FACULTY OF COMPUTING
UTM Johor Bahru

SEMESTER 1 2023/2024

SECP 1513 - 06

TECHNOLOGY AND INFORMATION SYSTEM

ASSIGNMENT 1: REPORT ON VISIT TO NALI 2023

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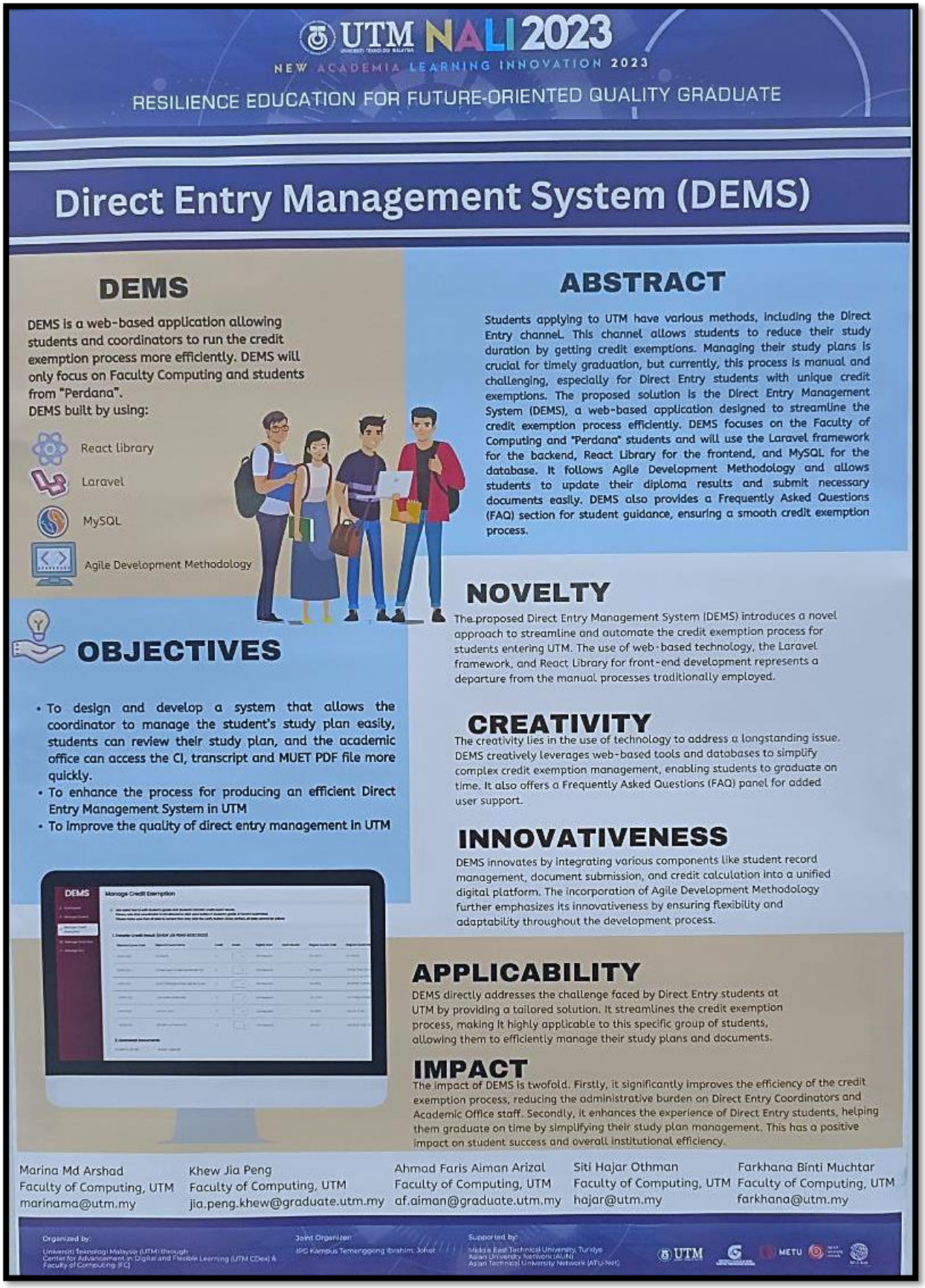
INTRODUCTION

NALI, an annual knowledge-sharing event, is organised by University Technology Malaysia (UTM), through Center for Advancement in Digital and Flexible Learning (UTM CDex). NALI, which stands for NEW Academia Learning Innovation, is a framework designed to foster innovative approaches to teaching and learning in education. It incorporates a student-centred and blended learning philosophy, incorporating various learning modes and materials with the aim of cultivating an entrepreneurial academia. The first edition of NALI was organised in 2018 and the latest edition of NALI was organised in 2023.

