport, Singapore, in order to join SAM project in UTM.



Mata and Albert, two of Thai students, took their photo in front of the international departures area. They thought they looked fantastically handsome.



After arriving in Singapore, Dr.Tula and our students bought tickets to travel by LRT (Light Rail Transit) to Jurong East in order to cross to Malaysia through immigration office near Oakland.



## DAY ZERO (Friday > 10 March 2017)



We had lunch at Changi Airport, Singapore. It's pretty nice, delicious and cheap because I got staff price. I don't know why I got that price maybe I looked like employee of the Airport.



Thai students seemed to be ready on the way to Singapore. They were very sure that they would arrive at Johor Bahru City Square fast and go shopping. However, what happened was that...



After we passed the Singapore immigration, we need to wait for the bus number 170 to go to Malaysia, OMG!!!! so much people waiting for bus more than 5000 people thought.



After three hours at immigration office in Singapore and thirty minutes at the bus stop, we finally arrived at Johor Bahru Sentral. Dr. Frauzan from UTM came to pick us up.



**DAY ONE** (Saturday > 11 March 2017)



**“First Group Photo”**

First time that all Thai students and Indonesia students took a group photo together in front of UTM dormitory. We were waiting for the bus to go to Kolej Tun Canselor (KTC).



Metha a.k.a. Mata Fongfong and James introduced themselves to their new friends from Indonesia. They looked glad to meet them.



James, Thai student, made a conversation with his group members and also exchanged e-mail address to keep in touch to each other. This is the chance to improve English and make friends.



Jarb, our second year student from Physics and prospective exchange student at TUAT, was very talkative with her new international friends.



## DAY ONE (Saturday > 11 March 2017)



Our students (Oat) introduced himself to everyone in this program, and mentioned “**One Word**” to describe each of their feelings for the beginning of this workshop. SAM program had just been officially started.



A mysterious student from Indonesia was introducing herself to the fellow participates of the SAM for 21st Century Skills. She looked friendly and funny but we forgot her name anyway :-)



“*Word from Everyone*” in first day workshop, every student had to introduce themselves and said one word for this program. The word that I said was “interesting.”



We were writing about expectation of SAM21st program. Most of students wrote around 1 small page and sent it to Malaysia staff. They wanted to know what the expectation of each one was.



## DAY ONE (Saturday > 11 March 2017)



Dr.Tula gave his speech for the beginning of this program. It was a pride of KMUTT students to see Dr.Tula's English proficiency today. This could not be seen often by students.



Dr.Tula began the first ice-breaking activity. Students from three universities were assigned to count numbers. It sounded easy but in fact, it might be beyond your imagination.



All members in my group tried to communicate to each other and seriously discussed regarding appropriate definition of 21st century skills' keywords.



I enjoyed talking with friends in my group. They were very intent on expressing their ideas and opinions, and also asked the reasons of each other. Sometimes I did not understand, but I often answered that "*I think so*". lol



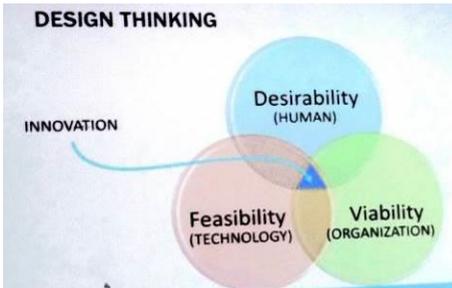
## DAY ONE (Saturday > 11 March 2017)

Definitions	
Work experience	work experience is an individual
Adaptability	Power or capacity that adjust / fit into new / different environment
Creative problem-solving	Ability to generate ideas or solutions to solve a problem or create something new
Leadership skills	Power that is given to manage and lead others in a group
Strategic thinking	Ability to think about the future and make decisions based on long-term goals
Communications skills	Ability to communicate with others in a clear and effective way
Analytical thinking	Ability to analyze a problem and find a solution
Work collaboratively	Ability to work together with others to achieve a common goal
Motivation / Drive	Reasons that cause someone to do something
Quantitative skills	Skills that involve numbers and statistics
Entrepreneurship	Ability to create a business idea and turn it into a reality
Global mindset	Ability to understand and appreciate different cultures and perspectives
Decision making	Ability to choose between different options and take action
Risk-taking	Ability to take chances and try new things

The professor gave this paper to us to find the definition for each word. For example, the word was “Work Experience” then we discussed about the definition of working experience in our group. This was the first activity that led us to talk in our group.



This lecture Dr.Fauzan gave us the scope ideas of “Design Thinking” and “Innovation Process” before all of us doing survey. We were interested and excited about it.



Our first lesson of the first phase in Malaysia was taught by Dr.Fauzan about “Design Thinking”. It seemed easy, but I found that it is quite difficult for every student to understand.



This was the first welcome meal at UTM. Everybody was so happy with Malaysian food. After this astonishing meal, everybody also seemed to forget what they had to do next.



**DAY ONE** (Saturday > 11 March 2017)



We went out to cafeteria for asking people who were having lunch there about problem of the cafeteria in order to collect all data to do the design thinking project.



This workshop assigned every group to interview students of UTM about cafeteria service. The weather was so hot, but we had to gather information as much as possible.



Amp, the most beautiful girl !!!!!!! from KMUTT (Thailand), with her friends were seriously trying to interview a group of UTM students on the way.



After interview section, we got a lot of information from the real users, so we have to extract raw data, categorize ideas, exchange ideas, and also discuss a lot with our international friends.



## DAY ONE (Saturday > 11 March 2017)



Group discussion about technical and academic content to identify “*Design Statement*” among my international friends absolutely challenged my English skill. I think this can improve my English.



For this stage, all groups have to write down the extracted information from the real target users consisted of user profile, needs, and pain points to create “*Design Statement*” at the end.



Film, the only senior student of KMUTT and a former exchange student of UTM, was working on brainstorming session with his group. They worked so hard until they got the final idea.



PERSONIFICATION	
<p><b>PROFILE</b></p> <ul style="list-style-type: none"> <li>• Age: 30+</li> <li>• Very busy career man</li> <li>• Very ambitious at work</li> <li>• Highly educated in his profession</li> <li>• Spending a lot of time on work &amp; family</li> <li>• Less interested in taking sports (physical activities)</li> <li>• Imbalance between career, family and physical activities</li> <li>• Priority on job with endless tasks</li> </ul>	<p><b>Super John</b></p> 
<p><b>NEEDS</b></p> <ul style="list-style-type: none"> <li>• Group motivation - group with same skills level, good coach / leader</li> <li>• Easily accessible sport facilities and health support system - save time and hassle free</li> <li>• Monitoring health progress - good tracking system</li> </ul>	<p><b>PAIN POINTS</b></p> <ul style="list-style-type: none"> <li>• Unfit physically; tired and body pain</li> <li>• Forced to join organization sport activities</li> </ul>

After interviewing Malaysian users about opinion of the cafeteria, we had to conclude all information and create the personification of target users.



**DAY ONE** (Saturday > 11 March 2017)



All groups had to play games created by Dr.Tula. It was a pretty complex mathematics. Each person would get a hint card, then read it, explain it, and finally find the correct answer.



Film and his team were thinking for the answer of mysterious game. This game seemed to be very difficult for every group. However, there were two winners when the time was up.



Thai students from KMUTT were having fun after first long day workshop. We went out to Sultan Abu Bakar State Mosque and see around the city by UTM bus.



Everyone tried to act like super model!!! in front of this beautiful palace. I thought that I was so cute in this picture. Everyone from different cultures finally could be unexpected familiar.



## DAY ONE (Saturday > 11 March 2017)



Thai boys, who joined this program, were showing their handsome. Everyone in this world think so. Don't you think so? Look at this picture and you will think that ... :-)



A group photo was taken by Amp. The end of the first day workshop came. Every student in this program enjoyed the beautiful view of sunset at Dataran Bandaraya before the dinner and Johor Bahru City Tour.



We went to dinner at Dataran Bandaraya. Foods and snacks of Malaysian were very different from Thai and had a little spicy taste.



All students looked so happy and energetic at this local night market in Johor Bahru city. It could make everyone astonished with different styles of products from different cultures.



**DAY TWO** (Sunday > 12 March 2017)



James, Thai student, challenged himself to play this exciting rotating machine. It can turn human body in every angles depended on the rotating force.



First activity on second day was started with students' understanding evaluation through online questionnaires. Everyone had to answer all questions by using their mobile phone.



This activity was very funny because we had to translate English word to our language and teach others in our group. Meanwhile, we also had to remember the words from other languages to answer the question.



Pleng, a former exchange student at Konkuk University was presenting her group's data of personification to Dr. Fauzan. She looked so fluent in English presentation.



## DAY TWO (Sunday > 12 March 2017)



Although we had different ideas, but everyone intimately shared their ideas with others by using post-it in order to analyze data for summarizing the best solution.



The brainstorming under the topic “How to improve the cafeteria” by writing the ideas in the paper and stick it to the board, I think it is an effective ways to create many ideas as they want without anybody disturb others.



Everyone in my group was intent on working. They helped to write the project and tried to present their own opinions. This showed that the SAM project was also practicing to work with others.



At the end of second day workshop, some selected students were individually interviewed about their feeling and gained skills from activities in these two days.



**DAY TWO** (Sunday > 12 March 2017)



Metha, Thai student, who was not so good in English but he got a chance from his group to present the project. Finally, he could do it very well because of his sense of humor to entertain people.



This was the cultural show from Thai students from only 30 mins practicing before the show began. It could present the traditional festival combined with the dance from northeast of Thailand.



It was the ending pose of Thai students' cultural show. There was a small technical sound mistake at the end of the song!!!, but all Thai students still posed their postures professionally.



This cultural show from Indonesian students was a tradition dance. It's called "Tari Saman" or "Saman Dance". It was the first time for many Thai students to watch this show. We were really impressed about this.



## DAY TWO (Sunday > 12 March 2017)



The show from Indonesian friends, they were singing and dancing with energetic movements. We thought that Indonesian language was the most beautiful language.



Finally, we came to the end of workshop in phase one of SAM. All Thai students, teachers, Dr. Fauzan, and Dr. Yuli were joyfully taken photo together.



This group photo included all participants and teachers from 3 countries. We are all very thankful for all teachers to make the very good program and give us an opportunity to join.



Eventually, all of us were back safely and happily to Don Mueang airport Thailand, and we were very pleased to invite others to join SAM program with us second phase in Thailand.

**SAM project**

Global Competencies

# 2<sup>nd</sup> PHASE ACTIVITIES in THAILAND





**DAY ZERO - ONE** (Friday - Saturday > 19-20 May 2017)



*“On the way to Don Muang Airport”* The traffic did allow us to pick up our friends on time, even though there are some unexpected incidents occurred as usual. 😊



*“At the Airport”*

Kim picked up a group of Malaysian friends at the airport. At last, we had met again. Let's take the first selfie of the trip.



*“Khlong Lat Pho”*

The first stop for educational trip was Khlong Lat Pho Flood Gate initiated by our beloved King Rama IX.



*“Bangnamphung Floating Market”*

Since we didn't have much time, we started the first morning trip on Saturday May 20 at Bangnamphung Floating Market.



## DAY ONE (Saturday > 20 May 2017)



Various consumer products, both local and non-local, can be found at this market. Inevitably, students were assigned to take one photo for the show and share session in the afternoon.



There were plenty of stuffs which were represented local lifestyle and culture of people living in the vicinity at the market for this reason lots of people visiting this weekend market.



Pro, our Thai student, seemed to enjoy so much with a large number of foodstuff along the way. Look Carefully! Someone hand him something to eat. Wonderful Offer!!!!



Not only the students but also our staff (Khun Nan & Khun Navanit) seemed to enjoy shopping a lot of local souvenirs and having local food for their snack in the lovely morning.



**DAY ONE** (Saturday > 20 May 2017)



Dean Thiradet came to give an opening speech for all participants of SAM for 21<sup>st</sup> Century Skills at Science Connect, Faculty of Science, KMUTT.



Small gifts were given to our guests, Dr. Fauzan UTM and Dr. Yuli UNJ, with the intimate atmosphere before the semiformal afternoon activities started.



Metha proudly started the show and share session with his funny gestures. Guess what photo he took. Look at the screen. It is the famous Thai wisdom toy which can create frog sound by spinning



Nice photo shot! Everyone felt excited with the new atmosphere for SAM 2<sup>nd</sup> phase in Thailand. Look at a lovely grin on their face.



## DAY ONE - TWO (Saturday - Sunday > 20 - 21 May 2017)



Dr. Fauzan briefly let the students know what to do in this phase. Students would be able to choose 1) App programming or 2) Prototype of their projects.



Dr. Chumphon, a special guest from department of Physics, KMUTT, was giving a short talk for the students in the topics of LabVIEW programming.



Students got into group and continue on the project from the last phase which had seriously designed in Malaysia. Afiqu! Don't close your eyes while taking photo.



After long hours, the prototype of Foldable Resizable Table (FRT) was intentionally completed. Let's see if the Arduino programming work correctly or not. ;-)



**DAY TWO** (Sunday > 21 May 2017)



This was the part of the communication game. Dr. Fauzan told a story to Film and let Film tell the story to the next person and so on. We would see how the story distorts from person to person.



