



IASDO

Institute for Advanced and
Smart Digital opportunities

PREFACE

WE ARE PLEASED TO PRESENT THE LATEST ISSUE OF THE IASDO BULLETIN, WHICH FEATURES ARTICLES ON A WIDE RANGE OF TOPICS RELATED TO DIGITAL SOCIETY. WE HOPE THAT YOU WILL FIND THE ARTICLES INFORMATIVE AND THOUGHT-PROVOKING. WE WOULD LIKE TO EXPRESS OUR GRATITUDE TO ALL THE CONTRIBUTORS WHO HAVE SHARED THEIR INSIGHTS AND EXPERTISE WITH OUR READERS. WE WELCOME YOUR FEEDBACK AND SUGGESTIONS FOR FUTURE ISSUES OF THE IASDO BULLETIN. THANK YOU FOR YOUR CONTINUED SUPPORT AND INTEREST IN OUR PUBLICATION

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Pitri Yen's Practicum Experience

By: Pitri Yeni Azwar, Dr. Hapini Awang, and Dr. Nur Suhaili Mansor

"I learned a lot of guidance from the IASDO staff"

My name is Pitri Yeni Binti Azwar. I was enrolled in the Bachelor of Science with Honours (Information Technology) program and was one of three practical students who carried out their practicum at the Institute for Advanced Smart Digital and Opportunities IASDO) at the School of Computing (SOC), Universiti Utara Malaysia (UUM) for six months starting from 7 March 2022, until 8 September 2022. I have gained a lot of new experiences during my placement at IASDO. It was an exciting and valuable experience for me to learn during my practical at IASDO. Since all employees nowadays need to possess basic computer skills, I firmly believe that computer literacy will help in performing given tasks efficiently without needing any study context. For me, the main task that I accomplished was through research, and during the practical, I received a lot of guidance from the IASDO staff. I was positioned in the Research Assistant Division, and my supervisor was Dr. Hapini Awang who was also the Director of IASDO.

During my practical period, I have been given the tasks such as:

- 1.** Updating the paperwork to purchase tables and beanbags to upgrade the meeting room in order to enhance the room and fulfil the activities in the rooms.
- 2.** Updating the working paper for the IoT Exploration Program with Orang Asli Students to give them exposure to the vast world of information technology in rural communities, especially the Orang Asli.

3. Made two posters for the IoT Exploration Program using Adobe Photoshop software. In addition, I made a congratulatory garland poster for the lecturers who had successfully published in a top-ranked journal.

4. Made invitation letters for the lecturers who want to participate in the IoT Exploration Program.



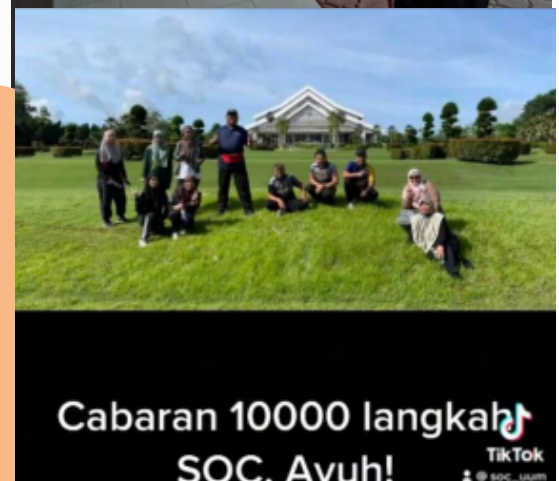
5. Be a facilitator during the IoT Exploration Program in Cameron. Besides that, made a PowerPoint slide to give exposure to primary and form six students about information technology, the direction after STPM, and the opportunities available at UUM. After organizing the program, we researched Orang Asli students who wanted to continue their studies to a degree.

6. Patrolled the SOC building accompanied by the dean and deputy dean to check for any damages and dirt on floor levels 1 and 2. Any damages and dirt were documented by taking pictures and creating a list, which was sent to the dean.

7. Developed a Databank Dashboard on Historical Buildings in Malaysia in collaboration between IASDO and National Heritage Department.

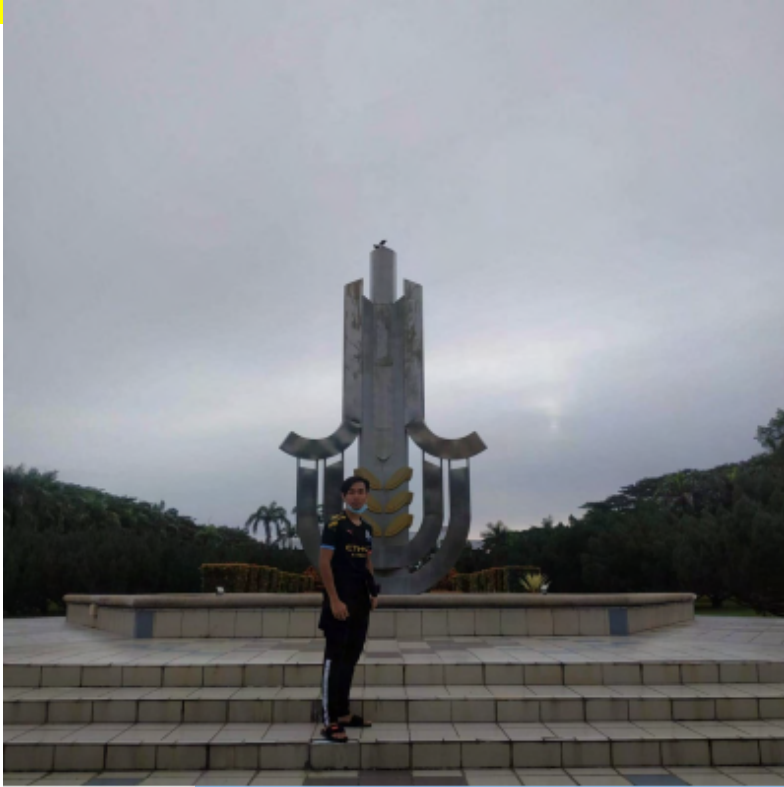


8. Participated in programs organized by the SOC and UUM, such as making bubur lambuk in the month of Ramadhan, SOC 10 000 steps challenge, gotong royong perdana, SOC aerobics, and many other exciting activities are carried out.