NALI, the theme of this event is about Resilience Education for Future-Oriented Quality Graduate. Resilience meaning that a person able to face the stress or overcome the difficulty from a difficult situation. A person's ability to cope with stress and adversity is defined as their resilience to difficult situations, their ability to adapt to changes, and their ability to bounce back from difficult situations. The goal of resilience education is to teach individuals skills and strategies that will help them developed resilience, such as the ability to solve problems, think positively, regulate their emotions, and develop social skills and coping mechanisms. Rather than feeling overwhelmed or helpless, it empowers individuals to deal with challenging situations. Various settings are available for resilience education, including schools, workplaces, and community organizations. In addition to social and emotional learning programs, health education courses, and psychology courses, it can also be integrated into existing curricula. Educating individuals can help them build resilience so they can better navigate life's challenges.

NALI featured a diverse array of programs, including the Tentative Program, Booth Layout, Keynote and Plenary sessions, Exhibition and Competition, NALI Workshops, and Pecha Kucha presentations. This multifaceted program was not exclusive to UTM, it welcomed participation from other universities as well. The inclusivity of the program aimed to create a dynamic platform for knowledge exchange, collaboration, and innovation, fostering a broader educational community beyond the boundaries of any single institution.

EXPLANATION (5 PICTURES)



The poster introduces the Direct Entry Management System (DEMS), a web-based solution designed to streamline the credit exemption process for students entering UTM. It addresses the challenges faced by Direct Entry students, offering a novel and innovative approach to managing study plans efficiently.

DEMS aims to simplify the credit exemption process by allowing coordinators easy management of students' study plans, providing students with a convenient way to review their plans, and offering quick access to academic documents for the academic office. The system is developed using the React library, Laravel, and MySQL, following an Agile Development Methodology for flexibility.

DEMS stands out for its novel approach to automate credit exemptions, departing from traditional manual processes. The use of web-based technology, Laravel, and React Library represents a creative leap in addressing a long-standing issue. Its creative application of technology simplifies complex credit exemption management and offers a user-friendly Frequently Asked Questions (FAQ) section.

DEMS innovates by integrating various components like student record management, document submission, and credit calculation into a unified digital platform. The incorporation of Agile Development Methodology ensures adaptability throughout the development process, showcasing a commitment to innovation in tackling academic challenges.

Tailored for Direct Entry students at UTM, DEMS directly addresses their specific needs in credit exemption management. The system is designed to be user-friendly, with additional user support through the FAQ section, making it highly applicable to this specific group of students.

DEMS holds a twofold impact – it significantly improves administrative efficiency by reducing the burden on coordinators and Academic Office staff, and it enhances the overall experience for Direct Entry students, aiding timely graduation through simplified study plan management. This positive impact contributes to student success and institutional efficiency.

In conclusion, DEMS emerges as a technologically driven solution tailored to the challenges faced by Direct Entry students at UTM. Its innovative features, user-friendly design, and potential for administrative efficiency make it a promising tool for transforming the credit exemption process and improving the academic journey for both students and staff.

UTM ECO Mobile App: Biodiversity Geo-tagged Ecotourism Experience on UTM Campus

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Abstract

Malaysian campuses house rich species biodiversity that are capable to become a tourist attraction. However, **no Malaysian campuses** capitalise on this opportunity to **encourage ecotourism** and **increase the environmental awareness** among students. In this context, UTM ECO offers a user-friendly mobile application providing the users and nature lovers about the biodiversity knowledges in the Universiti Teknologi Malaysia (UTM) to enhance on-campus ecotourism experience. The methodology emphasised two important aspects: establishing the biodiversity database of UTM Johor Bahru campus through crowdsourcing efforts; developing a user-friendly ecotourism mobile application to provide users with a simple yet intuitive biodiversity exploration within UTM campus.

Key Objectives

01 To establish a biodiversity database of UTM Johor Bahru campus through continuous crowdsourcing efforts by UTM's community which records of flora and fauna.

02 To build an interactive edutourism mobile apps to both celebrate and educate the users on the rich UTM campus biological diversity.

Commersialisation Potential

- Local Parks
- National Parks
- Eco-campuses

Novelty

Creativity | **Biodiversity Database** | **Mobile Technology** | Digital Pamphlet

Innovativeness

01 **Improve knowledge**
Providing outdoor class easily which promotes understanding and exploration of biodiversity based on personal experience.