Ploy was laughing so hard. You would probably know that the story Dr. Fauzan told Film changed drastically when students retold the story.



Before ending this phase, students took their work to show their friends in front of the class. “Here is how it work, Combine Space Chair (CSC).”



Where were they pointing at? It’s Kim, the project manager for this phase. He had done lots of things to get the project run smoothly.



**SAM project**  
Global Competencies

# 3<sup>rd</sup> PHASE ACTIVITIES in INDONESIA



## DAY ZERO (Friday > 25 August 2017)



All of students gathered at KMUTT then went to Donmuang airport by a van. They all were very excited in joining Southeast Asian Mobility for 21<sup>st</sup> Century Skills (SAM21) phase 3 in Indonesia.



An hour later, we reached Donmuang airport. We took a group photo before flying.



Amp and Ploy, two of Thai students, took their photo in front of the Memories Don Mueang International Airport area. They looked cute and cheerful.



4 hours later, we arrived Jakarta, Indonesia. We were welcomed heartwarmingly by Universitas Negeri Jakarta (UNJ).





An hour later, headed to the Maxone hotel provided by UNJ.



Before the students went to relax in provided rooms, we had a dinner at Jl. J.A. Suprpto II No.75. The food were very tasty and inexpensive.



### **DAY ONE (Saturday > 26 August 2017)**



Spending only 10 minutes, Dr.Parinya and students reached Universitas Negeri Jakarta (UNJ) and started to do the planned activities



Dr.Achmad Ridwan, vice rector for planning and cooperation affairs gave a speech to officially open SAM21. After that, He gave the Trophy for Dr.Tula Jutarosaga.





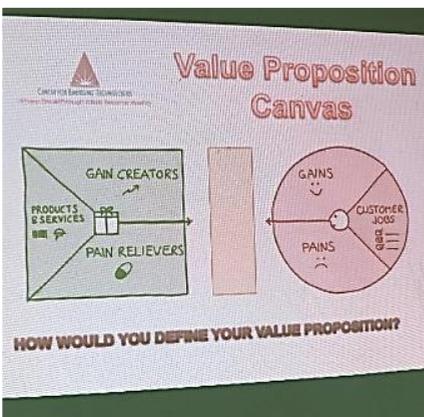
Dr. Achmad Ridwan also gave souvenir to Dr. Fauzan Khair Bin Che Harun, a professor from University Technology Malaysia (UTM)



We played ice breaking in the first activity. It is the mathematical calculations, which made familiarity and good performance.



Later on, we all played the game called answering the quick questions which was hosted by Dr. Fauzan. The winner was group 6 which one of the member was James, Thai student.



Business Model Canvas (BMC) in 3<sup>rd</sup> phase continued from the phase 2. This activity was about marketing plans. The circle was customers' idea: "How it worked?", "What is gains&pains "?and "What is customer jobs?" The square was producer's idea such as gain creators, pain relievers and product services.





This group were brainstorming. One student was from Thailand names Paulo. He was enthusiastically worked with his teammates.



Dr.Fauzan gave advices to students about customer job, gains and pains that “If you were customer, how did you think?”



Dr.Parinya also gave advices to students who had presented their inventions.



Albert as, a group leader, was laughing and smiling with his members.



This group was led by Ploy, KMUTT student seemed very serious. Ploy did a good job as a leader.





There was an activity after having lunch. Each group helped each other writing their ideas on the provided board.



Dr.Tula visited each group as an advisor



Team no.4 was firstly finished the activity. It was the first time of Khun (Thai student) to join SAM21. He made a good job.



After that, all Thai students went to famous night market which were guided by Indonesian students



After brainstorming all day, UNJ student volunteered to take us to shopping at Jakarta market and ate traditional food





This is a national monument called Monas which symbolizes the fight for Indonesia.



This photo is taken before going back to the hotel.



## DAY TWO (Sunday > 27 August 2017)



Dr.Tula, Dr.Parinya and all Thai students wore Thai national clothes, and took group shots to keep these as the memory.



In the second day morning, each group presented their poster, by choosing a member to be a presenter (James is presenting his project.)





This is the complete poster of Albert's group.



In the evening, there were cultural shows. Before the show began, we had to answer Dr.Fauzan's question. Everybody looked so excited with the upcoming answers.



All of Thai students were getting ready for their cultural show. They rehearsed, and memorize their own role.



KMUTT's student show was emancipated slaves. There were ballad singing which they could make it impressively.



The singing shows from UTM students, everyone sang very melodious.





The danced shows from UNJ, Indonesia. It was a dance to the beat step out in full show that all actors rehearse well



After the show, all actors and actress took group shots with their teacher, and their teacher looked very proud of them.



If making little heart with your hands is a fashionable thing to do when you take pictures, so, in Thai style, “wai” is this the best posture to act.



Later, it was the moment of giving the certificate to the students who participated in our SAM student's activity. Ploy smiled happily at the show.





Dr.Tula and Dr.Parinya attended the photo congratulations to their students. And then, everyone keep bag went to Bandung.



Tonight we will sleep at Bandung at 15 degrees Celsius. Before everyone went to bed, joined to roast corn, played word guessing game from a gesture, told horror story, and reflect feeling.



### DAY THREE (Monday > 28 August 2017)



In the morning, in Bandung, warmly sunshine gave us some energy to do activities.



First activity, each team had to compose their own song and think of their styles. This Albert and Mata's team, it seemed that someone was a black sheep.





In this game, everybody in each team needed to pull each rope until it's tense. Next, slowly walks from the start to the middle of the rope. Then, put the balls into the prepared cup, That's it.



The game was about to build 4 triangles with 6 sticks. This team could make it within 2 minutes, such a smart team.



A fashionista of the team, Albert, although when he rappelled from the top of the cliff model, he still looked great.



Another extreme plaything, all of students had to sit on the rope, and flew through the air from one tree to another tree. The person in the picture was Dr. Parinya.





Here it came, it was time to check out, and said goodbye to TWCC Camping Land. It had been a great time staying here.



Next station was strawberry farm. Unfortunately, the farm had closed before we arrived. So, we went to the front of the farm to buy some strawberries, and then took some pictures.



“No strawberry!! Fine, let’s pick some raspberries instead.” Led by Khun, our Thai student.



We were too late to collect the strawberries, so, we decided to feed the sheep. Oat looked little scared. Don’t be afraid Oat, sheep are herbivore, and it don’t eat meat.





We went to Suang Angklung Udio, where they showed Indonesian cultures. This picture is a show called “Mask Dance”, which is a traditional dance.



The highlight of Angklung Interactive, the show let the audiences participate the show. They gave each audience an Angklung, then helped them perform the music as Angklung Orchestra.



Finally, everyone was a performer, the young staff took audiences from their seat to join the show on the stage.



Indonesian entertainment was like Thai's, for example, in this picture, James was playing a Thai traditional game, Re Re Kaowsan.





And it seemed like Khun was playing Mang Mum Kayumlangka with an Indonesian friend.



When the show finished, everybody was still fun. We had taken some pictures before we left.



### DAY FOUR (Tuesday > 29 August 2017)



Last day in Indonesia, we were at Jakarta. After we had checked out from the hotel, Dr. Yuri and Dr. Fauzan took everyone to Ancol Dreamland. Although it was hot, but everyone still had lots of fun.



Ancol Dreamland is one of famous places in Jakarta. Inside Ancol Dreamland is divided into 4 zones which are water park, Eco park, aquarium and amusement park. All Thai students chose to go to the amusement park.





The amusement park opens at 10 A.M., so 4 girls just took some pictures with the view of Ancol Dreamland. Everybody just looked great.



It was 10 so we got in the line to buy tickets. By the way, that day was a nation day off so there were lots of people.



After we had got through the gate, Dr.Parinya joined the gang playing playthings.



We had continued walking until we met mascots. Then we took some pictures with those mascots which are the main characters of the park.



Our first plaything is Hysteria. When you sit in the seat, you will feel nervous all the time. Because you don't know when will it go up or down?





Enough for extreme playthings, let's play something softer such as flying with the dinosaurs.



After playing soft playthings, we went to Hurricane. The persons who were going to be the players were Pro, Paulo, Oat, Pleng, Mata and James. Had fun with it, guys. ;D



The others who didn't want to play like Khun, Ployt, and Dr.Parinya took themselves to the Ferris Wheel.



Finally, we got back into group again with Twister. Spun until somebody got sick.



I gonna fly like a bird in the sky.

But, Twister could not even scare Mata. He still looked great.





“It’s time to go”, last picture in the amusement park with the carousel before leaving.



At Soekarno-Hatta Airport, Indonesia, last picture before we got into the plane to go back to Thailand. We all had so much fun that we had joined SAM21 phase3. Thanks for new experiences and we all hope that we all will see each other again in SAM22.



**SAM project**

Global Competencies

# THE SCRAPBOOK PROJECT





## FOODFIT

*“The world is a book. And those who do not travel read only one page.”*

*---- St. Augustine ----*

Achmad (IDN)

Firsty Kartika (IDN)

Witri Sandryani (IDN)

Wan Nur Shahirah Binti Shahrman (MYS)

Sirapop Nuannimnoi (THA)

“The world is a book. And those who do not travel read only one page.”, quote by St. Augustine of Hippo, emphasizes that if you never go anywhere, you'll have a very limited view of the world. Sure, not all of us can travel around the world. However, it is still better than staying in one place like we only see only a book cover. This is the reason why “we” choose to travel, this is why “we” choose to join this program. This program is only the beginning of our big journey under the blue sky. This is the beginning where we all come together, where we start traveling together. Thus, this is our story in SAM21--Southeast Asia Mobility Program for 21st Century Skills. Participants of

SAM 21 from three countries - Indonesia, Malaysia, and Thailand - get a chance to work in groups to solve problems, to play and to learn about each other.

Let us introduce ourselves a little bit. “We” are members of group 1, also known as “555+”. The name of our group comes from a popular internet slang in Thai for “lots of laughs”. We are the laughs for people who are sad, the laughs that will make them all feel happy again, the laughs that will take away their problems and make them enjoy their lives.



### Phase 1

This phase held in Malaysia, 10 - 12th of March 2017. In this phase, we learned about design thinking and about the capability that student’s college was had in 21st century.

We introduced each of us and give one word about this activity. It was great moment to can meet the college students from the other countries that certainly have different background, culture and habit.

Firstly, Dr.Fauzan, as an instructor told us to go to the cafeteria in UTM. That aim to know and analyze the

situation on there. In there, we interviewed some of cafeteria customers. Then, we made a personification on the paper about the plan that we'll make. After finished the personification we presented about our planning in front of all the participants and of course the instructors too.



Phase 2

For the phase 2, our program was held in King Mongkut's University of Technology Thonburi, Thailand. On this phase, unfortunately two of our members can't come and only Shahirah, Firsty, and Sirapop can attend the program. The main activity on this time was prototype implementation. Before we were making the prototype, the lecturer from Thailand gave us a short course about how to use Arduino, while Dr.Fauzan taught us to use the MIT software application. After that, we started to develop our application which named Food Fit. During the developing process, we had a lot of discussion. From that activity, we learned to appreciate each other's opinion and to be more



open minded. Finally, the prototype is done. We are satisfied with the final result of our prototype application, because we already gave our best effort for it.

The cultural trip was so fun. We visited Bhumibol Bridge and Floating Market. We can see how beautiful Thailand is and warmed by the hospitality of the people. At the end of the trip, we shared our photos and talked about it together. There was some unique photos that caught our attention. From that, we can see many different points of view from everyone and we were a bit surprised because we can find every kind of things on there. Next is the pictures that we took during we went to floating market and Bhumibol Bridge.

In the phase 3, our program was in Indonesia, remarkably the biggest country in Southeast Asia, Sirapop and Shahirah arrived at Jakarta International Airport. They are very happy with the food here. We enjoy their time. In this phase, we got a chance to learn about Business Model Canvas (BMC), which we can use to describe our business model to investors. It is quite difficult to learn in the first place but we are lucky to have Sirapop in this team. He explained a lot more about it. After we understand everything about it, we begin working on our own model based on the design and prototype created during the first and second phases.