Azim's Journey

By: Muhammad Hazim Adnan, Dr. Hapini Awang, and Dr. Nur Suhaili Mansor



Furthermore, I have been blessed with meeting such astounding and superb lecturers especially Dr Hapini whom I consider a very dear lecturer to me. He has been very supportive since my years as a foundation student at UUM as he did teach me during my first semester in UUM Foundation. Although he does not currently teach me in degree, we still keep in touch and Dr Hapini's advice and guidance have helped me in many ways whether it is academic or personal matters because his affable approach has made me comfortable for me to communicate with him. My achievement in obtaining the dean's award would not be possible without his help and he has always given me encouraging support to do my best in my studies in order to have a bright future and become more employable towards future employers.

Assalamualaikum, I am a first-year student currently pursuing my studies in bachelor of information technology science here at Universiti Utara Malaysia at the School Of Computing (SOC). I am very grateful to continue my studies at UUM because my learning experience has so far been very impactful and fruitful. I am currently in my second semester and taking 5 subjects which include Computer System Organization, Data Structures And Algorithm Analysis, English Proficiency III, Programming 2, Sports Management & Recreation II, and Statistics For Information Technology. The assessments and activities handed out by my lecturers have challenged me to identify and produce alternative solutions to complete the tasks. These mind-challenging tasks have improved my thinking process as I become more insightful and analytical with each task I face. All courses that I have taken have been relevant and crucial to my field of studies in SOC as my insight of knowledge improves in various aspects. All my hard work has paid off as I managed to obtain the dean's list award which is a very commendable academic award that only students who achieve a CGPA of 3.65 or higher can receive the award.



Mobility Dispatch - Social Intercourse

By: Nurul Hafizah Hazwani Hashim, Dr. Fazli Azzali, and Dr. Azizi Abas



Earlier this year, four postgraduate students participated in the Erasmus Student Exchange Mobility Program, where three of them were positioned in Greece and one in Spain. It was organized by Erasmus+, a European Union program to support education, training, youth, and sport. Luckily, two of the participants, Hafizah and Tendai are students from Big Data Lab who were the first selected from this lab. Therefore, a sharing session was conducted at Big Data Lab in July 2022.

They started the session by describing the environment of the country and the university. According to them, Athens is a somewhat conservative but developed country, famous for its historical landmarks and olive trees. They were mesmerized by the transportation system in Greece, which is very fast, smooth, and connected not only to the town but also to the suburbs. As for the university, they enrolled at the University of West Attica, Greece. The best thing about the university is that free meals were provided for the students, and the restaurants are distributed across Athens. During their stay, they were assigned to the same supervisor who was very attentive to helping them adjust to the new environment., indeed!

Academically, they were tasked with producing papers on their studies under the guidance of their supervisor. Socially, their task is to travel throughout the country and experience a new culture. A perfect job for students.

Unfortunately, life is not all rainbows and butterflies. They did not miss out on sharing their hardships and unpleasant experiences throughout the program. The biggest hardship they faced is poverty. Indeed, they were given some allowance for this program, but it was very limited resulting in them being very selective when doing groceries and shopping. When asked about racism, they replied that they did experience it subtly. Due to them being foreigners and women of colour, sometimes they were stared at when riding a train or trams, especially by the elders. They shared that once, they tried to ask for directions, but got shooed away harshly as the person declined to entertain them. Besides that, it is hard for them to seek help from the locals because of language barriers. They explained that most of the Greeks, particularly youngsters can speak English, but with a heavy accent, making it difficult to understand them. Sign language is the best, they said. Another misfortune they always faced is a strike. There were a lot of consequences of a strike, one of them being school closure since all transportation systems were halted.

They conclude that the output that they have gained from this exchange program is diverse in terms of cultural experiences, knowledge, and valuable memories that benefit them not only academically, but also physically and spiritually.

Lastly, they closed the session by reckoning everyone to participate in an exchange program and providing guidance on mobility to anyone interested in partaking in the future that is, one needs to open up without being judgmental and eager to try new things.





This was the first time Ahmad Abrar, a student from Pakistan, had tasted the King of Fruits. Due to the odour, he was initially reluctant to try durian, but now he has since become one of the biggest lovers of the fruit.

By having this activity, the group, especially the international students, were not only able to taste the durian, but it also facilitated the formation of strong bonds between the students and the staff. This durian orchard visit is really a quick escape that the students needed after having a rough day and a stressful environment daily.

Thorny-Season: A Case Study by IRL Members

“The taste is good despite the smell of it”



Additionally, the group enjoyed their time at the orchard. After a long, stressful day in the laboratory, this was a refreshing break. They were charmed by the tranquility and lushness of the environment.

Shurahbil, a student from Indonesia really admires the serenity of the orchard. “It was a great trip, and we feel recharged and ready to head back to work now,” he said. In the future, we really hope that there will be more events we will be able to organize. Not only engaging the IRL research laboratory but also including participation from other research laboratories as well.



By: Athirah Rosli, Prof. Dr. Osman Ghazali, and Prof. Ts. Dr. Suhaidi Hassan

It is durian season in Changlun, Kedah and the roads leading to Universiti Utara Malaysia are lined with durian stalls selling the freshest fruits. Not to be left behind, on June 16, 2022, Professor Ts. Dr. Suhaidi Hassan, together with seven members of InterNetWorks Research Laboratory (IRL) students, visited a durian orchard in Changlun, Kedah. The orchard’s owner, Dik Yah, welcomed the group with fresh durian and other local fruits offered at the orchard. Her orchard has become one of the go-to spots for families and friends who want to have an unforgettable experience of eating fresh durian in an orchard. The orchard is close to the main road, easily accessible, and priced affordably.