02 **Increase biodiversity database**
The students can also capture the new flora and fauna photos and submit them to the iNaturalist app during exploration.

03 **Ecotourism capability**
Provides a low-obstacle way to learn about biodiversity, increase awareness, and explore the campus biodiversity.

Impact to Students' Learning

Applicability

01 **Learning Framework**
Promote outdoor learning modules & achieving student's resilience and leadership

02 **Lifelong Learning**
Provides lifelong learning to learn more about campus biodiversity

Publication:
[1] Conceptual Design for Crowdsourcing Biodiversity Tagging Application (2019)
[2] UTM ECO Mobile App: Biodiversity Geo-tagged Ecotourism Experience on UTM Campus (2022)
[3] MyDNAmark.org: A Comprehensive Genomic Visualisation Database for Malaysian Species

Acknowledgement:
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SUSTAINABLE DEVELOPMENT GOALS

Organised by: Universiti Teknologi Malaysia (UTM) through Centre for Advancement in Digital and Flexible Learning (UTM CDex) & Faculty of Computing (FC)
Joint Organiser: Institute of Teacher Education (IPG) Temenggong Ibrahim Campus
Supported by: Asian University Network (AUNe) Asia Technological University Network (ATU-Net)

The UTM ECO Mobile App represents an innovative initiative at University Technology Malaysia (UTM), aiming to enrich on-campus ecotourism experiences and promote environmental awareness among students. This user-friendly app serves as a comprehensive guide, offering valuable insights into the diverse biodiversity within the UTM campus.

The primary objectives of the UTM ECO Mobile App are twofold. Firstly, it seeks to establish a robust biodiversity database for the UTM Johor Bahru campus through the collaborative efforts of the UTM community, encouraging the documentation of flora and fauna. Secondly, the app focuses on developing an intuitive and user-friendly ecotourism mobile application, designed to enhance the exploration of biodiversity within the campus.

The novelty of this initiative lies in its integration of a mobile app with crowdsourcing for the dynamic exploration of on-campus ecotourism. By combining outdoor learning with citizen science, the app offers an interactive platform for users to actively engage with and contribute to the biodiversity database. Its innovation is further underscored by its capability to serve as both an educational tool and a means of promoting environmental awareness.

The UTM ECO Mobile App has a significant impact on students' learning experiences. It empowers leadership and teamwork through its interactive features, encourages active participation in citizen science initiatives, raises awareness about conservation efforts, and provides a platform for continuous learning about campus biodiversity.

The app is highly applicable in promoting outdoor learning modules, contributing to students' resilience, and fostering leadership development. Additionally, it serves as a digital pamphlet, aligning with sustainable development goals, encouraging lifelong learning, and promoting eco-friendly practices.

In conclusion, the UTM ECO Mobile App emerges as a trailblazing initiative that seamlessly blends technology, citizen science, and outdoor learning to create a holistic platform for exploring and understanding biodiversity within the UTM campus. Its potential to impact students' learning, promote environmental awareness, and contribute to the sustainability of the campus ecosystem positions it as a valuable and innovative tool for the UTM community.

UTM NALI 2023

NEW ACADEMIC LEARNING INNOVATION 2023

RESILIENCE EDUCATION FOR FUTURE-ORIENTED QUALITY GRADUATE

Breaking Barriers, Unlocking Potential:
Self-Directed Learning Tool as a Framework in Empowering Final Year Students

ABSTRACT: The project highlights **the transformative power of education in overcoming barriers and unlocking the full potential of each student that goes beyond traditional academic knowledge and technical skills.** Based on the principles for advancing future-oriented, we manage to **design the Course Information, which can unlock the learner's potential and capability in undertaking each assessment throughout the semester.** In this project, we designed a template to undertake the assessment given with a dynamic rubric for scoring each task. The students implemented this project for the course SBEW4293 Planning Conference, delivered fully physically throughout the semester.

Project Objectives

1. To **prepare** students for **future challenges and opportunities.**
2. To **promote ethical behaviour, values, and responsible decision-making** among students.
3. To **nurture** students' **innovation, creativity, and entrepreneurial mindset.**

NALI Approach Implemented in The Research

- **Effective Assessment:** Quickly learn, unlearn & relearn in response to technological advancement — **Novelty**
- **Creativity** — Focus extends beyond academic achievements, embracing the holistic development of learners
- Nurture critical thinking, creativity, emotional intelligence, and social skills — **Innovativeness**
- **Applicability** — Self-directed learning as a great **tool** for helping students in lifelong learning.
- **Empowering the students' smart and sharp skills:** Essential for future-oriented quality graduates — **Impact to Students' Learning**

How Self-directed Learning Applied in Class for Planning Conference?