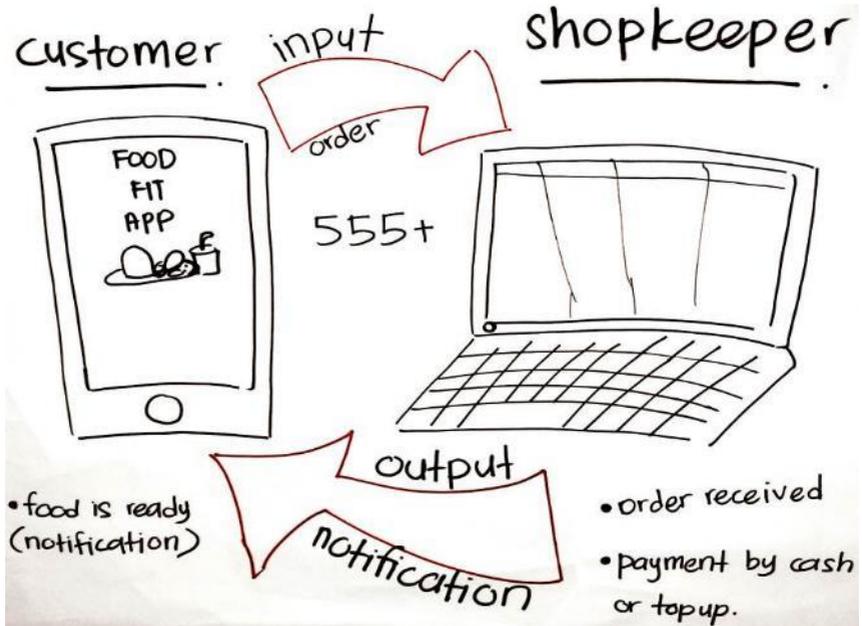


Phase 3



## **Our Project**

Our project is an online system to solve queuing problem in every cafeteria inside KMUTT, UTM and UNJ. Time is the most valuable thing in our lives. Every single human-being is born with limited amount of time to live. We think that queuing is one of the problems that block away success in students' lives. Moreover, time is not the only thing a long queue can take away from us. Long queue ruins good environment of the cafeteria. This leads to difficult management and disorders. Thus, we developed a prototype for a new online system which allows users to pre-order food from every cafeteria inside our campuses. This will surely reduce time-consuming queuing. Our mobile application takes orders from customers and properly forwards them immediately to an online desktop computer of each particular restaurant, who registered in our system.



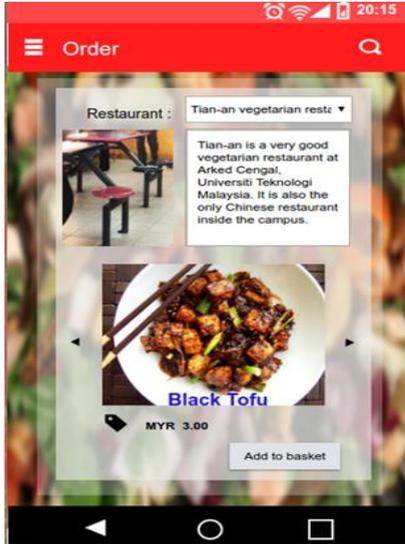
### Ordering Process



← First, you must log in on the Food Fit Apps.



The apps will show you status account (Like amount of top up, Profile picture)



Choose your food and description and the price will appear



← The last, check again your order make sure your order is correct, and choose “Check Out” for ordering or choose “order more” for adding some orders.

# **FRT**

*(Foldable-Resizable Table)*

Alin Mardiah (IDN)

Ika Farida Novyanthi (IDN)

Chaeriyatun Nissa Auliyani (IDN)

Mohammad Khairil Ikram Bin Abdul Halim (MYS)

Sasikarn Arunrattana (THA)

Weerit Danboonruang (THA)

Southeast Asian Mobility for the 21st Century Skills, known as SAM21 is a program sponsored by University Mobility in Asia and the Pacific (UMAP) to nurture the next generation students 21st century skills. Throughout the program, student skills and knowledge emphasizing on the skills are important for the student to strive in the 21st century.

This activity takes place for 3 phases which is held in three universities that cooperate in this activity of SAM 21. The first phase was held at Universiti Teknologi Malaysia (UTM), the second phase was held at King Mongkut's University Technology Thonburi (KMUTT), Thailand and the last phase was held at Universitas Negeri Jakarta (UNJ), Indonesia.

There are 47 students from various backgrounds of different educations who participated in this activity with

details of 25 students from Universitas Negeri Jakarta (UNJ), 10 students from Universiti Teknologi Malaysia (UTM), and 12 students from King Mongkut's University Technology Thonburi (KMUTT).

In this activity 47 participants were divided into ten groups based on the results of the questionnaire on the way of thinking. The result was Mohammad Khairil Ikram Bin Abdul Halim from UTM, Sasikarn Arunrattana from KMUTT, Alin Mardiah from UNJ, Ika Farida Novyanthi from UNJ, and Chaeriyatun Nissa Auliyani from UNJ united in to group 2 named AG (Asian Generation), we chose this name because we are as young generation in Asia who have to do something to solve the problem in our surrounding and this is our journey in following Southeast Asian Mobility for 21st Century Skills. We believe that by giving this name we would be able to become the future Change Agent.

## **FIRST PHASE**

### **AT UNIVERSITI TEKNOLOGI MALAYSIA (UTM)**

In the first phase of this 21st SAM activity was held at Universiti Teknologi Malaysia (UTM) on March 10-12th, 2017 by taking the theme of "Workshop of Design Thinking and Team Working". In this activity our group attended by only 3 people out of 5 members; Mohammad Khairil Ikram Bin Abdul Halim, Sasikarn Arunrattana and Alin Mardiah,

the rest of two people were unable to attend SAM 21's first phase.

In accordance with the theme of the activity, participants are encouraged to work in team and build a design thinking to solve a problem together. In this activity, we come from three different countries and different educational backgrounds are required to be able to build 21st century skills on us. The event opened with a 21st century skills workshop focusing on SAM 21, this is important because we are as generation that lives in the 21st century which is the era of globalization with the rapid development of technology and information.

In this 21st century skills workshop, we learn about the skills that we need to have as a generation in the 21st century, including communication, teamworking, design thinking, critical thinking, entrepreneurship, global minded, living diversity, and many more. In building this 21st century skill, we were given the task to create an idea to solve the problem of cafeteria on campus. To find out about the cafeteria problem, we were asked to interview at least ten UTM students about the cafeteria problem.

With time for a short interview, campus conditions were relatively quiet as it was a holiday, and our team only three people, demanding us to be able to go the extra mile in the team. During the interview, we made a list of

questions about the condition of the cafeteria on campus and shared their respective duties in the interview activities, namely Khairil and Alin as the interviewer and Sasikarn Arunrattana who can be called Jarbb as camerawoman. Here, we are with some of the students we manage to interview:



In a relatively short period of time, we are finally able to complete the interview task well. Our next task is to review the interview results and determine the main problem about cafeteria which will be the main focus in the project that we will create. In determining the main problem, we do a review by all members write the important points of the interview results in sticky notes through the recording of interviews of ten students who have done. After that, we discuss and write a review in the mahjong paper that contains the user profile, the pain point, and what the user needs to solve the cafeteria problem.

As a result, out of ten UTM students with the age range of 20 to 24 years that on average are students with a

technical education background, they have the same problem in cafeteria, which is difficult to get a seat to eat during lunch and dinner time. Especially, if they come in group, the cats in the cafeteria are annoying and make the cafeteria condition less hygienic. The cafeteria is not open 24 hours, so they find it difficult if they feel hungry at night, hard to find cafeteria during holidays, long queue in ordering food, and etc. And cafeteria users want the right solution to make it easy to find a seat to eat during lunch and dinner, no disturbing cats, and they want a more hygienic cafeteria and open for 24 hours.

Next to determine the right project, we discussed and decided to select the issues of the seat finding's difficulty and the number of cats in the cafeteria as the main focus of the problems we will solve. To create a great idea in solving this problem, we are led to brainstorm with each team member drawing project ideas in sticky notes in a short and repetitive time, but with different ideas. As a result, we found many varied ideas, such as making tables and chairs that can be changed in size, making the sensor as a cat split so as not to get into the dining area, making anti-cat spray so the cat does not like to be in the dining area, making the table complete with folding umbrella so it can be used in outdoor when cafeteria's full, and many more. The results of this brainstorming we discussed again to determine

which project we will choose, and finally we chose to combine many ideas into two of our flagship projects which we named FRT (Foldable Resizable Table) is a table design that can be folded and changed in order to be used by more people and FRC (Foldable Resizable Chair) with a paint compartment which is a chair design to complement the design of the table that we made and equipped with a compartment for a cat's place so as not to disturb the user, even the user can give food directly for the cat in the compartment.



In addition to the above activities, we are also challenged to learn the language of the three countries that follow the activities of SAM 21 (Indonesian, Malay, and Thai). Besides that, at the first phase we also did the JB tour to JB crown arch and Dataran Bandaraya Johor Bahru.

After the activities were completed, we were given the task of filling out a questionnaire about the outcome of the activity and providing an assessment to the fellow team members.

From the first phase of Southeast Asian Mobility for 21st Century skills, we get many lessons, including:

1) We learn to work in teams with different backgrounds and appreciate any opinions or opinions given by each team member.

2) Two heads is always better than one, brainstorming for ideas in a team more efficient than doing it alone.

3) We learn how to think of a solution that is out of the box in solving problem.

4) In every product, the most important part that needs to be considered in it is the user centric.

## **SECOND PHASE**

AT KING MONGKUT'S UNIVERSITY OF TECHNOLOGY THONBURI (KMUTT), THAILAND.

In the second phase of 21<sup>st</sup> SAM activity held at King Mongkut's University of Technology Thonburi (KMUTT) on May 19-20, 2017 by taking the theme of "Prototype Implementation". In this activity our group has full team member, Mohammad Khairil Ikram Bin Abdul Halim, Sasikarn Arunrattana, Alin Mardiah, Chaeriyatun Nissa Auliyani, and Ika Farida Novyanthi. Before starting the activity, we did the tour to Chao Praya and floating market. We found many kinds of food and souvenir to take home to

each country, and saw the simplicity of Thai society. In this place we gave challenge by Dr.Tula to capture any interesting place, things or another then we told it in front of the class.

We created a prototype of FRT which has been initiated in phase 1. FRT Main Functions:

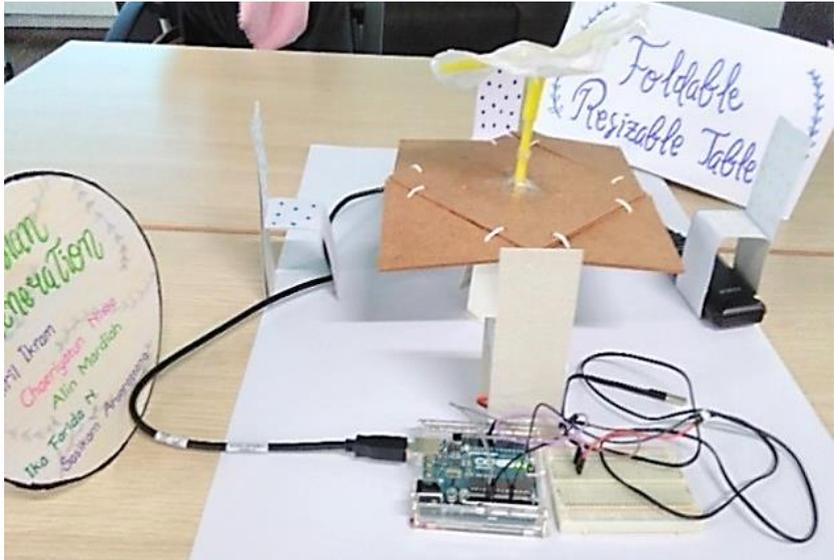
- 1) FRT comes with two sizes;
- 2) FRT fits for maximum 8 people.



In depth, FRT and give result that FRT has an Additional Features those are:

- 1) Automatic Umbrella
- 2) Calories Catalogue

- 3) Call waitress' button
- 4) Food Heater
- 5) Rain Sensor - Automatic Umbrella



FRT is connected with a program called arduino to make additional features work. Arduino is one program that can work automatically for air conditioners and other electronic devices that depend on environmental conditions. In our group, the arduino integrated with FRT so that the umbrella on the FRT can move automatically depending on the environmental conditions.



In the end of activities we play games that we must build strongest, cheapest and symmetry building. We arrange it with things in the table and take it one by one, it means that one person only available take 5 things in same kind of things. And the result we are the second group that have the strongest, cheapest and symmetry building.

From the second phase of Southeast Asian Mobility for 21st Century skills, we got many lessons as following:

1) Critical thinking and creativity skills to implement our ideas into a prototype and improve it with such new ideas that we got from other participants;

2) Collaboration and communication skills that we got from our group work that consisted of 5 persons from 3 different countries.

### **THIRD PHASE**

AT UNIVERSITAS NEGERI JAKARTA (UNJ)



This phase is the third and the final phase of SAM21 that conducted in Jakarta, Indonesia. Our agenda started on 26 August 2017, officially and formally opened by our Vice Rector for Planning and Collaboration Affairs of Universitas Negeri Jakarta.

The aim of this program is basically focused on the business and communication elements of the project. After our Vice Rector gave his remarks and officially opened this phase, Dr. Tula made a very interesting game to bond every participants from all contributed countries. He valued each of us accordingly to the country we come from, with a point that will be used to created a group with such of certain numbers that Dr. Tula offered. He valued Thailand Participants with 1 Point, Indonesian Participants via 3 points, and Malaysian Participants with 5 points. The game was very interesting because every time Dr. Tula offered a certain number, like 101. Then all of us have to gather around to form 101 based on our point that Dr. Tula has



seconds speech about: our customer needs, the approach we would implement to persuade the customer to use our product, the benefits in using our products and what's our strengths compare to other competitions.