Assessment of Citizens Usage of E-Government Initiative: A Case Study of the Nigerian E-Taxation System Continuous Usage

By: Ishaku Uba Haruba, and Dr. Hapini Awang

Despite the successful record of electronic taxation (E-Taxation) system in other countries, the statistics of usage in Nigeria are still disappointing, which indicates that it is not on the right path to success. Therefore, we conducted an empirical investigation to examine the determining factors of E-Taxation success among Nigerian taxpayers. As a result, we have successfully come up with the e-taxation success Model. This model structurally maps out the significant related factors and describes how the E-Taxation continuous usage could be developed.

The study extends the DeLone and McLean IS Success Model (D&M) by integrating Trust as well as E-Government Experience, Culture and Sense of Place (SOP) to examine E-Taxation success.

A survey of 768 individual taxpayers in Nigeria, who participated in the E-Taxation system was conducted. The study discovered that Information Quality, System Quality, Service Quality, Net Benefit, and Trust, are significant determinants of taxpayers' Intention to Use and continuous Usage of the E-Taxation system, when they are regulated, through their Satisfaction.

The study covers the task of pre-use and post-use by providing a behavioral process within context of E-Taxation unceasing application. Hence, the study proves how crucial it is for authorities and groups to appreciate the long-term measures of E-Taxation suitable plans.

The characteristics of an addictive person can include:

Preoccupation with substance use.

Placing more value on the benefits associated with drugs or rewarding behaviours rather than their detrimental effects.

The inaccurate belief that problems experienced in one's life are attributable to causes other than as a consequence of addiction.

Increased anxiety, dysphoria and emotional pain.

Increased sensitivity to stressors associated with the recruitment of brain stress systems, such that “things seem more stressful” as a result.

Difficulty in identifying feelings, distinguishing between feelings and the bodily sensations of emotional arousal and describing feelings to other people.

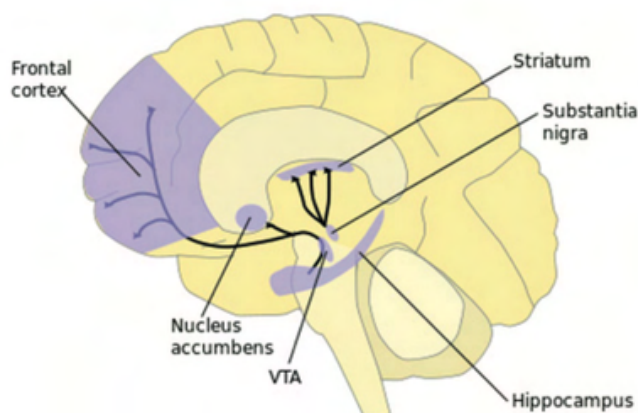
ONLINE GAME ADDICTION: THE FACTS THAT WE SHOULD KNOW

By: Wan Mohd Yusoff Wan Yaacob, Associate Prof. Dr. Nur Haryani Zakaria, and Associate Prof. Dr. Zahurin Mat Aji

Online game addiction can be classified as problematic, excessive and compulsive usage of online gaming that results in a significant inability to function in multiple domains over an extended period of time. This addiction has the same effect as opium, alcohol, marijuana and other substance addiction towards the brain system circuitry.



Online game addiction can stimulate certain receptors in the brain to generate euphoria which regulates pleasure in the brain and slow down the action in daily routine caused by dopamine release. Dopamine is a neurotransmitter made in the brain whose role is as a reward centre which communicates the messages between nerve cells in the brain and the rest of the body. There is a dopamine flow that operates in the brain as shown in Figure 1.



Specifically, euphoria in online games is also a reward psychiatry system in the brain which is handled by a certain part of the brain which is called the Nucleus Accumbens (see Figure 1) that regulates the dopamine release to make pleasure in the brain. This pleasure centre of our brain will stimulate and increase dopamine in the brain to make the user feels good towards substance addiction. The same goes for non-substance addiction such as online game addiction. The dopamine released towards online games makes the user feel euphoric and feel the games are more fun than the previous times.

There are three discrete phases in online games addiction: First, the user feels the game is actively fun and continues playing continuously throughout time which encourages the regular release of dopamine in the brain. There is a part of the brain called Homiostasis in the Hippocampus (see Figure 1) which maintain and balance the dopamine release in the brain and keep the tolerance from being increased in order to make a new impact. Once the tolerance develops and climatizes the dopamine release, the games will start to be less fun and need to increase the time spent gaming in order to maintain the euphoria and dopamine.

GAME OVER

In order to mitigate the problems, the user has to change the neurochemistry in the brain and solve the exhausted dopamine circuitry. The user has to implement digital detox by getting rid of the online games for a period of time and the body will reset the Homeostasis to a normal dopamine level. In order to turn back to their normal condition they need to be on the detox for a period between 2 weeks and 2 months.