CLO1,CLO2 PHASE 1	CLO1,CLO2 PHASE 2	CLO3 PHASE 3	CLO4 PHASE 4
Students are divided into several operational committees	**Students work in the designated team to complete each task**	**Students Organised the conference based on the task given**	**Students analyse the benefit gained from the event**
Free to plan and decide on how to conduct and accomplish the task with their team members.	Completing the task based on their space, time, and capability throughout the semester	Every committee works together to achieve their goal. Instructor used "dynamic rubrics" to do the marking	Finalise all the hard works through a post-mortem report and self-reflection
Progress reports (10%), Conference paper (10%)	***Progress reports (20%), Conference paper (10%)***	***Oral presentation (10%) Conference Proceedings (20%)***	***Post-mortem report (10%), Peer assessment (10%)***

Acknowledgement: *Credit to all the lectures involved in SBEW4293 (Planning Conference) and the outstanding students who worked hard to make this planning conference happen.*

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Organised By:

Joint Organiser:

Supported by:

UTM

Education transcends the mere acquisition of academic knowledge; it is a transformative journey that extends beyond traditional boundaries. The poster titled "Breaking Barriers, Unlocking Potential" introduces a groundbreaking project centered on empowering final-year students through a self-directed learning approach. This initiative challenges conventional educational norms, emphasizing a shift from mere knowledge acquisition to the holistic development of skills and capabilities.

At its core, the project focuses on creating a Course Information template designed to unlock learners' potential throughout the semester. This dynamic template incorporates a flexible rubric, providing students with a personalized and adaptable framework for undertaking assessments. The initiative was put into practice in the "SBEW4293 Planning Conference" course, offering students a real-world context to apply their knowledge and skills.

Aligned with the principles of advancing future-oriented education, the project aims to prepare students for challenges and opportunities beyond the classroom. It emphasizes ethical behavior, instills core values, and nurtures innovation, creativity, and an entrepreneurial mindset. The principles of New Academia Learning Innovation (NALI) are woven into the project, emphasizing effective assessment, creativity, and applicability.

The implementation unfolds in four distinct phases. Firstly, students are empowered to plan and decide collaboratively on how to execute tasks. In the second phase, working in designated teams, students execute each task based on their space, time, and capabilities throughout the semester. The third phase involves committees collaborating to organize and achieve the goals set for the planning conference. Finally, in the fourth phase, students analyze the benefits gained from the event, finalizing their efforts through post-mortem reports and self-reflection.

The impact on students' learning is profound. The project goes beyond conventional academic achievements, embracing the holistic development of learners. It positions self-directed learning as a powerful tool for lifelong learning, fostering innovation, adaptability, and resilience in the face of future challenges.

Acknowledgments are extended to the lecturers involved in the "Planning Conference" course and commendation to the outstanding efforts of students who played a pivotal role in making the planning conference a success.

In conclusion, the project represents a paradigm shift in education, breaking free from traditional boundaries to embrace a self-directed learning approach. By unlocking students' potential and fostering innovation, this initiative stands as a beacon of transformative education in the 21st century, preparing students not just for exams but for a dynamic and evolving future.

UTM NALI 2023

NEW ACADEMIA LEARNING INNOVATION 2023

RESILIENCE EDUCATION FOR FUTURE-ORIENTED QUALITY GRADUATE

PROGRAMMING RESILIENCE SKILLS THROUGH COMPETITION-BASED LEARNING USING MOBILE ROBOTS IN REAL-TIME SOFTWARE ENGINEERING COURSE

1 ABSTRACT

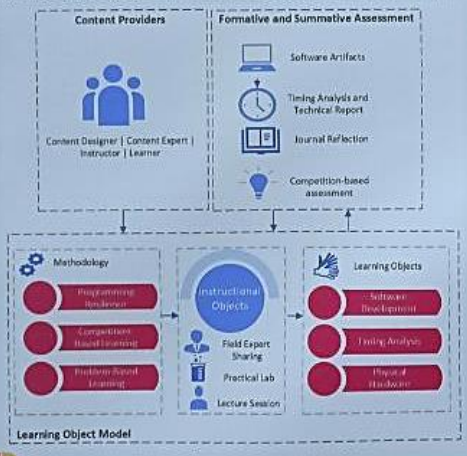
Implementing the Collaborative Assignments and Projects (CAP) framework in teaching a Real-Time Software Engineering (RTSE) course encourages student collaboration in problem-solving through practical application of real-time concepts and theories. This study shares our continuous effort to improvise the CAP framework by embedding the Programming Resilience and Competition-Based Learning (CBL) in teaching and learning activities for the RTSE course. The primary goal is not just to focus on technical skills in real-time software development using mobile robots but also to equip learners with programming resilience skills that are crucial for software engineers to address stakeholder problems in real-world contexts.