### **3) Scarp Book**

The scrap book that contained a whole experiences that we've got throughout the SAM 21<sup>st</sup> Century Skills program from the first to the last phase from the participants' sights.

All of the outputs stated above, should be done by the second day. So, at the second day, all of the groups need to do an elevator pitch for 90 seconds to persuade the attendance about their products and services, and then all of the groups need to perform their poster about the products and services as well. After all the presentation have done, All participants from each contributed countries will have a time to do a Cultural Activities and performances.





Then after that, all of us were going to Bandung to have another good time together before the programs will be officially ended. In Bandung, we stayed in Graha Cikole, Lembang. The coziest place we could find in Bandung! 😊 We did some of outdoors activities such as Flying Fox, Rafting etc.

Besides of all the 21st century skills we've got throughout the programs, we've also got a new experience, friends from other countries and a very sweet memory to be reminded for a whole life time.

Last but not least, we'd like to say THANK YOU VERY MUCH for UMAP and our beloved lectures: Dr. Yuli, Dr. Tula and Dr. Fauzan and the other organizing comitties for the opportunity to us to take part in this AMAZING PROGRAM. We hope that this such of program will be continued and improved in the next time.

Sincerely,  
ASIAN GENERATION GROUP.

# ALLOY

Sylvia Faustine (IDN)

Anna Rahmadianty (IDN)

Lo King Wei (MYS)

Phuah Yong Hwa (MYS)

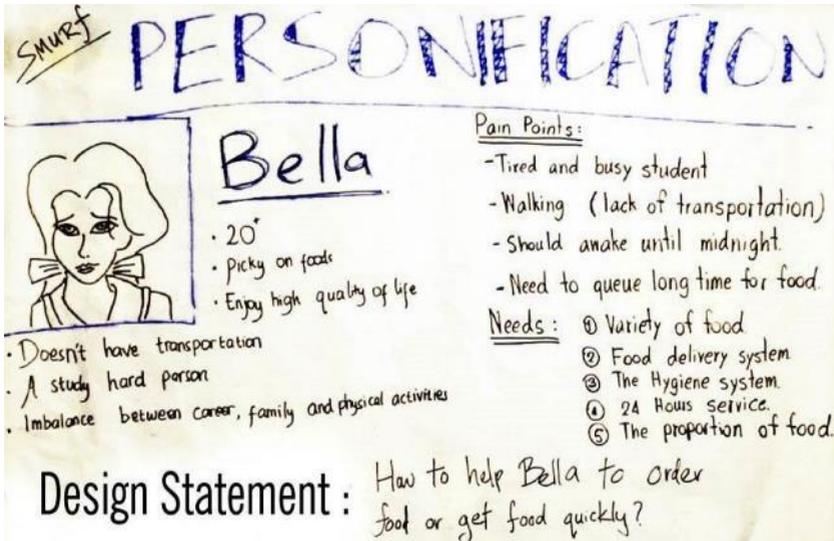
Wimonnat Sukpol (THA)

**Phase 1** at Malaysia, 11 - 12 March 2017 @ UTM



In the phase 1, the activity about workshop of design thinking and team working. This is the first time that we meet and we have to work together. On this phase, we think about the problem that UTM student faced. We draft the question for interview the student about the cafeteria. Then, we conclude the information that we get form the interview. After that, we find way to solve the problem by write down each idea in post it and put it to the white board. We explain the idea to each other and find the best idea. The idea that we choose is application for ordering food.

## Design Thinking



After we interview Malaysia student about their opinion of the cafeteria, we have to conclude information and create the personification. This picture is the personification of our group. We explain the pain points that they faced. There are tired and busy student, walking (lack of transportation), should awake until midnight, need to queue long time for food. Thing that student needs are variety of food, food delivery system, 24 hours service and the proportion of food. So, the design statement of our group is how to help her to order food or get food quickly.

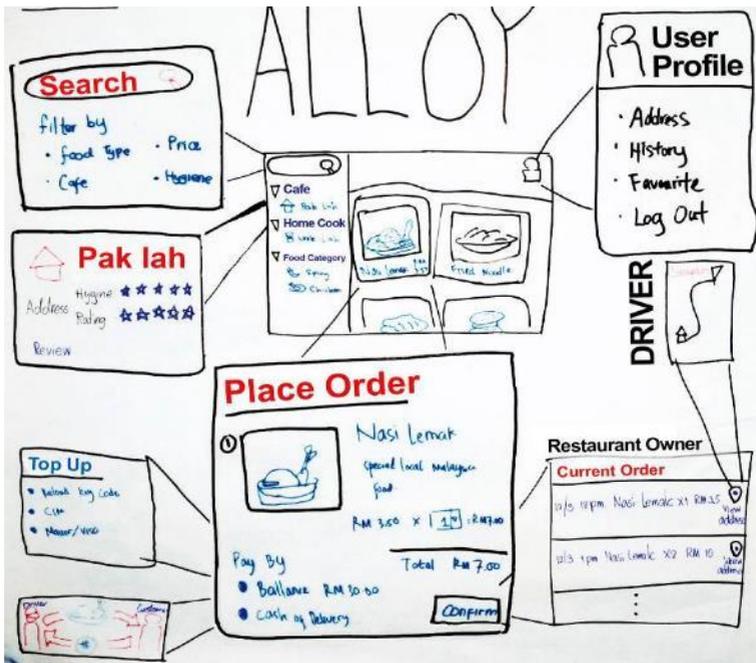


We interview the UTM student to know more about problem they face during order at Café.



First picture for Group3

### ALLOY Application (အလှူအငှါး)



“After we interviewed UTM students, we found many problems. Finally, our group focused on problem of a

long queue and a food delivery service. Therefore, we create "ALLOY" app. It is the application that you can search any menu from cafeteria and home cook. It will show price, location, rating of hygiene and rating of that restaurant. You have to confirm your order by writing down your address. The restaurant owner can see every order by using this application too. The important comment for our group is making it different from other existing app, so we will discuss more details and create some special features."



Lo King Wei, as our group presenter present our group project Alloy application in front of the board. Dr.Tula listen and look interested with our project. This is a good experience for us because we work as a team and find solution for the problem together.

**Phase 2** at Thailand, 19 – 21 May 2017 @ KMUTT



The main purpose of this part is to develop prototype for our solution through various prototyping application and experience the culture of Thailand.

For the prototyping part, first we have the chance to experience different prototyping tools in including software and hardware. For our group, we have a software solution, hence we learn MIT app inventor as the prototyping tools.

In the learning session about MIT App Inventor 2, Dr. Fauzan teaches how to use App Inventor 2 to create a app prototype in a very simple way. It's just take around 30 minutes for this session, we learned how to drag the elements from the menu and drop at the app template.



During the time in Thailand, first we learned that the important of communication skills through an interesting activity. Different people, with different spoken language and different type is expression comes together to pass down information. Although we have a lot laughter when find someone miscommunicate ridiculous, we also embrace the different strength between us and start to aware the important of good communication.



Besides, we learned about the prototyping process through understand our user use case, the customer requirement and learning the prototyping software. It's an

amazing web application with the simple form of programming and turn our idea into live! We also have a chance to work in a very comfortable and flexible environment which able to simulate our creativity to the max.

Look like a serious war is happening. We are discuss how to build the tallest building using the lowest cost. We combine with group one into one. We are aim to beat others with our awesome building!

We also enjoyed a challenging critical thinking activity where we have to use the least resource to build the highest tower. Our group member creativity are being challenged and lot of wonderful ideas being developed. We enjoy the discussion and the process of solving.

At the end, the building we done is this awesome and tallest building. Although we didn't manage to build the most stable and lower cost building but we all are enjoy the process of build it up. We are young ,brave and never afraid of failure.

In term of cultural exchange part, the first day we arrived is a training day but our Thailand friend welcome us with a night market dinner. The hotness and spiciness of Thailand food not only fill our stomach, it also warm our body and heart and showcase the passion and friendliness of Thai culture.

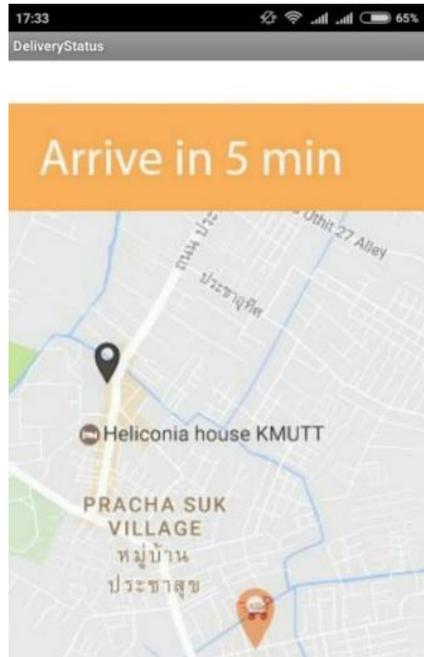
Besides, we have the chance to visit Thailand traditional floating market. The market is huge like a maze. It consists of all traditional and modern food, local products and durian! There are so many foods that we wish you try but it's far more than our stomach can handle.

We also visited the garden built by the King of Thailand. In the garden, our Thailand friend told us about the story of their King. We not only learned the history and politics of Thailand, we also feel the loyalty and sadness inside every Thailand friend's heart.

In short, this is an extremely fruitful phase as we are not only technically trained, mentally stronger, we also immerse deep into Thailand culture and a stronger bond of cross-cultural friendship is formed.

To solve the problem faced by our persona Bella, our group Smurf decided to develop an application. Bella is willing to order food and get food quickly. It is because Bella is a hardworking student. Sometimes she studies hard until midnight and she feels tired and hungry so she hopes she can get food easily.

User can view the information of a restaurant such as restaurant name, pictures, hygiene rating, operating hours, address, and a brief description about the restaurant's history.



Users are able to update the latest booking status by viewing the delivery status map after finished booking.

A simple and clear home page designed to provide the best experience for user by provide search engine, categorize restaurant list horizontally and latest promotion.

User can view food information such as restaurant rating, food ingredients, prize, and food review through the Food Details before order food.



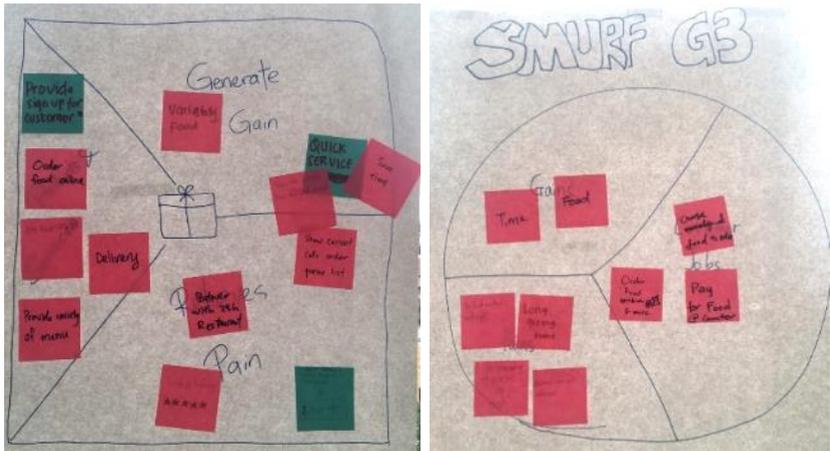
This is our group photo before we leaving SCi connect @ faculty of Science. One of our member “Pleng” absence because she has a final exam and we would special leave space for her.



### **Phase 3** at Indonesia, 25 - 28 August 2017 @ UNJ



In this phase, we have to think about the business model for the application that we done in Thailand.



This is our first activity about business plan. We think about customer jobs, what they gains and pains point. After that, we discuss for our application. How our product can solve the problem. What our product generate gain and relieves for customer.



Kiwi teaches us about how to calculate the cast structure and revenue streams. He explains us about how to estimate each cost and how to get money from customer.

# SAMAZING

Mardian Chandra (IDN)

Septina Restu Nurhalimah (IDN)

Nuratut Alfiyah (IDN)

Tuan Mohamad Hakimi bin Yahya (MYS)

Jatuporn Saetang (THA)

This is our adventure story in South East Asia Mobility 21<sup>st</sup> Century Skills. This story is start from our first met in Malaysia. We are grouped based on the way we learn. So this is us.

## PHASE 1 : UTM MALAYSIA



This is our first met in Malaysia, we introduce our self and and we know each other.



We started discuss about what we can do that day in the phase 1. So, we started to thinking and discuss about the problem that given to us.



And this is us with all delegates from 3 country Indonesia, Thailand and Malaysia. And the program continues to the interview student at UTM about cafeteria. And we found a problem that the food is expensive and the students need more variation food. But in this phase we just have to design thinking. And this phase is done and continues to going some places in Johor Bahru.



And this is our first idea to solve the problem in the phase 1. And this is explained about our idea “We interviewed Malaysian students

about cafeteria topic in UTM. Problem issues that we got from users are the high price of foods and having no foods' diversity. So my group focused on the solution in cafeteria using process. Firstly, we offer merchants buy more ingredients in order to get more discounts. This can directly reduce the foods' prices. Secondly, merchants should make food schedule in each day in order to manage users' demand of foods."