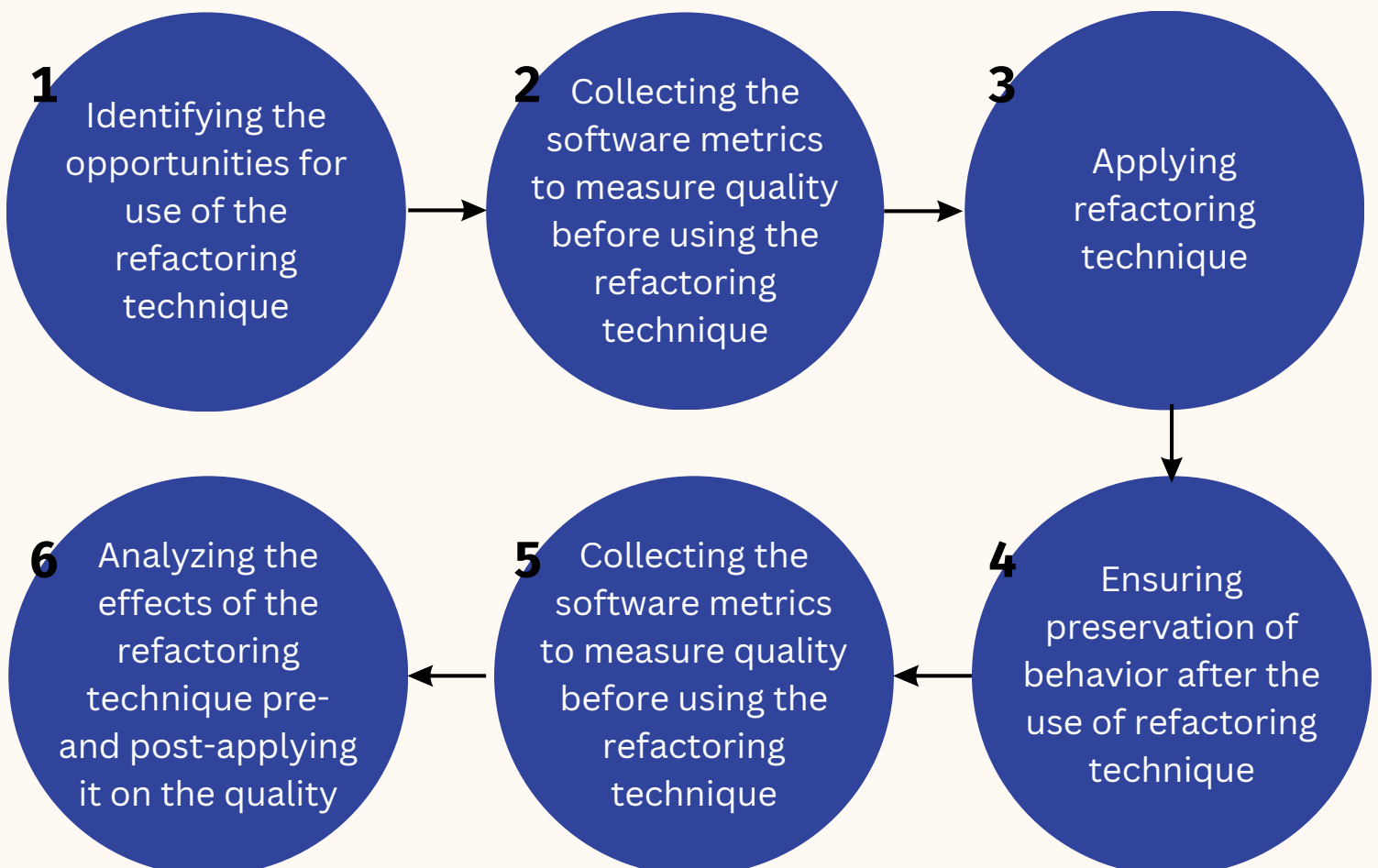
BEST PRACTICES TO REFACTOR C</>DES

By: Abdullah Almogahed, Associate Prof. Dr. Mazni Omar,
and Associate Prof. Dr. Nur Haryani Zakaria



Software refactoring improves software design quality by restructuring a system's internal design without changing its functionality. Nowadays, refactoring is a significant activity of software development processes because it can be triggered by various factors such as new requirements, adaptation to multiple contexts, and poor quality. Refactoring is one of the most popular techniques for improving the quality of existing software, and it has four major benefits: 1) it improves software design, 2) speeds up programming, 3) makes software easier to understand, and 4) aids in defect detection. There are 68 original refactoring techniques. Extract Method, Move Method, and Extract Class are the most commonly used refactoring techniques.

Six sequence steps must be carried out to apply best practices in refactoring



Step 1.



the classes of a software project should be analyzed to identify areas that may require refactoring to improve the design's quality. In this book, Fowler provided examples to demonstrate how to use refactoring techniques. By the end of this step, the potential classes that require refactoring should be identified, and the appropriate refactoring technique should be chosen.

Step 2.



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Step 3.

each refactoring technique selected is performed to see how it affects the quality attribute. Fowler explained how to use each refactoring technique. Application refactoring techniques can be performed manually or with the assistance of tools such as the Eclipse Refactor plugin, RefactorIt tool, and JDeodorant tool.



Step 4.



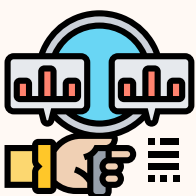
system behaviour preservation means that the outputs of the software system after refactoring must be the same as they were before the refactoring. Regression testing must be carried out by executing the source codes after refactoring and comparing their outputs after refactoring with their outputs before refactoring can be used to preserve the behaviour of software systems.

Step 5.

the software metrics are collected to measure the relevant quality attributes after performing the chosen refactoring technique. This step is carried out exactly as described in step two above.



Step 6.



the effects of the refactoring technique are evaluated by comparing software metrics before and after applying it. If the refactoring improves quality, the process can be continued. If refactoring degrades quality, the refactoring process can be cancelled.

STEPS AND WAYS TO ELIMINATE LAZINESS AND PROCRASTINATION



By: Munya Saleh Ba Matraf, and
Associate Prof. Ts. Dr. Nor Laily Hashim

Laziness and procrastination are two characteristics that negatively affect the productivity of individuals. On the academic side, procrastination and laziness harm student achievement. Some may think laziness and procrastination are one thing, but this is not true as laziness is often due to organic and reflex reasons, unlike procrastination, which occurs with a person's will.

First, laziness often has organic causes such as thyroid problems, diabetes, vitamin deficiencies and depression. Besides, behavioural habits such as sleep disturbance, eating much sugar, drinking less water, and eating fast food may also cause laziness. Hence, knowing the cause will be the first step in treating laziness.