2 OBJECTIVES

- To identify the level of programming resilience of RTSE students for a problem-based task to perform timing analysis on robot software
- To analyse the programming resilience skills based on the Programming Resilience Scale for University Students (PRSUS) through a CBL using mobile robot

3 NOVELTY

The enhancement of Collaborative Assignment and Project (CAP) framework for the Real-Time Software Engineering course.



4 CREATIVITY

Mobile Robots Problem Solving

Competition

5 INNOVATIVENESS

Innovative Elements:

- Programming Resilience
- Competition-Based learning

6 APPLICABILITY

CAP approach through problem-solving activities for programming embedded systems course

7 IMPACT

Analysis shows high programming resilience despite different Gender, Nationality, Final Year Project (FYP) Track and Internship Experience

6 COMMERCIALIZATION POTENTIAL AND AWARDS

Lab Modules

Adopted by similar programming embedded systems course

Gold Medal: New Academia Learning Innovation 2021 Exhibition (NALI 2021)

Finalis, Anugeran Khas Menteri Pendidikan Bekebentuk Kurikulum dan Penyampaian Inovatif 2019 (AKRI 2019)

Sponsored By:

UTM FACULTY OF COMPUTING
UTM Johor Bahru

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Joint Organizer:
Institute of Teacher Education (IPG) Temenggong Ibrahim Campus

Supported by:
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Asia Technological University Network (ATU-Net)

This poster explores the implementation of the Collaborative Assignments and Projects (CAP) framework in teaching Real-Time Software Engineering (RTSE). The initiative aims to cultivate collaborative problem-solving skills by creating a dynamic learning environment that mirrors real-world challenges in software engineering.

A notable aspect is the integration of Programming Resilience and Competition-Based Learning (CBL) into the RTSE course. Beyond technical skills, the focus is on developing resilience and adaptability crucial for addressing actual problems. The inclusion of problem-based tasks and the use of the Programming Resilience Scale underlines a holistic approach to preparing students for the complexities of the software engineering field.

The poster delves into the initiative's objectives, methodology, and innovative elements. It highlights diverse instructional methods and assessment tools, demonstrating a well-thought-out design catering to varied learning styles. This inclusive approach ensures a thorough evaluation of students' understanding and application of RTSE concepts.

The ongoing enhancement of the CAP framework and the introduction of competition-based learning using mobile robots bring freshness and practicality to the course. These elements not only keep the poster relevant but also engage students in ways aligning with real-world industry expectations.

The poster acknowledges the potential for commercialization and awards received, emphasizing the initiative's impact and recognition. This suggests that the educational approach not only attains academic success but also holds broader relevance and potential beyond academia.

In summary, the poster elucidates an innovative educational approach in RTSE, emphasizing collaborative problem-solving, resilience, and adaptability. The use of varied instructional methods and ongoing refinement highlights a commitment to preparing students for real-world software engineering challenges, making it a noteworthy initiative with broader implications.

UTM NALI 2023

NEW ACADEMIC LEARNING INNOVATION 2023

RESILIENCE EDUCATION FOR FUTURE-ORIENTED QUALITY GRADUATE

UTM ROBOTECH

NXT-PRIME IN EDUCATIONAL ROBOTICS

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Collaboration: Prof. Madya Ts. Dr. Dayana Farzeeha Ali (Universiti Teknologi Malaysia)

Product Description

The MINI INDUSTRY NXT-PRIME: BURGER FACTORY project utilizes LEGO MINDSTORMS NXT EDUCATION and LEGO SPIKE PRIME EDUCATION to engage students in STEM learning. The platform features LEGO bricks, motors, sensors, and programmable hubs, attracting students' attention. An interactive module, MINI INDUSTRY NXT-PRIME: BURGER FACTORY INTERACTIVE MODULE, is created using BRICKLINK STUDIO 2.0 to explain the robots' construction and functions.

Applicability

Targeted Group

Advantages

Provide teachers with a relevant and high-quality teaching tool in the PdP process.

Provide a real simulation of food processing to students.

Able to attract the interest of students as well as deepen their knowledge on the basic components of robotics.