## **PHASE 2 : KMUTT THAILAND**



We met again in Thailand finally after two months we're doing the 1st phase in Malaysia. We gathered again especially in James' college in KMUTT. In this phase we have to make the prototype of our project.



First day in the morning we are going to the floating market. And we got some fun and buy the food and other stuff in there



In the afternoon this phase is opened by the dean of faculty of science, Assoc.Prof.Dr.Teradet.



After that we got some workshop about the labview from one of lecturer in KMUTT. We've got some knowledge we make the prototype of our peojct called that Fudee. And we make the application with help from Dr. Fauzan



We make it until midnight. But, that's fine and we got some fun because we are together. We have done for our project and we sleep until morning.



Finally the second day we presented about our project to other student.



We satisfied about our project. Fudee is an application to help the poor student to get the low price to buy the food in cafeteria. And the people can donate for the poor student.



And this is us with all delegates from Indonesia, Thailand and Malaysia.

**PHASE 3 : UNJ INDONESIA**

In this phase we have to presented about our project to the people and after this we have gone to Bandung, West Java Indonesia.



# BIOPLASTIC & SMART CUSTOMER APPLICATION

$(SP)_2B$

Muhammad Sahrul Fakhri (IDN)

Susi Rahmiyati (IDN)

Bong Woei Shen (MYS)

Prompron Poonpraseart (THA)

Kunpasu Nuanpan (THA)



Phase 1 (*Malaysia*)



Phase 2 (*Thailand*)



In Malaysia, We were asked to solve problems in the cafeteria. We used English while chatting together. But we also tried to communicate in other languages such as Chinese and Malay with the people in cafeteria.



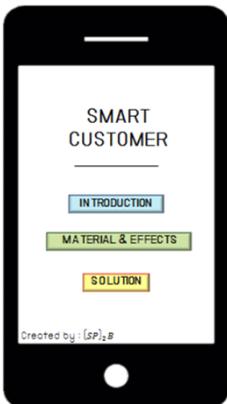
After that we came to the summaries on the board. So, we found the problems about plastic. The customers said it cannot retain heat for long, weak and is unhealthy. Sometimes they find it troublesome to clean and reuse, so they choose to throw it instead. That is one of the causes of increasing garbage and landfills too.



In Thailand, We solved the problems that we already concluded it.



Plastic is so close in our life. It is used to wrap the food and is still a popular packaging in food store or cafeteria. But, do you know the effect of using plastic?



APP

Plastic made from materials found in nature, such as natural gas, oil, coal, minerals and plants. Most plastics are made from hydrocarbon (natural gas, oil and coal). These resources are not renewable.

Another important effect is it is not healthy. First, we created bio plastic from pineapple leaves (but this picture is just a structural simulation). It is one of the sources of natural fiber.

And make the application. In it there is data about toxic waste in our countries, MATERIAL & EFFECTS and our solution is bioplastic.

The purpose of this creation is to utilize waste of pineapple leaves into a product that can be used in everyday life and replace plastics or styrofoams as packaging.



In Indonesia, we meet again  
Smile again 😊



We have 3 assignments.

<p><b><i>Further idea development for the next phase.</i></b></p>	<p><b><i>Problems or Obstacles encountered</i></b></p>
<p>It's about refinement of our product. We have to improvement or repair our product before we offer it to people.</p>	<p>2 members could not make it to 2<sup>nd</sup> phase due to circumstances at own university &amp; personal matters.</p>

## Our Activities



While do project with group



Break time with tea and sweets



During waited the bus.



Smile together after project.



Relax time!!!



Relax time!!!



In Thailand at science building.

## **Our Feelings & Expectations**

We try to help each other all the time. Although in the phase in Thailand has friends who did not attend, but we Skype talked to do work with together. I'm very impressed while travel in many places. I have seen new things which differences in my country. And this is another impression. I am close to my friends within a few days. You know, we can take our hands to the floating market. Even we talk to each other in 1 day. I'm very happy. Such as the moment that we laugh while we drinking tea or when we effort to communicate with each other (different cultures). At first time, it's quite difficult but then we were well adjusted.

I think, it almost time to finish this program. I feel sad that we will depart. It's not easy for us to meet again.

*By Prompron Poonpraseart (THA)*

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I'm Pro from Thailand. I'm join the program because I want to make new friends make new knowledge and improve my English skill that can't find in the classroom. So after I join program in Malaysia and Thailand that make me know English language is very important if I want to understand the other people. I feel like a lot of time I be a burden. I bored myself so must that I can't help my team because of I can't understand them and shy to give the comments but I so luck about my team that they so kind and

try to understand me and they always try to help me a lot and always cheer up me. I think all of things in this program that make me grow. And about the last phases that will arrived soon I will try my best and enjoy every moment

*By Kunpasu Nuanpan (THA)*

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I joined this programme to meet new people, experience new cultures and improve myself. I like the people here and therefore feel happy to have joined. Sadly, I encountered a problem before the 2<sup>nd</sup> Phase - I could not join the programme in Thailand due to university test and presentation. I hope I did not let my teammates down and will do my best in the next phase.

*By Bong Woei Shen (MYS)*

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I participated this program to meet and exchange my idea with another people who have different background, culture and language etc. But after this program begun, I got more than it. I got a lot of great experience, i met good people from other country, problems and solution. I am joining in group 5, there are 5 of us and we called our team is (SP)<sub>2</sub>B, it was our initial name (Sahrul and Susi from Indonesia, Ploy and Pro from Thailand and Bong from Malaysia).

First time we met at UTM (Malaysia), there are some of problems such as differences of pronunciation and way of think. But those problems are nothing because we always shared each other and tried to build better communication.

I learned about friendship with differences, how to be communicator and help each other to complete our project like what we did in 2nd Phase, even two members of us did not come but we are still communicating by skype. So, I hoped the distance is does not reasons for us to keep communication. :)

I am very happy being a part of this program.

*By Muhammad Sahrul Fakhri (IDN)*

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Three word for SAM 21<sup>st</sup> phase : Amazing, Challenging and Fun !

I'm so excited to join this programme because there are many things that i can learn such as communication skill, friendship, team work, learn to understanding each other in difference and many more. But i'm so sad can't join 2<sup>nd</sup> phase in Thailand because there is someting that must i do.

Thank you so much to Sahrul, your idea sometime help to break our problem, i guess you can be good leader future.

Thanks a bunch to Ploy, you are nice girl, dilligent girl, you thinking something structurly. Always be a nice girl. 😊

Thanks a lot to Pro. You teach me how to be cheerfull person. Keep be cheerfull boy. I hope simeeday we will meet again !

Thank you Bong. You make our team colourfull. Even sometime we have misscommunication, but you teach me how to respect each other.

Thank you all you guys. I} hope we can meet again in another time, always communication even distance separate us. I hope our relation doesn't stop even this programme will be finish. 😊

**You give me the best experience in my live and i will never forget it.**

*By Susi Rahmiyati (IDN)*

# MABA Apps

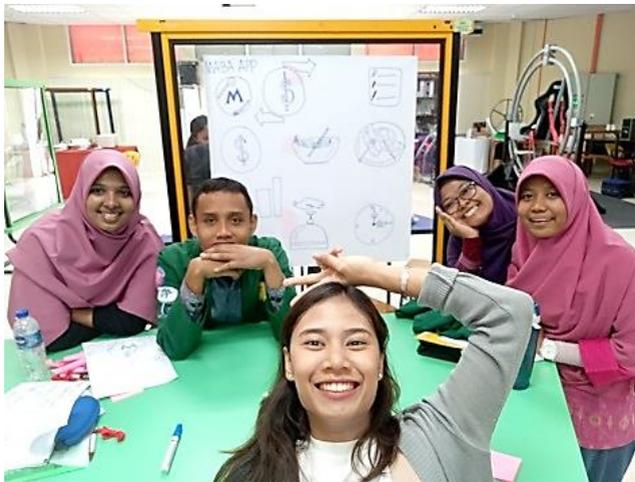
Bayu Suryo Wiranto (IDN)

Dwi Ayu Oktaviani (IDN)

Mega Ayu Agustin (IDN)

Noor Nadhiah Binti Jaafar (MYS)

Warochar Wanna (THA)



Boundaries between nations have been dismissed since we know a word, globalization. Globalization boards our view, view of whole world. Nowadays, we not only consider our province, or our nation, and we not only work with people that we understand each other. Globalization pushes us to interact with people from entire world, have teamwork with them although we do not have same religion

or cultural background. Unfortunately, there are few people unable to deal with that, they are not comfortable with people who have different value. Thus, if there is an opportunity to help this few people become able to work in globalization, that thing must be great SAM 21 is kind of that opportunity. Participants of SAM 21 from three countries – Indonesia, Malaysia, and Thailand– get chance to work in groups with people who come from different countries. They get objective to do, problem to solve, and things to present. As we, group 7, experience whole SAM 21 agenda, everything is remarkable.

In first meeting, which held in Universiti Teknologi Malaysia, our group conducted a survey related to university student perspective on cafeteria.



Our moment when interview student in UTM



When we presentation from our planning project

When we want to interview, we around the UTM and so difficult to find student, finnaly we must around the UTM with long way, but we happy for that. Based on the survey,

we understood that there was many students have problem about cafeteria, and we had a role to figure out the solution.

By using critical thinking which taught in Malaysia meeting, we got an idea. The idea was creating an app, android app, which can help student order food from cafeteria easily. The app provided information related to food, like price, ingredients, size of portion, payment method, how long the delivery to customer, and picture of the food. Our idea presented drew in a large piece of paper to be presented in front of all participants and mentors.



The Desain Model for Our Solution

After that, we processed this idea in next meeting at King Mongkut's University of Technology Thonburi. Second meeting held in King Mongkut's University of Technology Thonburi, Thailand. Similar with meeting in Malaysia, we got objectives to do. We must create our idea, no matter that is an app or a table, no matter what you are, engineering students or not. Actually, this was challenging for us. Our

idea is an app, and no one of our group member is a computer engineering student. Although we got explanation about platform we use to create the app before, eventually our masterpiece look not so good. But, we thought that is okay, at least we gave a try.



Our MABA APPS



The last meeting will be held in Indonesia, and we get business skill to follow up our idea. Frankly, we know that nowadays everything become worth when make it as

business. We make a business model and canvas business model.

Facebook is an example. Facebook change the world on every manner we do, like the way we communicate, the way we have transaction, the way we do social and political campaign, and those happen because founder of Facebook make it as his business.

Eventually, we think that program like SAM 21 is fruitful, and hopefully held annually.

We fascinate on what we get as participant, the question is why only us? Why another student who not lucky as us get this opportunity to be in next event, SAM 21 event? Hopefully our friends have chance as we have, and we can create something awesome from this program.



# INFINITY

*“ALONE WE CAN DO SO LITTLE;  
TOGETHER WE CAN DO SO MUCH”*

Pramita Cucu Mawarni (IDN)

Viana Rahmawati (IDN)

Viyayanti Vatmala (IDN)

Nurul Syahrizzat Binti Mohd Yasin (MYS)

Warunyou Niminram (THA)

Hello, Everyone! Let us introduce our self. We are from group 8, Infinity. We awarded our self as THE BEST GROUP on Southeast Asian Mobility for 21<sup>st</sup> Century Skills (SAM 21). I know you cannot wait to read our stories, here we go!



**Warunyou Niminram**  
(Albert) - THAILAND

Hello I am Warunyou Niminram or you can call me Albert. I am a student from King Mongkut's University of Technology Thonburi (KMUTT). Bangkok, Thailand. I am a participant of SAM 1<sup>st</sup> program. I am studying Applied Physics at the 2<sup>nd</sup> year now. I am proud of myself that I have joined this program because I met all nice people from Indonesia, Malaysia also from Thailand. I got many great experiences from doing activities during the program.



This is all my group friends. They are so nice and beautiful. We took this picture at the last day at KMUTT before we went separate and went home.

During phase 2, we have fun a lot at KMUTT we didn't only got to know how to work here but we also got a really good friendship from each other that make me feel so happy.



We went to the trip outside KMUTT, I think it's really good activities for my friends from Malaysia and Indonesia for exploring BKK sometimes. We were enjoyed so much even it is a really hot weather.

Even the weather it is so hot but Cucu (from Indonesia) and me still can got a good picture. The location of this picture is Bhumibol bridge, there have nice park, we stopped there a bit for waiting the floating market to open.



We also went to floating market. I like this place so much because my friends can easily to learn about Thai culture. Me and my friends we have a lot of Thai food there.



It is serious time to work now but we still have time for taking a picture. Actually this time we were wait to present our project but we got really so far.



Nuyu she always close her eyes when we taking picture (just kidding) Nuyu she always took care about me when I was in Malaysia, she is so nice and I think she like to have durian a lots.



This is Thai food at the floating market. Actually this is one of my favorite local food. The taste is like spicy, sweet, salty and all of herbs!