Second, procrastination is a major natural consequence of laziness that leads to delaying many tasks. Curing laziness is the first step to treating procrastination. Other causes of procrastination are complicated tasks, speed of boredom, low motivation, the search for idealism, setting big goals and fear of failure

After knowing the causes of procrastination, here are some steps to treat it:

1. Divide the big goals into small goals that can be accomplished easier and faster, and set a timetable for accomplishing these tasks
2. Prepare positively for completing the task
3. Address any negative feelings while carrying out tasks (e.g., taking a break and changing places)
4. Excellent planning to perform tasks and the plan must be written
5. The more you exercise, the easier it will be to break through that barrier of inertia and you will feel more motivated and more willing to put in the effort.

In addition to the previous steps, here are some ways also may help in solving the problem of procrastination

Method 1: Pareto principle 20/80:

The Pareto Principle says that 80% of the results come from 20% of the causes. The rule is that knowing 20% of anything allows you to perform 80% of the related operations, and this rule applies to everything. Therefore, when you have a set of tasks in front of you, you should use this principle to start completing the tasks that require 20% effort and give 80% impressive results. This will motivate you to complete the rest of the tasks

Method 2: Eisenhower Matrix:

The Eisenhower Matrix is a way to organize tasks by urgent need and importance, so you can effectively prioritize your most important work. Differentiating between urgent and important tasks in the Eisenhower Matrix can help you determine which tasks you should jump on and which tasks other team members or anyone else can handle best where urgent tasks require your immediate attention. There are clear consequences if you do not complete these tasks within a specific time schedule. These are tasks you cannot avoid, and the longer you delay these tasks, the more stress you are likely to be exposed to, which can lead to stress and fatigue. Figure 1 shows the Eisenhower matrix.

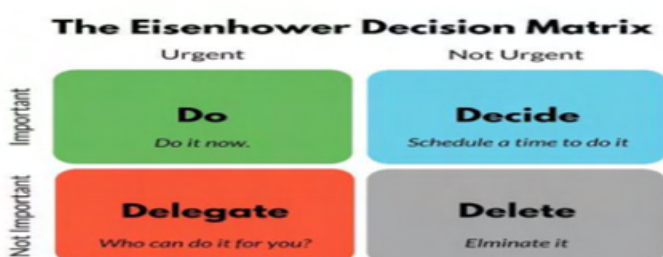


Figure: 1 Eisenhower matrix

Method 3: The five-second rule

The rule says, if food falls on the floor, it may be safe to eat it if it is picked up again within five seconds (depending on how clean is the floor). This rule helps in resolving things faster. Not only the food falling on the ground, but every problem addressed faster will not be considered a problem. You feel lazy and start thinking about procrastination, start counting to five and move on. Don't postpone today's work until tomorrow. Figure 2 depicts five-second rules.

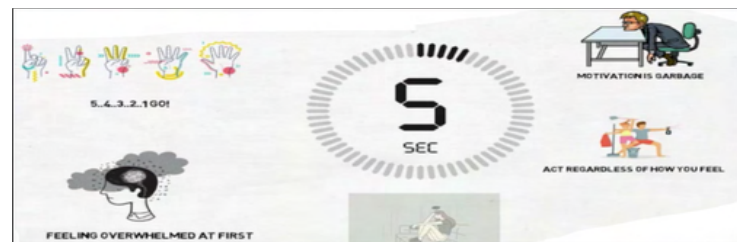


Figure: 2 five second rules

These are some steps and ways to let you overcome laziness and procrastination. What if you tried all of them and you still feel lazy??? In this case, you must discover your method, which is called the self-motivation method. Everyone has a dream he wants to come true; this dream must be your motivation to succeed and stop laziness. For more reading about the topic, refer to the references list below.

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<https://tinybuddha.com/blog/5-ways-get-energized-motivated-feel-lazy>

<https://jamesclear.com/eisenhower-box>

<https://www.femina.in/wellness/de-stress/8-possible-reasons-why-you-feel-tired-lazy-and-dull-all-the-time-177175.html>

<https://www.briantracy.com/blog/personal-success/how-to-use-the-80-20-rule-pareto-principle/>



STRENGTHENING THE AGENDA OF LIVING CAMPUS



By: Dr. Saadi Ahmad Kamaruddin

28 JULY 2022 - Living Campus is a sustainability strategy plan for UUM 2030. The plan defines university-wide goals and priorities in the areas of waste management, campus operations, the environment and ecosystems, emissions and energy, and culture and learning. It also incorporates UUM's overarching vision.

The two main cores of UUM living campus sustainability plan are:

- i) Sustainable Young Green Talents
- ii) Resources Conservation

Until 2023, UUM Living Campus aims to solidify four main taskforces (waste management, carbon footprint, energy management, and water management).