Objectives

- **As a simulation of the Teaching and Learning Process (PdP)** for RBT subjects in food technology
- **Enhance the knowledge** of PISMP RBT students on **the basic components of robotics** in RBTS 3283 course that will learn about components such as manipulators, gear and so on.
- Primary school pupils can learn about the basics of robotics, in line with the **Standard-Based Curriculum and Assessment Document (DSKP)** of the RBT subject.
- **Knowledge of the Industrial Revolution 4.0 (IR 4.0)** can be exposed to students as well as preserving the use of **machine learning IR4.0** through this teaching tool.
- **Related to IPG Transformation 2018-2025 cluster 3.**

Market Potential

Commercial

Used as a tool in **vocational training programmes.**

Used as an example in **marketing and advertising programmes.**

Used as a **curriculum cross-activity.**

Impacts

Provide relevant teaching materials.

Suitable to use as reference material for all levels of education.

Robotics Clubs

Save Time

Create a real simulation

Novelty

Based on BPK 2017, RMK of PISMP students intake June 2019 and past intakes in Major RBT especially in IPGKPT do not have any exposure on basic knowledge of robotics and programming skills. Therefore, they face problems during teaching at school. However, in 2023, the MK of RBT major students intake June 2022 have learnt courses about robotics such as RBTS 3283, RBTS 3452 and RBTS 3373. Although, these course are in line with the DSKP RBT Standard 4, 5 and 6, there is no any teaching aids for those subjects. Therefore, Mini Industry NXT-Prime Burger Factory is designed to demonstrate a real simulation of food processing. It emphasizes the process of producing a product by combining a range of design, technology skills and programming in the subject of Design and Technology (RBT).

Product Picture

The NXT-PRIME in Educational Robotics initiative introduces an innovative project, the MINI INDUSTRY NXT-PRIME: BURGER FACTORY, utilizing LEGO EDUCATION and LEGO MINDSTORMS NXT to engage students in STEM learning. The platform, featuring LEGO bricks, motors, sensors, and programmable hubs, serves as a captivating educational tool, sparking students' interest in science, technology, engineering, and mathematics.

The MINI INDUSTRY NXT-PRIME BURGER FACTORY INTERACTIVE MODULE, created using BRICKLINK STUDIO 2.0, acts as an interactive guide, explaining the construction and functions of the robots. The project's objectives are multifaceted, aiming to simulate the Teaching and Learning Process (PdP) for Robotics (RBT) subjects in food technology.

One primary goal is to enhance the knowledge of PISMP RBT students on the basic components of robotics in the RBTS 3263 course, covering manipulators, gears, and more. Additionally, the project aligns with the Standard-Based Curriculum and Assessment Document (DSKP) of the RBT subject, enabling primary school pupils to learn the basics of robotics.

The project's novelty lies in addressing the gap in exposure to basic robotics knowledge and programming skills faced by PISMP students. Past intakes lacked teaching aids for subjects like RBTS 3263, RBTS 3452, and ROTS 3373. The MINI INDUSTRY NXT-PRIME: BURGER FACTORY serves as a real simulation of food processing, emphasizing design, technology skills, and programming in the subject of Design and Technology (RBT).

In terms of applicability, the project caters to PISMP majoring in RBT, providing a relevant teaching tool for the PdP process. Its market potential extends to vocational training programs, marketing and advertising initiatives, and cross-activity curriculum integration.

Advantages of the NXT-PRIME project include providing teachers with a high-quality teaching tool, offering a real simulation of food processing, attracting students' interest, deepening their knowledge on robotics components, and serving as valuable teaching material.

The impacts are far-reaching, creating a relevant and interactive module that saves time, serves as a reference material for all education levels, and contributes to the establishment of Robotics Clubs. In essence, the NXT-PRIME project not only revolutionizes STEM learning

but also bridges educational gaps, providing a dynamic and engaging platform for students to explore the world of robotics.

VIDEO (5 PERSON)

VIDEO LINK: https://youtu.be/_mtbWd0y664

SCRIPT OF FIRST POSTER:
Hanan:

What Inspired you to come up with this idea?

Researcher:

Well This is actually based on e-learning we extract the data so that we can predict students' performance based only on their engagement in e-learning.

Hanan:

What are some of the technical issues that you've faced?

Researcher:

I think it's the number of students in classes because when we're doing analytics the smaller the data the easier it becomes to import it, so we've to extract a bigger amount of data, so we divided the data into 4 classes on 4 years.

Hanan:

How do you face these difficulties and solve them?