**Pramita Cucu Mawarni**  
(Cucu) - Indonesia

I am really curious to know my friends from Malaysia and Thailand. Previously we only met in the group, just know the name and we follow social media each other. When the big day came, five of us met each other. I thought we will be a good team. We were collected in the same group based on questionnaires from lecturers. Therefore, I felt that there was a match in some ways, there was the same nature and our behavior. That was what made me comfortable in this group. For me, without comfort there will be no good cooperation between one person and another.

The theme of the workshop on the first day is Design thinking and team working. Before the day, I've ever learned about design thinking, so I had known more this first. SAM 21 makes me understand more about what is meant by real

team work and I can also implement design thinking directly. SAM 21 makes us think and find solutions very fast, because any task must be done quickly. It is one of the many advantages that I feel. I also have more courage in interacting with others, like I interviewed some Universiti Teknologi Malaysia students. I am encouraged to communicate using English better. At this stage I find myself. I find it easier to evaluate what things I need to improve in, such as communication, working in groups and other knowledge. I am forever grateful to be part of this amazing team, joined with some brilliant person, Nuyu, Albert, Viana and Viya. Thank you so much.



One of the best lecturer, Dr. Yuli. We took a picture in front of Johor Baru Sultan Palace

I had never visited Thailand before. I was very excited when I got the opportunity to attend a workshop in Thailand.

In this phase, I felt that my intimacy with some of the members in my group was getting closer. Because we already through the hardship and happiness moment together. We've been through hard times together, like stayed awake even though it was past midnight to work on the project. At phase one we made the idea, then in phase 2 we had to make it happen. I feel good in education but not in engineering. I became more knowledgeable about a little basic engineering and the way things work with techniques. I remember what Dr. Tula said, if you work and your boss asks you to do something, you can not refuse it. Therefore, you must know your other field of knowledge. That thing I will always remember, it never hurts to learn other fields of science.

This paragraph is dedicated to my lecturer, Dr. Yuli from UNJ, Dr. Fauzan from UTM, and Dr. Tula from KMUTT. Thank you for this opportunites, and I hope we can meet again in another places.



**Viana Rahmawati**  
(Viana) - Indonesia

My experience while following SAM 21<sup>st</sup> phase 1 and 2 in Malaysia and Thailand

My experience while following phase 1 in Malaysia is an experience I will never forget. In Malaysia for the first time I met with my group that is Albert, Nuyu, Cucu, and Viya. We discussed many things. In Malaysia I learned design thinking. First we interviewed students in Malaysia who were in the cafeteria. We interviewed them to find various problems in the cafeteria. After that, we discussed the group and decided to take one theme that we would solve together. After that, we try to examine the issue to find a solution to the problem. In SAM 21 I finally learned how to think together and solve problems by creating a product that

can be a solution in the cafeteria. It is truly an unforgettable experience for me.

My story during the SAM 21 phase 2 in Thailand began as I embarked on a journey to Thailand with a transit flight through Kuala Lumpur first. Various problems I found between me and two of my other friends missed the plane in Kuala Lumpur. This happens because the plane is delay and we are late for check in. Because of this, my two friends and I had to wait for the plane the next day and this made us late to join the activity on the first day going to the floating market. Because of this I want to apologize to everyone because it's been a hassle for all of you. I also said thank you so much to Ph.D. Tula who helped us.

On the first day of SAM 21<sup>st</sup> phase 2 activities started, we started with the material by Thailand lecturer that I forgot the name on how to make the prototype. Making prototype using technology is a new thing for me. Because my major is Biology and I haven't know about how the prototype is made especially using technology. From the material by the lecturer in Thailand I finally known a lot about how to make the prototype.

After materials, I and my group as Cucu, Nuyu, Albert and Viya discussed to create a prototype of our product we had thought together in the first phase of SAM 21 in Malaysia. This discussion made me learn how to develop

minds with friends who have different background. Here, my English skills are also trained and make my English skill being increased. After the discussion we started to design our prototype. We made it simple with cartons. However, it is also quite difficult for us because we can only finish everything at 2 pm. Even so, I am very happy to be sharing with my friends from different country so I can learn a lot of thing and this makes our friendship become tighter.

On the third day, we started preparing for the presentation of our prototype results that we had done yesterday. We started to make power points to be presented. But, the event on the third day, started by games. Game on the third day is game that trains our memories and pronunciation in English. This game is very exciting because many who forget the words that must be remembered. Then after the games ended, we all started presentation in turns explaining our prototype work. This presentation trains us to increase our public speaking skill, to train in English and develop ideas and thoughts. After the presentation there is also a question and answer session about the prototype we have created. We are very happy, because with this discussion we got a lot of opinion to repair our prototype. After that, the event then closed with games again that is games that make a building using material that have been provided. We also compete with each other to

make the building as high as possible but with a low cost. This is fun because it trains us to compete and work together to reach a common goal.

Impressions that I feel is I'm very grateful to have the opportunity to be able to join SAM 21<sup>st</sup> phase 2 in Thailand. This became one of the best things in my life. Lots of new experiences I've gotten that I've never had in other places. By following this event I can share experience and knowledge with other friends in Indonesia. The message is the show can be much longer because I think 2 days is a narrow time and felt not enough to make a presentation prototype and others. This made me and other friends just able to sleep at 2 am on Saturday because of the limited time provided. However, SAM 21<sup>st</sup> phase 2 in Thailand remains one of the best things in my life. Thanks for all of my lecturers especially Dr. Yuli and friends.



**Viyanti Vatmala**  
(Viya) – Indonesia

On 19-21 May 2017, I was ready to join the 2nd phase of SAM in Thailand. I and my friends (Adiati and Ika) arrived in Donmeuang airport in the morning of May 19. We were picked up by our Thai friends (Ploy and Film) using mini bus from KMUTT.

After that, we headed to the hotel. We are the first Indonesian students who arrived in Bangkok. While waiting for other friends to arrive at the hotel, we ate and took a rest. A few hours later, the friends from Indonesia came one by one.

The activity of the 2nd phase of SAM began in the morning of May 20. We were collected to meet all SAM participants from Malaysia, Thailand and Indonesia for breakfast. The multitudinous snack menu has helped us to

be ready for the journey to the traditional market in Bangkok. When we got to the market, we went of looking around at the merchandise, such as bags, shoes, jewelry, plants, food, drinks, fruits, etc. I and other Indonesian friends bought a Thai tea drink. Actually, this was my first time to drink the tea mixed with the milk. The taste was just a little bit bitter than Indonesia tea. I like it and I think that it was not too bad. Our journey continued to look at the food menu I had never seen before. I and some friends from Indonesia and Thailand bought a meal that I did not know what the name is.

The food was wrapped in leaves and it was eaten by being directly inserted into the mouth as a whole, not by biting it first. I deliberately did not want to try it. I just saw my friends who commented that the food was very spicy. In addition, there were also food such as bamboo shoots, but not thinly sliced as commonly cooked by Indonesian people. The bamboo was steamed only with the whole dish, not sliced, with a little green water. Once satisfied to taste the cuisine and the souvenirs, we continued the journey to the next place.

Next, we were invited to a place where there was a big river which becomes the central water of Bangkok. There, we and the lecturers from the three countries took the pictures together.

At the next day, we continued the planned project of creating an automatic table prototype. This table can open to form a circle automatically based on Arduino. When somebody comes in, the table will move automatically. After finishing the project, we proceed to make a group presentation.

At the end of the activity, SAM participants were given games of agility and pumping in a group. A series of activities of this second phase of SAM, has given a very positive impression for me. It provides many lessons and experiences. Absolutely, the 2<sup>nd</sup> phase of SAM has become an amazing moment in my life.



**Nurul Syahrizzat**  
(Nuyu) – Malaysia

The name given by my parents to me is Nurul Syahrizzat but many people would like to call me with a nickname of Nuyu. I also not sure why is it but I think it is easier to spell, easier to pronounce and I think it is cute. I am originally from Malaysia and will always stay in Malaysia. I am student from Universiti Teknologi Malaysia and currently studying in a third year of Bachelor of Nuclear Engineering. This thread is a little bit about my experiences as a participant in this program. I hope you have a great time reading this.

At the very first moment when I received an email from Dr.Fauzan saying that I was accepted as one of the participant for Southeast Asian Mobility for 21<sup>st</sup> Century

Skills Program, I was really happy as this is one of the program that I really want to join. I also curious as I am not very familiar with the word 'mobility' and I am not very sure what are the skills needed in the 21<sup>st</sup> century (even though to apply this program I need to do an essay about these skills but I just google it anyway). So, the curiosity did kills the cat and yes, I joined this program on the first phase that was held in Universiti Teknologi Malaysia (UTM), Malaysia.

At the beginning of the first phase, luckily I have one of my classmates that joined this program too named Kiminh. So I don't feel such an awkward feeling haunt all over me but a minute later after an introduction and refreshments from Dr.Fauzan and Dr.Tula, unfortunately, I have to be apart from him and we have to divide ourselves based on the questionnaire that we had answered before the program. The questionnaires that were provided were mostly about our own characteristics and how far did we know ourselves. However, as the proverbs say, "After every bad luck comes a good fortune".

I was being placed in Group 8 together with three Indonesian girls with cute nicknames; Cucu, Viana, Viya, and a Thailand boy with a cool English name, which is called Albert. They were so nice, friendly, and talkative just like me. Suddenly now I realise that our personalities is similar and that is the reason why we were placed in the



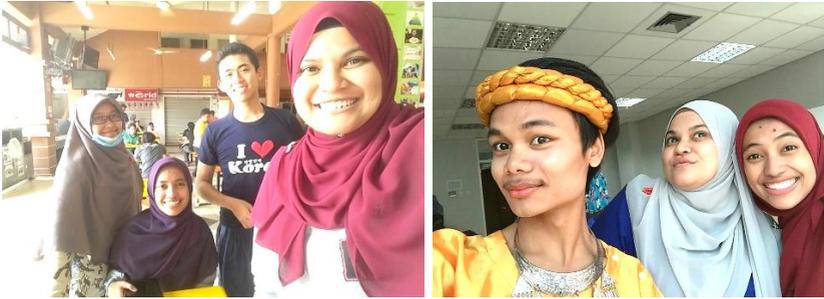
same group. Knowing them made my life and my job become easier and the greatest thing happened to me was that I can know myself very well as they are my reflection in the mirror.



The theme for the first phase was design thinking and team working. So in order to develop and embedded those skills, we did interviewed few UTM students regarding about their feedback on university's cafeteria inside UTM. After the interview session, we solved the problems with a theme and finally after lots and lots of argumentation, discussions over discussions, ideas over ideas, we finally come out with a brilliant idea to improve the system that was instilled by those cafeterias so that the students feel less burden. As the result, the idea of creating Multi-Function Table was created by the five of us.

Next, the second phase was held at King Mongkut's University of Technology, Thonburi. This phase taught us to touch a little bit of make up about our product as we made our ideas turn into reality. By doing and learning Arduino that was taught by one of the lecturer from KMUTT, we

successfully created a prototype of our product. Unlike the previous phase, this phase taught me a lot of life survival as I slept at very late at night just because my teammates and I need to finish the prototype.



As this phase also taught me to be committed to my work and I learnt a lot about time management. In this phase we were given lots of task but just a little time to done it. Therefore, I did learnt so much about new things and I also remember the saying of Dr.Tula which may sound as “When we are working and the boss suddenly ask you to do something that you are not major in, by hook or by crook you have to do it anyway.” This quote may not be as much as it sound, but the meaning behind this quote did enhanced me to always learn new things even though it is not related to my major. I am so grateful of being chosen as one of the participant in this program and I really hope I can meet all of them again next time.

# SAKO

Sarahdinna Mustika Destriana (IDN)

Karima Fachrani Putri (IDN)

Adrian Tay Ban Yung (MYS)

Nutchapol Jeerawattana (THA)

## The First Phase

The first phase of SAM 21st Century had been held in Malaysia on March 11-12th 2017. We did many activities there. The first day, we started activities with introduced our name to all participants of SAM 21st Century.



Introduction



Discussion

All participants were divided by 10 groups. We discussed about problems of cafeteria in UTM. Before we found problems of cafeteria, we analyzed and arranged questionnaires about cafeteria that we would ask students

in UTM. After we arranged questionnaires, all groups was given time for interviewed students.

After we interviewed people, we analyzed what students need in cafeteria and problem that used be found in cafeteria, such as long queue, dirty, bad service, limited seat, and so on. Then we discussed problem that should be solved and presented the problem.



Analization



Crown of Johor



Daratan Johor



Presentation

In the evening we discussed problem, we went to Johor Palace and we took many picture in Crown of Johor. We spent great time there, we could talk and take a picture together. After that, we went to Dataran Johor. We took many picture and made boomerang. There was food market

in Dataran Johor. We bought many food there. After we spent dinner there, we went to traditional market in Johor.

The second day, we continued our discussion about problem of cafeteria. We found solution about problem and presented it to all participants. Last day in Malaysia, all participants in each country showed performance. We sang and danced traditional in each country. It was really fun because we could know culture in each country.



Culture Performance

## The Second Phase

The second phase was held in Thailand. All participants arrived in KMUTT a day before the program. The first day, all participants went to Bhumibol Bridge. After that we went to floating market for shopping. The place had many items and it was not expensive with variety of choices.