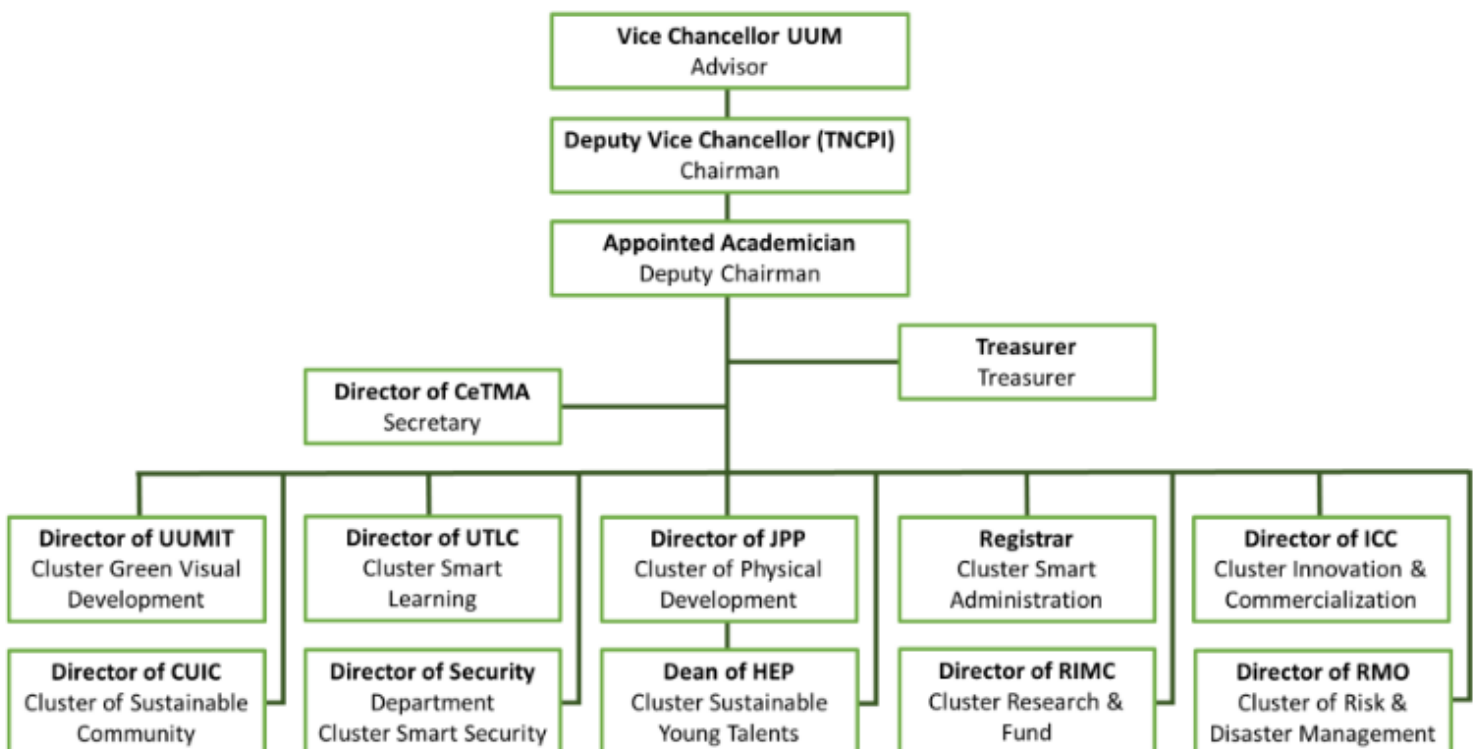
The Living Campus initiative inspires faculty, staff, and students to continue putting in significant effort to find answers to the university's many sustainability issues. These would aid the university's initiatives to put sensible cost-cutting measures into place and address contemporary campus issues.

The Malaysia Sustainable University Campus Network, or MYSUN, is an Erasmus+ CBHE project supported by the sustainability office of the Centre for Testing, Measurement, and Appraisal (CeTMA). MYSUN was developed in response to a sincere desire to help the Malaysian higher education system enhance the knowledge and skills of their staff, have access to good practices developed in other institutions, and strengthen their capacity to cooperate in this matter both locally and on a national level.



Living Campus engages in a quadruple helix of collaboration with communities, businesses, and the government to ensure that best practices presented may be applied outside of UUM for the mutual benefit of many stakeholders and parties.

New Structure of UUM Living Campus Steering Committee



YOUTH LEADERSHIP CAMP: UNLEASHING YOUR POTENTIAL

By: Nadhrah Jamaludin, and Dr. Hapini Awang

Amidst a busy schedule on week 14, I had the most incredible experience I have ever had in my undergraduate. Fortunately, I managed to complete all my tasks earlier. This camp was held on 6th July 2022 at Sekolah Kebangsaan Telaga Mas, Pokok Sena, Kedah. The target for this camp was leaders among the students which were School Prefects, School Librarians and Peer Counselors. There were 70 leaders participating and 9 facilitators from University Utara Malaysia (UUM) in this camp. We played a lot of activities with them, let's find out what they were.



PRESIDENT OF THE PROGRAM GIVING HIS SPEECH DURING OPENING CEREMONY

First and foremost, the most important slot was the opening ceremony. Our president gave a short speech, and we introduced ourselves to the students. Then we moved to the next activity, which was an ice-breaking session. Students had to discuss and choose an animal for their logo and tagline. Each group had one facilitator to guide them and 40 minutes were provided to them for this activity, and they needed to present their logo and tagline. Most of them were still shy during presentations because this was the first time they stood in front of their friends.



ACTIVITY 1: ICE BREAKING SESSION AND PRESENTATION

Next, "lead the blindfolded" was the second activity. In this activity, all participants had to close their eyesight with a piece of cloth except for the leader because they needed to give instructions to their groupmates. This activity aimed to improve their corporation and trust level among the groupmates. The next activity was flying can. Each group would get 3 pieces of rope and a can filled with water in a loop. They needed to bring the can to the next checkpoint only using the rope without touching it. Next, traffic jam proved to be the most challenging activity ever because they had to think outside of the box on how to solve the problem. It was already noon and everyone was feeling very tired, so we took a break for an hour.



Activity 2: Lead the blindfolded



ACTIVITY 3: FLYING CAN



STUDENTS WERE EXCITED FOR OUTDOOR ACTIVITIES



ACTIVITY 4: TRAFFIC JAM

After we refreshed ourselves, we had a motivational talk slot by Practicum Counselor UUM. The last activity for the program was tic tac toe. All of them enjoyed playing the game very much. So, it was time for the closing ceremony. We did take a picture with them and it is one of the memorable moments.



ACTIVITY 5: MOTIVATIONAL TALK SLOT

ACTIVITY 6: TIC TAC TOE



Last but not least, friends make life memorable. This was my first experience ever being a facilitator. I am glad that I grabbed this golden opportunity because I could develop my communication skills and gain more experience.

These are the beautiful and handsome facilitators.