Researcher:

As I mentioned earlier we took more than one class so we can extract more data.

Hanan:

What was the duration of your project?

Researcher:

For this project, to be exact it took around one year at the end of 2022.

Hanan:

How did you organize the data related to the project?

Researcher:

Well the data related to the project is actually from e-learning, so we just extracted the data from e-learning and we used one of the subjects from the faculty of computing and then we extracted the data which is covered again

SCRIPT OF SECOND POSTER:

Raghad:

what Inspired you to come up with the idea of the UTM smart app ?

Representer:

it is very important , we want to highlight the priority of animals and plants in campus among students , so basically you open the app and take a picture and uploaded so the information about the specific animal shows up.

Raghad:

so it is easy to use too ! What was some of the technical issues that you've faced?

Representer:

Combining between thigs and gathering them together , also designing it to be easy for handphone users.

Raghad:

How do you faced these difficulties and solve them?

Representer:

Enhancement in different parts , as you see her (pointing to the poster) , we were a combination of people from different feild , I am from faculty of computing and miss fauzia from environment planning and chan siang from bioscience , so every one is assisting other, you have a computer science just call me , I don’t have experience in environment so can refer to Fauzia.

Raghad :

What was the duration of your project?

Representer :

Established 2021

Raghad :

No I mean how long it takes ?

Representer :

it was hard for us basically it Around 5 months or 6 but to make a team that took a lot of time.

Raghad :

and how did you organize the data related to the project about the animals and nature?

Representer :

so the data basically we worked together with National Geographic , so we collect data and post it in national geographic data base

Raghad :

ok thank you for your time

Representer :

ok , thanks

SCRIPT OF THIRD POSTER:

Min Xuan:

Based on this project, What inspired you to come up with this idea?

Presenter:

So for this project, it basically based on the support for final year student.

Basically All of them need to working to organized a conference for themselves. We get some feedback from the industry that our new graduate are not be able to communication with the industry. They think that they when going outside just working but they forget about they still need to communicating with the people and need to have some kind of event, communicate with the VIP. So that why we need to have this kind of subject.

Min Xuan:

What was some of the technical issues that you've faced?

Presenter:

Okay, because they are student, when they are graduate from UTM, so when they want to communicate with the others from the outside or industry. So they need to have proper communication and permission from the vice and all the technical problem that they need to go through. It is not able to say that direct meet the people from the industry just simply say who are you and meet the person who incharge. They are representing UTM so they have to do more proper.

Min Xuan:

How do you faced these difficulties and solve them?

Presenter:

Uhm okay, it's like communicate with them, assist advise them to tell that some kind of procedure need to be done. Becuase they think like this can be done as simple thing. Example, when you want to meet and who you want to contact. You cannot contact the person directly. We will told them if you want to do such event, what you will need to do or have a conversation with them. They learn and see to learn how the procedure run. So by doing that, basically they learn from mistake. Simple to say they learn in hardway by mistake. There are still allow to make mistake because they are student.

Min Xuan:

What was the duration of your project? Like the time needed.

Presenter:

Okay because this subject, it takes the whole semester.

Min Xuan:

Like from Year 1 Sem 1?

Presenter:

No no no, for this is for Year 4 Second Semester, for the last semester.

So basically the advantage for this subject is engaging with the industry, all the potency employed. So when they communicating with them, some of them already getting better when they finish the generating. What I get is they are not contain skills. Everything is okay but they want extra. Employee can see the extra from the students. So they graduate already have the job.

Min Xuan:

Last question is how did you organize the data related to the project?

Presenter:

So basically because our program is a professional program, so we have a board of accusation, so one of the comment of the board that asking that all graduation are good terms. good skills. To prepare the events, supporting UTM. So the paper is all in the national level. Know how to get the sponsership and know how to handle with the industry. So basically useful for students in this project.

Min Xuan:

Thank You sir for the interviewing.

Presenter:

Thank you and good luck too.

REFLECTION

DIRECT ENTRY MANAGEMENT SYSTEM (DEMS)

(HANAN OSANA HUSSEIN SALAH)

Attending the NALI 2023 program at UTM University has been an enriching experience that has significantly contributed to my academic journey. The program, designed to showcase various projects in science and technology, provided a platform for students to engage with lectures, experts, and industry professionals. Reflecting on my participation, I find that the activities conducted during NALI 2023 have had a positive impact on my overall learning experience.