The first photo of all participant



Floating Market



Mata's performance



Developed software



The last photo

We went back to KMUTT for talked about our picture that we took when we were shopping at floating market. Mata presented about an instrument that sounded like frog and it was really special.

We learnt about how to build application. We developed software that we had discussed in Malaysia. Our group made an application for delivery food in university.

The second day, we presented our project. After we presented, all participants did building team work. We had to build the highest tower. But, it was not normal building. There were many conditions to build it harder. The last activity was saying what you want to say, and if anyone felt the same thing, they could move forward one step.



Games

Building the highest  
tower

## The Third Phase

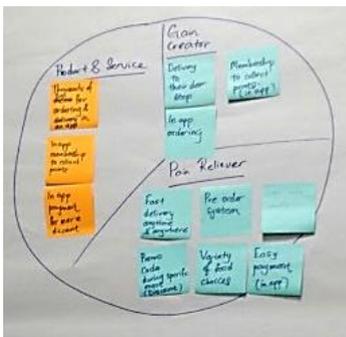
The third phase was held in Indonesia. Dr Fauzan and Adrian were arrived early on August 24th 2017. Thai student and Malaysian student were arrived on August 25th 2017.



Dr. Fauzan and Adrian had arrive in Jakarta



Thai and Malay students had arrived



Analization



All participants took a photo

The activities in third phase started on August 26th 2017. We thought and discussed about product and service. Dr. Fauzan taught all participants how to make bussines plan. After Dr. Fauzan explained how to make bussines



plan, all group made bussines plan of product that would be presented in the second day.

Everyone took a photo in Plaza UNJ. The first time, we took a photo together. After that, we took a photo with our friends in same country and sam group. Then everyone came back to do activity for presented in second day.

# Yummy Apps

Himaniyatul Rizqol Baeti (IDN)

Adiati Bintari Ayuningtyas (IDN)

Achmad Syazwan Bin Sahhariman (MYS)

Metha Foug-Foug (THA)

First Phase of SAM 21st Century Skill was held in Universiti Teknologi Malaysia at 10-12 Maret 2017.. In this session we are all delegates of three country (Indonesia, Malaysia, and Thailand) for first time meet up and begin to create teamwork in each group. We are in the 10th group that we giving its name is Chang Group. Our group consist of 4 people are : 1. Himaniyatul Rizqol Baeti (Indonesia), 2. Adiati Bintari Ayuningtyas (Indonesia), 3. Metha Foug-Foug (Thailand), 4. Achmad Syazwan Bin Sahhariman (Malaysia).



We choose the name of our group is Chang because change in Thailand language means elephant that it is a

unique symbol of Thailand. And the other reason of that is one of our group, he told his self that he loves food a lot so he linked to Chang<sup>^</sup>. He is funniest one in this group. Firstly, we are begin to know each other. Because we are from different country, different cultures, different language, and also different character so we are must to create the chemistry in our group.

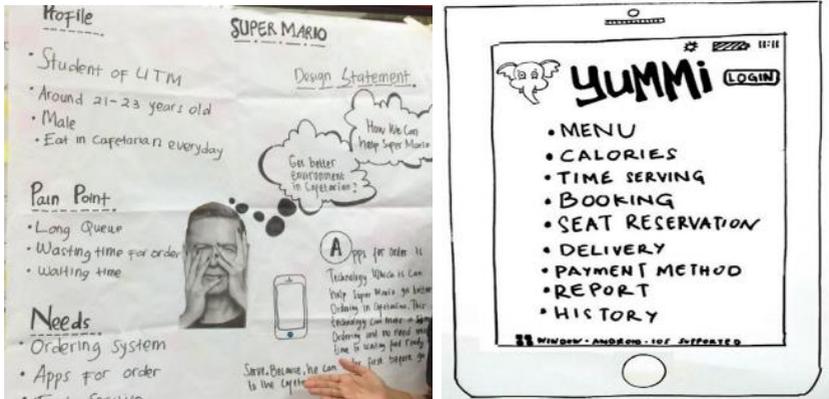
This section is about design thinking, so we have a task to find some problems that we can found in caesarians. We starting to look for the main problems that students of UTM found in caesarians. We are interviewing the peoples that eat in caesarians and list the problems that we found. And then we discuss it to identify the main problem that we are found.

“This program gives all groups a topic that “How will I develop cafeteria?” My group interviewed UTM students with the question that "Do you have some problems in cafeteria?" Because it is holiday of university, my group can therefore interview only 12 persons. There are many interesting data from interview section such as unclean cafeteria, long queue, hot weather, few numbers of chairs, distance between dorm and cafeteria and running animals on table in cafeteria. We focus on the long queue problem that more students concerned. Eventually, my group makes

application for users' convenience to manage their needs of foods through mobile application.”



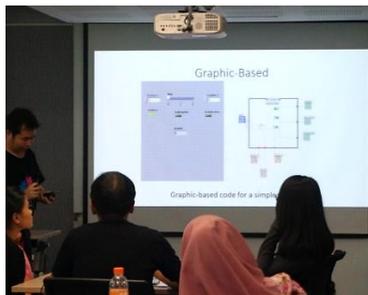
After we discuss it, we decided to create our design thinking and we solve this problems with create a mobile apps that we give its name is Yummy Apps like these pictures.



Finally we finish this phase with cultural performance and took a picture together.



The second phase was held in KMUTT Thailand at 19-22 May 2017. The topic of this phase is Implementation Procedures, so we must solve our problems that we found in Malaysia and make prototype about it.



After we discuss before, we agree to create the mobile apps for ordering system to solve our problems in cafeteria. And then we starting to create it and its first time to us to create a mobile apps, so we need extra effort to create it. And finally we finish it well.

And we are close this phase with took picture together. We think our chemistry starting form and we are closer each other^^



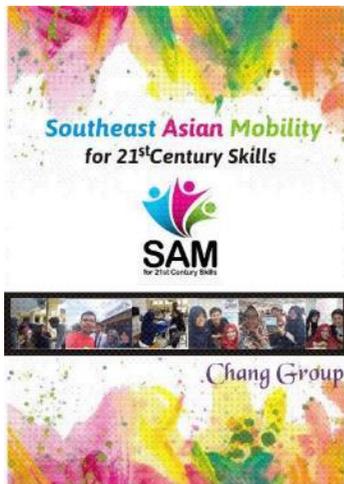
The Last Phase was held in UNJ, Indonesia with main topic is about communication and strategic business planning at 25-29 August 2017. We are prepare a business model canvas through identify our product value proposition and also make a poster for marketing our product.

We are planning our business for get successful profit with some strategic marketing. All of our ideas are we write down in business model canvas. Moreover, we are



also make scrapbook and also poster. And the last session we took picture in Tugu UNJ with happily.

Key Partner	Key Activity	Value Proposition	Relation ship	Customer Comment
<ul style="list-style-type: none"> <li>• Cafetarians (Mak Jah)</li> <li>• Advertiser</li> <li>• Programmer</li> </ul>	<ul style="list-style-type: none"> <li>• Selling</li> <li>• Promote</li> <li>• Platform management</li> </ul>	Free mobile Apps for ordering system	<ul style="list-style-type: none"> <li>• Giving point every order</li> <li>• There is funny gift in our Apps</li> </ul>	Student - Staff (All of the University)
	Key Resources <ul style="list-style-type: none"> <li>• Apps</li> </ul>		Channels <ul style="list-style-type: none"> <li>• Google</li> <li>• Play Store</li> </ul>	
<b>Cost Structure</b> Domain Web site : 300.000 IDR/year Monthly Management : 500.000 IDR @ 12 = 6 million/year \$,3 million/year		<b>Revenue Streams</b> <i>6 million/year</i> <ul style="list-style-type: none"> <li>• Advertiser Company For promote their products</li> <li>• Sharing <sup>income</sup> <del>product</del> with Cafetarians (8%)</li> <li>• Registration cost for Cafetarians (100.000 IDR)</li> </ul>		



# 4-TUNE

Wanda Amelia Rahma (IDN)

Anisa Iman Sari (IDN)

Hanifah Harfiatun Alhaq (IDN)

Ku Mohamad Afiq Bin Ku Arshad (MYS)

Nuttanon Songsuwan (THA)

Our group story through 3 phases in SAM project



Nisa is the first time to go abroad...felt so great !



(1<sup>st</sup> Phase in Malaysia)  
Go...go.... we can do it !



Almost done !



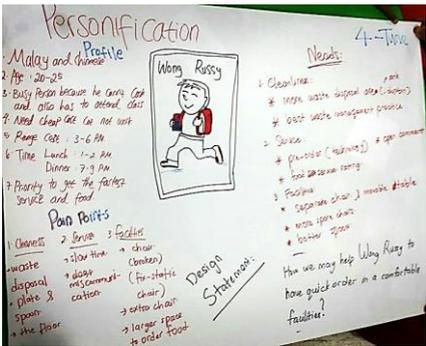
Our Group in Royal Palace of Johor Bahru...Nice ^^



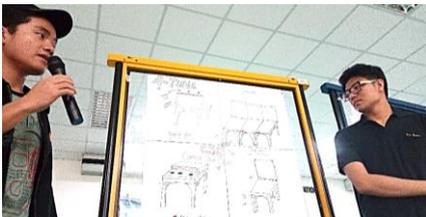
Pasar Karat... The night was so great ! love the moment



Dr.Tula with us yeah !



Those are what we found in UTM cafeteria



Keep fighting Nut and Afiq !

**Personification**

Malay and Chinese  
 1. Age: 20-25  
 2. Busy Person because he carries bag and also has to attend class  
 3. Need cheap bag (as not work)  
 4. Range Size: 3-6 ft  
 5. Time: Lunch: 1-2 PM  
 Dinner: 7-9 PM  
 7. Priority to see the fastest service and food

**Pain Points**

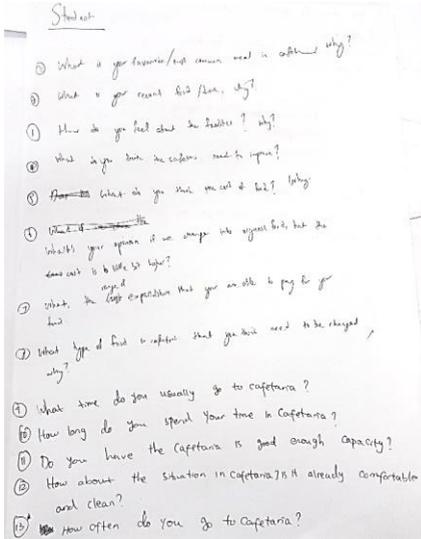
- 1. Chassis
- 2. Service → slow time
- 3. Facilities (chair)
- waste disposal
- plate & spoon
- the floor
- door recommendation
- (fu-fu-static chair)
- extra chair
- larger space
- wider foot

**Design Statement:**

How we may help Wang Russy to have quick order in a comfortable facilities.

**Needs:**

1. Clean area:
  - # trash waste disposal area (workers)
  - # trash waste management process
2. Service:
  - # front-line (waitress) # open comment
  - # food preparation room
3. Facilities:
  - # separate chair # movable # table
  - # waste spoon chart
  - # better spoon



Those are the questions that we will ask for interview



Delay time to KLIA ☹️ felt worse !



Stay At KLIA coz late for the flight to Thailand ☹️



Yeay we met for the second time 😊



Nice pict with Dr. Fauzan



Go..go..go..we can ! Make our CSC real 😊



Our CSC was ready !



We presenting the CSC (Combine Space Chair)



The chair will detect the space between chairs...they safe in 50cm long, if those chairs too close arduino will detect with light and give sound



Lunch time ☺ the foods were so delicious !



Before leaving the KMUTT



Must go back to Indonesia...see you in Jakarta !



Yeah!!! We got new member,  
his name is Khun 😊



It's value Proposition Canvas  
time



It's Lunch time in Indonesia

## ***Over All Of CSC (Combine Space Chair)***

**Problem:** How to improve the canteen and we focused on the facilities especially about the chair. The chair at canteen of UTM is the fixed chair and some of them are broken?

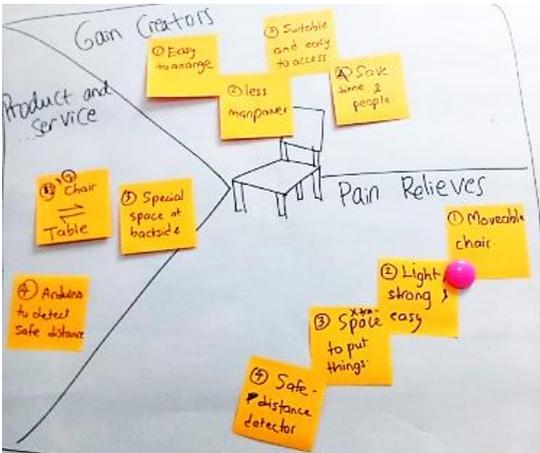
**Solution:** We think about the solution for the chair that is ‘**easy to move and easy to made**’ with the cheapest price. We had idea about it and its named **CSC (Combine Space Chair)**.