The Memory of Collaboration With SOC

By: Dr. Mat Rahimi Yusof

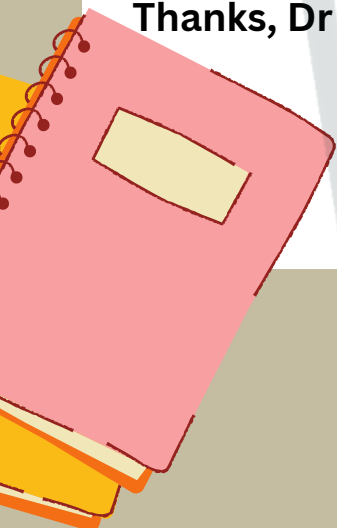
I was invited to join IMBRE Grant after a lengthy discussion with Dr. Hapini Awang. Although I was very happy I also felt a little bit worried because of the scope of the research. Nevertheless, I figured that this was the right time for me to develop networking with other schools. So, I decided to grab this opportunity. Fortunately, our proposal was approved.

The networking began officially. I still felt worried because technology is not my expertise. However, after brainstorming and discussing, I felt that technology is very important for everyone. I gained a lot of new knowledge and skills in technology, which made me very happy.

Dr. Hapini and the SOC team were always supportive and helped me to understand more about technology, especially in education. Besides that this grant taught me how to collaborate with others outside UUM.

Honestly, I do not regret joining this collaboration because it encouraged me to do the right thing, especially in regard to how technology can support teachers in their daily routines at school.

Thanks, Dr Hapini, SOC and Team





Awareness of Natural Hazards, Disasters and Risks

**By: Prof. Huda Hj. Ibrahim,
Associate Prof. Dr. Azman Yasin,
Associate Prof. Dr. Mazida Ahmad,
Associate Prof. Dr. Mazni Omar, and
Dr. Amirulikhshan Zolkafli**

In March 2022, the Institute for Advanced and Smart Digital Opportunities (IASDO) was invited by Erasmus+ to participate in the 2nd educational training at the University of West Attica in Athens, Greece (UNIWA). The training aimed to introduce the participants to Information and Communication Technology (ICT) solutions, methods and approaches to deal with natural hazards, disasters, and risks.





The first day of the training started with a session on Natural Hazards, Disasters, and Risks. The participants were introduced to the various hazard assessments, including the location and timing of the hazards. The importance of early warning hazards was emphasized, which is usually based on historical data and the Sendai Framework. The session emphasized the need for appropriate disaster prevention, mitigation, preparedness, and response to build people's capacities and tackle the causes of vulnerability.

The second session of the day was on GNSS for Natural Disaster Monitoring. The participants learned about the role of GNSS in advancing natural hazards monitoring and risk assessment. The session discussed the use of satellite-based augmentation systems such as NAVIC (IRNSS) and SBAS.



The third session of the day was on GIS applications in Flood Management. The participants learned about the framework of spatial analysis for flood management, including preparing and exploring data, choosing methods and tools, performing the analysis, and examining, refining, and reviewing the results. The session also discussed the importance of setting a suitable buffer zone and the use of a model builder in ArcGIS to automate processes

The second day of the training focused on a micro-zonation study using microtremors (HVSR method). The session discussed the acquisition of data using microtremors, with a focus on the use of seismometers with three components. The session also highlighted the importance of considering the fundamental frequency of soil formations, and how short or long-period seismometers can be used. However, the session also touched upon the drawbacks of using long-period seismometers, such as the time it takes for the instrument to come to rest and the avoidance of measurements during rainfall or strong winds.



The second session of the second day was on Natural Disasters: Evaluation of Losses and Design of Structures. The participants learned about the FEMAS software program for estimating potential losses from disasters. The session emphasized the importance of having a nationwide database for evaluating losses and designing structures, including demographics, building stock, essential facilities, transportation, utilities, and high potential loss facilities.



The third session of the second day was on IoT-based Landslide Early Warning Systems using Low-Cost Solutions. The participants learned about the reliability and efficiency of IoT-based landslide prevention technology, and how it provides accurate data and has great potential for future work. The session also discussed how landslide monitoring systems are low-cost compared to conventional monitoring systems.



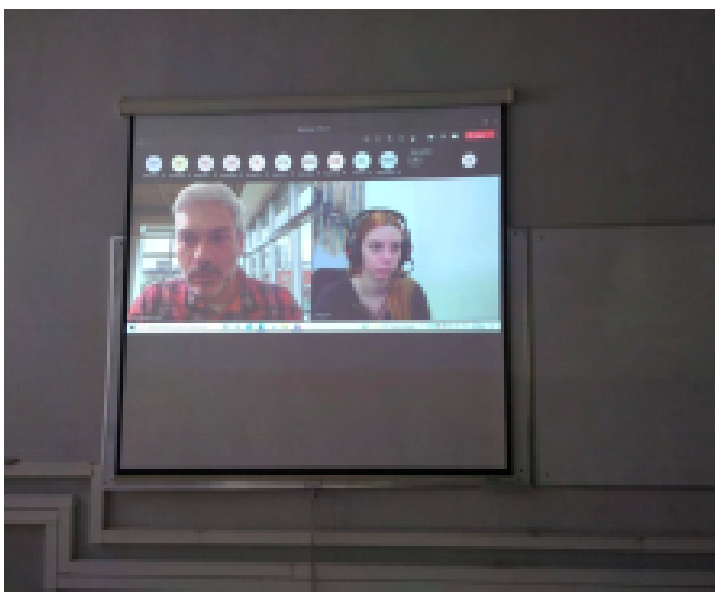
The third day of the training started with a session on the Security of Critical Infrastructure of the Transport Sector. The participants learned about the five strategic pillars of global road safety, including road safety management, post-accident management, safer road users, safer vehicles, and safer mobility and roads.



The second session of the third day was on New Trends in Remote Sensing Applications. The participants learned about the increasing use of remote sensing in both the commercial and personal sectors, and its potential to take us into the metaverse. The session emphasized the importance of credible images in the metaverse, which can only be achieved with remote sensing and geospatial technologies. The session also touched upon the increasing demand for scans in various locales and the realism of virtual properties, which adds to their worth, especially for commercializing virtual tourism. The session mentioned that remote sensing images can be downloaded at Copernicus Hub and the United States Geological Survey (USGS) Explorer.