**Arduino** is an open source computer hardware and software company, project, and user community that designs and manufactures single-board microcontrollers and microcontroller kits for building digital devices and interactive objects that can sense and control objects in the physical world.

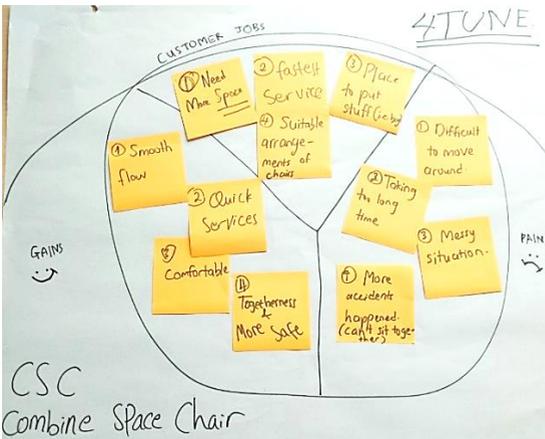
It is simple and accessible user experience, Arduino has been used in thousands of different projects and applications. The Arduino software is easy-to-use for beginners, yet flexible enough for advanced users. It runs on Mac, Windows, and Linux. Teachers and students use it to build low cost scientific instruments, to prove chemistry and physics principles, or to get started with programming and robotics.



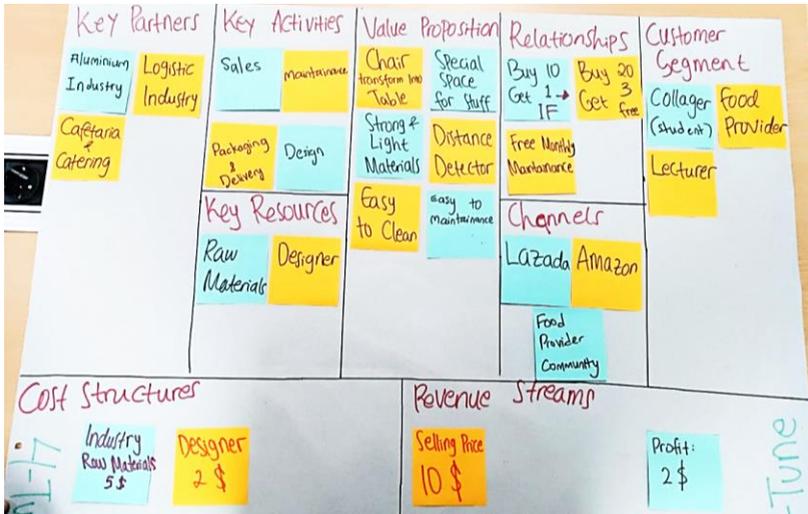
CSC can detect the distance by 50cm (coz we set it before) so if there is any object or other chair the arduino will give the signal by light on and sound. They wont collide each other (objects). The situatin in the cafetaria will become conducive coz there wont be accident. We make the cafeteria efficient in layout and also simple mutifungtions chair.



(The Seller)  
**VPC:** Value Proposition Canvas



(The Customer)  
**BMC:** Business Model Canvas



Our Business Model Canvas

### *First Phase Full of New Experiences*

Hello everyone, my name is Hanifah Harfiatun Alhaq. People around me tend to call me Ipeh but SAM's participants tend to call me Hani. And I'm the member of 4Tune. Soo glad to know all of you 4Tune (Nisa, Afiq, Nutt) & I'm the student of Islamic Studies department, Faculty of Social Sciences, UNJ. SAM first phase was an amazing experience for me because almost all the participants of UNJ come from math and science or technique department but there were just me, Nandar and Ika who come from social background. Comes from different background than others make us really proud and feel so honorable to be the representative of our major.

In this phase, I went to Malaysia with Alin. I met her since 2 years ago because we have being a volunteer at the remote area of Banten and teaching the children there together. At that moment, we make a plan to flight to Johor Bahru and transit in KL. Our departure was at 6:30 pm and we arrived at Soekarno Hatta International airport close to that time. We worried that we will be left behind the next plane because our arrival time really close to the next flight, so after check in we were running as fast as we could. Alhamdulillah, Allah still loved us because finally we have the chance to come to the boarding gate and sat on our seat number. Before went to Johor Bahru, we were transit at KLIA. There, we spent our time to go to KL Center and Menara Petronas. After that, we back to the airport and went to Johor Bahru. This was the second time I went to Malaysia, yet the first time I visited the icon of Malaysia. Thank you Alin to accompany me wherever I go. After made a little journey, me and Alin met other participants of Indonesia at Johor Bahru airport and we went to UTM with UTM's students.

Day one, after Dr. Yuli, Dr. Tula and Dr. Fauzan did the Introduction of SAM 21st Centuries Skills, we were introduced ourselves then learnt about design thinking. At the workshop of design thinking, we had group activities named user centric problem solving, we learnt how to being

empathy and understand user needs. After that, we did personification and design statement. Then, did the data clustering by interview some of UTM's students and asked their opinions about the canteen of UTM. In the evening, we had UTM and JB City Tour, we visited Sultan Palace, night market and other places. Really fun to visit the night market because it feels like at home hahaha 😊. The night market there, looks alike with night market in Indonesia. After go around, we back to the UTM's dormitory and have a rest.

Day two, was the last time we were in UTM. In the morning, we have some discussions and brainstorming to solve the canteen problem. The problem was how to improve the canteen and we focused on the facilities especially about the chair. The chair at canteen of UTM is the fixed chair and some of them are broken. Therefore, we think about the solution for the chair that is 'easy to move and easy to made' with the cheap price. We had idea about it and its named **CSC (Combine Space Chair)**. We made sketch of CSC and presenting it to others, we believe that our product can be the solution of UTM students' canteen problem.

*By Hanifah Harfiatun Alhaq (IDN)*

## ***Second Phase in Thailand was so amazing !***

Hai, it's me Nisa one of the member in 4Tune group. I'm so excited joined the second phase of SAM in Thailand. Coz we will make our project become real, yeahh its CSC (Combine Space Chair). Many things i had prepared to go abroad for the program. I booked 2 tickets to reach KMUTT in 19<sup>th</sup> of May 2017. My ticket is point to point so i didn't transit too long in KL. I met Viana and Fira at the airport Soekarno-Hatta and three of us had the same flight. We sat and talked during the time before the flight, suddenly there's a notification that our plane comes late so our departure is delay for about 30 minutes. We were so upset and a little bit worry for the next departure in KLIA2 to reach DMK. Time passed and we arrived at KL at 3 o'clock the next departure is on 4.30 p.m. we run to transfer counter departure but there's a problem with Viana and Fira coz they don't check in online before so they must go outside first and check in manually. I was confused here because Viana want me to follow her but in my mind i'll be late if i go with her and solve their problem. But in the other side i get pity on her, so i choose to follow Viana and solve their problem together.

The line so long and imigration become so busy in the weekend. There of us become panic coz the time is running for our next flight. We were optimist and still run to attend the flight. But when arrived at the gate the plane already

gone. We were so sad and didn't know what to do after this. As soon as possible we contact Dr. Yuli and told the story. Finally after waiting Dr. Tula and Dr. Kim helped us and bought the next flight tomorrow morning. We felt blessed ☺ on 20th May 2017 I finally arrived in Thailand and went straight to KMUTT. We missed the fun tour in Thailand that was facilitated on SAM. But its okay as long we can join the main program here. After lunch we were opening the program by the ceremony.

The program also had games and i was joining as the player. The situation was so fun ☺ we divided in two big groups to learn the new basic knowledge. One is studying about how to make apps and the other studied about arduino. My group focus to make special chair in UTM's Cafeteria so we learned arduino to apply in CSC that we will make. 4Tune consist of me Nisa, Nut, Afiq, and Hani. In this second phase we must make the prototype of our project that had we plan before in the first phase at UTM. Coz we dont have much time to make it real so we decided to divid the group member, Me and Hani made the replica of the special chair in the other side Nut with Afiq made the arduino which will detect the space between 2 chair or something with sounding voice and light on. Not only our group but all of the groups had strategy, teamwork, and good communication skills. We made it till 8 P.M. and felt

so happy can finish it so we just need to practice how to presentate CSC in the next morning.

Its almost the time to show CSC to all of the groups. 4Tune got the third turn. All the members take turn to deliver the best explanation about the CSC project. Start with how we got the problem till we decided to make CSC as the solution of the problem. At the and of our presentation we showed how the CSC works. I really love this moment and all of other groups really appreciate what have we made. After all the groups had delivered the presentation about their project we also had little game and took some pictures before close the program. In the afternoon some of the participants must went back to Indonesia so we must got ready for the flight. That's all what i had in this second phase of SAM program. The third phase must be awsome in Indonesia. See you all in here 😊

*By Anisa Iman Sari (IDN)*

### ***Second Phase, Just Let It Flow***

In the second phase, the participants of SAM went to KMUTT, Thailand. I have prepared about the ticket and have same flight with some of SAM participants of UNJ, and also Dr.Yuli, we went to Don Mueang airport together. After our arrival at Don Mueang airport, we went to the immigration and OMG!!! The immigration was so crowded.

There were many people who visited Thailand and we spent maybe one until two hour there. Before we left the airport, there was an accident. Dr.Yuli got information about 3 students from Indonesia was left behind the plane at KL airport, they were Nisa (my team mate), Viana, and Fira. We worried about them and really sad to know it. At that moment, we discussed about how to bring Nisa, Viana, and Fira to Thailand with the safe and fast way. After have a long discussed, Dr.Yuli said that they (who left behind) will have a flight schedule on the next day. So grateful to know it, thank you Dr.Yuli, Dr. Tula and Dr.Fauzan to really take care of us.

Day one, after have a breakfast we visited float market and some of place there (sorry, I forgot name of the places that we visited). There, we bought and tried some of Thailand foods, took many selfie together and others. After that, we back to KMUTT to continue SAM program. The program opened by a game, but I didn't follow the game because I must looking for the mushollah and take a prayer. In the program, all the participants divided in two groups to learn about new knowledge. The group one studied about how to make applications and group two studied about Arduino. Since 4Tune have a plan to make CSC so we decided to learnt about Arduino to apply it on our CSC. In this second phase, **we have to make the prototype of**

**CSC which we had made before at the UTM in the first phase.** To make the prototype faster, we divided our group in two small group. Me and Nisa made the replica of the special chair while Nutt and Afiq made the Arduino that will be detector of CSC. Since my basic background is social sciences I'm not really understand about Arduino but I felt so grateful to gained many knowledge from cross major here. We made the prototype until night because next morning we must practice and presenting it to others.

Day two, this day was our last day in KMUTT, we have to present our prototype. All of us (4Tune) delivered the explanation about CSC and we practice in front of others how CSC worked. All the members of SAM really appreciate the prototype of CSC and give some applause, felt so happy when our project accepted by others. Before the program closed, we played game and took pictures together.

In the afternoon, some of participants must go to the airport and back to their country while me and some of Indonesian students still at Bangkok and spent our few days to holiday. That's all my story in the second phase, hope the third place can be the unforgettable phase to all the participants. Can't wait to see you guys in Indonesia!

*By Hanifah Harfiatun Alhaq (IDN)*

### ***Third phase, Indonesia***

“This Must Be the Great Journey”

Hello everyone, i'm Khun from Thailand. This is my first time goes to Indonesia. I enjoy the every vibes here. I'm the new member of 4Tune, with consist of Nisa, Afiq, Hani, Nutt. But, Nutt doesn't come in this phase because he still in Korea to do the student exchange so i replaced his place at this group. Well, last night Nisa and Adiati already waiting us in the airport since we didn't take our lunch yet, so Nisa took us into restaurant. The name of the restaurant is Solaria. I ordered seafood noodle and mineral water. At the airport, we must walking to the parking area because the bus wasn't allowed to enter the terminal gate. We enjoyed the Jakarta's night view for the first time and there were so many traffic jam. At 7.30 pm finally we arrived at the hotel and searching for diner at Soerabi Bandung then take a rest.

In the morning, after taking the breakfast. I and the other participants go to UNJ by foot because the univeristy (UNJ) really near from the hotel. The program starts with ceremony activity and welcoming from the Vice Rector for Planning and Collaboration Affairs of UNJ, they welcome us very warm. Time goes fast, i learned new things about Business Model Canvas and i got shock because our group must make that BMC to promote our product. And you know



what??? I really don't know what is the product of my group. Kindly, Hani and Nisa explained the product very well to me. So, i can understand whats my group product had and finally i can give my opinion to make its promotion better.

Currently, i'm still in the workshop room, make our group's value preposition and elevator pitch also. I feel really grateful to being part of this program and i hope i can apply what i gets here in my life.

*By Ratchanon Kulchanimit (THA)*

# Epilogue

*“Every day you have the opportunity to learn and experience some-thing and some-one new. Seize the opportunity. Learn and experience everything you can, and use it to change the world.”*

Rodney Williams



Universiti Teknologi Malaysia

Universitas Negeri Jakarta

King Mongkut's University of Technology Thonburi and

University Mobility in Asia and the Pacific (UMAP)



**SAM**  
for 21st Century Skills