The 2nd Educational Training at the University of West Attica, Athens Greece was a successful event, with all the sessions being conducted as per the schedule. The primary focus of the sessions was on research governance, and the discussions revolved around this topic. The Question and Answer sessions were highly engaging, and the participants actively participated in them. The lively atmosphere of the sessions made for an enjoyable learning experience for everyone involved



One aspect of the training that received particular praise from the participants was the emphasis on thinking outside the box. They appreciated the opportunity to engage in discussions that challenged their conventional ways of thinking and encouraged them to consider new and innovative approaches. Furthermore, the intercultural communication aspect of the training was also well received, as participants were able to connect with people from different countries and cultural backgrounds, fostering a sense of unity and understanding

Overall, the Study Tour was a positive experience for everyone involved, with participants gaining new knowledge and insights into research governance and the benefits of intercultural communication. The Institute for Advanced and Smart Digital Opportunities (IASDO) should be proud of the impact they have made on the participants and the positive reviews they received.

Geomatics for Disaster Risk Reduction Awareness Raising Event

By: Prof. Huda Hj. Ibrahim,
Associate Prof. Dr. Azman Yasin,
Associate Prof. Dr. Mazida Ahmad,
Associate Prof. Dr. Mazni Omar, and
Dr. Amirulikhlan Zolkafli



Figure 1

On December 14, 2021, a team of researchers from the Institute for Digital Advancement and Smart Opportunities (IASDO), led by Dr. Azman Yassin were invited by Erasmus+ to host an Awareness Raising Event. The goal of this event was to educate the public and relevant authorities on the significance of creating resilient communities while taking into consideration of regional vulnerability. Throughout the day, the definition and concepts of geomatic and disaster risk were presented in simple explanations, emphasizing the knowledge gained and capacity building done in GeoDRR.

The primary objectives of the 2021 GeoDRR Awareness Raising Event were: (i) To share insights on using GIS for disaster risk management in Malaysia, (ii) To advertise the MSc (GeoDRR) program, set to be launched by the School of Computing at Universiti Utara Malaysia in September 2022, (iii) To increase understanding among the public and state authorities about the importance of geomatic disaster risk reduction management in reducing the risk of disaster.

To ensure the event produces a significant impact on the participants, IASDO invited two renowned speakers: Dr. Khamarrul Azahari Razak and Mr. Mohamad Sam Bin Manaf. Dr. Khamarrul Azahari Razak is the Director of the Disaster Preparedness and Prevention Center (DPPC) at the Malaysia-Japan International Institute of Technology (MJIT) at Universiti Teknologi Malaysia (UTM) Kuala Lumpur. DPPC is a top center for advancing disaster risk reduction through science, technology, and innovation and serves as a regional research hub for disaster prevention as part of the Japan-ASEAN Science, Technology, and Innovation Platform (JASTIP). Dr. Razak holds a Ph.D. from Utrecht University and has collaborated with the Faculty of Geoinformation Science and Earth Observation, the University of Twente, and the United Nations University Disaster Risk Management Centre for Spatial Analysis and Risk Management. He has also served as an international visiting researcher at the Disaster Prevention Research Institute at Kyoto University and the Asian Disaster Reduction Center in Kobe, Japan.



Dr. Khamarrul Azahari Razak

Dr. Khamarrul Azahari Razak is a member of several organizations and committees focused on disaster risk reduction and climate change. He is a member of the Climate Change and Disaster Risk Reduction Group at the Global Young Academy in Germany and the technical committee for Transdisciplinary Approach for Building Societal Resilience to Disasters at the Asian Civil Engineering Coordinating Council in Japan. Dr. Razak is also a Science and Technology Expert Panelist for the National Disaster Management Agency in Malaysia and part of the Inter-Agency for Slope Management technical committee.

Dr. Razak is an expert in disaster risk reduction, specializing in multi-hazard risk assessment, urban resilience, and climate change adaptation. He has a strong background in earth observation and geospatial technology for disaster risk management and the role of communities in disaster risk reduction. He has participated in research projects and consultations with organizations such as UNDP, JICA, and UK Economic & Social Research Council, working towards integrating disaster risk reduction into sustainable development. Dr. Razak is also an Ex-Officio Member of MERCY Malaysia, a humanitarian organization focused on supporting sustainable development



Mr. Mohamad Sam Bin Manaf

On the other hand, Mr. Mohamad Sam Bin Manaf is the General Manager of Ground Data Solutions R&D Sdn. Bhd. He holds a Bachelor's degree in Computer Science from UKM and a Master's in Remote Sensing from the University of New South Wales. He has 10 years of experience working in government agencies and has held positions such as Head of Division and Chief Operating Officer at Pan-Northern Air Services Sdn. Bhd. He has also served as Technical Director and led business development at RS&GIS Consultancy Sdn Bhd and AAM Proprietary Limited. In his current role as General Manager at Ground Data Solutions R&D Sdn. Bhd, he has utilized his technical expertise to drive the company's success in securing new projects with both government and private agencies in the geospatial industry.

GEODRR Awareness Raising Event details were as follows:

- **Date: 14 December 2021 (Tuesday)**
- **Time: 09.30 AM - 11.30 AM (Malaysia time)**
- **Platform: Online Zoom Meeting**

- **Fee: Free of charge**
- **Target Group: Open to all students, industry partners and local communities.**

This event successfully attracted 159 participants from higher education institutions across Malaysia. Besides engaging talks by the speakers, several other activities were also conducted such as a pop quiz, group discussions, and Q&A during the event, as can be seen in Figure 1.

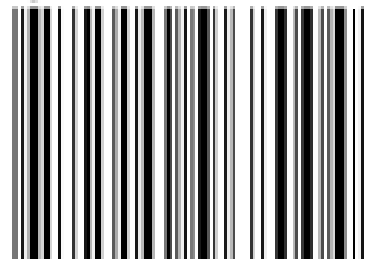
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