1. Benefit to the Student: The activities organized during NALI 2023 undeniably offered substantial benefits to me and my group members. The exposure to real-world projects and interactions with industry experts allowed for a practical understanding of theoretical concepts learned in the classroom. Engaging with these activities fostered a holistic learning environment, bridging the gap between academic knowledge and its real-world applications.

2. Impact on Course/Subject Outcome: The activities conducted as part of NALI 2023 had a direct impact on the outcome of the course. By witnessing and participating in projects presented by professionals in the field, I gained insights into the practical implications of the subjects studied. This firsthand experience not only enhanced my comprehension but also provided a broader perspective on the potential applications of the course content.

3. Learning Something Impactful: The NALI 2023 program proved to be a source of impactful learning. Through interactive sessions and project demonstrations, I acquired knowledge that extended beyond the textbook. Learning about cutting-edge technologies and witnessing their implementation in real-world scenarios broadened my understanding and instilled a sense of curiosity to explore further.

4. Spark of Excitement/Interest: Undoubtedly, the activities at NALI 2023 sparked excitement and interest among the students. The dynamic and innovative projects presented by industry experts ignited a passion for the subject matter. The hands-on experiences and the opportunity to witness groundbreaking advancements in science and technology generated enthusiasm, making the learning process more engaging.

5. Effectiveness of Visiting NALI 2023 and Interview Sessions: The visit to NALI 2023 and the subsequent interview sessions significantly contributed to a better understanding of the course material. The direct interaction with experts allowed for clarifications on complex concepts and provided practical insights that textbooks alone couldn't offer. Moreover, the interviews facilitated networking opportunities, opening avenues for mentorship and potential collaborations in the future.

In conclusion, the NALI 2023 program at UTM University has been instrumental in enhancing my academic experience. The activities conducted not only added value to the course but also ignited a passion for continuous learning and exploration within the realm of science and technology. The program succeeded in bridging the gap between theory and practice, making the learning journey more meaningful and inspiring.

UTM ECO MOBILE APP:
BIODIVERSITY GEO-TAGGED ECOTOURISM EXPERIENCE ON UTM CAMPUS
(RAGHAD ZAINALABDIN TAHA)

Reflecting on my experience with the NALI 2023 program, I can confidently say that it was a transformative journey that broadened my understanding of artificial intelligence (AI) and various information and communication technology (ICT) topics. The program served as a valuable opportunity for me to delve into cutting edge projects and explore the diverse facets of AI.

One of the standout aspects of NALI was the wealth of information presented, which often left me pleasantly surprised. The comprehensive coverage of AI topics allowed me to gain insights into areas that were previously unfamiliar to me. From machine learning algorithms to data analysis techniques, the program provided a holistic view of the current landscape of AI and its applications.

Engaging with the presenters at each poster session was a highlight of the program. I was impressed by the presenters' patience in answering my numerous questions and catering to my curiosity. The interactive nature of the sessions not only enhanced my understanding of the projects but also fostered a sense of connection with the experts in the field. These interactions not only enriched my knowledge but also inspired me to explore AI further.

One particularly intriguing project that captured my attention was the development of a mobile app designed to facilitate students' knowledge about the animals on campus. The project's data analysis process was fascinating, shedding light on the intricacies of handling and interpreting data in real-world applications. To deepen my understanding, I had the privilege of interviewing a stakeholder involved in the project. The insights gained from this conversation provided valuable perspectives on the project's impact on user experience. Learning about the practical implications and real-world implications of AI projects like this one added depth to my comprehension of the field.

Furthermore, NALI offered a unique platform for networking and building connections with professionals and enthusiasts alike. The collaborative atmosphere fostered meaningful conversations, and the diverse backgrounds of the participants added richness to the overall experience. Connecting with like-minded individuals allowed me to exchange ideas, gain different perspectives, and form connections that may prove beneficial in the future.

In conclusion, my participation in the NALI 2023 program was a rewarding experience that not only expanded my knowledge of AI and ICT but also provided me with the opportunity to engage with experts and explore innovative projects. The program's impact on my intellectual growth and my newfound connections makes it a memorable and invaluable chapter in my journey of continuous learning in the realm of artificial intelligence.

BREAKING BARRIERS, UNLOCKING POTENTIAL:

SELF-DIRECTED LEARNING TOOL AS A FRAMEWORK IN

EMPOWERING FINAL YEAR STUDENT

(TAN MIN XUAN)

After I participated in NALI 2023, I had found an interesting project that talk about self-directed learning tools as a framework in empowering final year students. From the explanation of the project, this project helps a lot for the final year students that are prepared to working after graduate from UTM. The fresh graduate student will be able to know all the procedure that need to work with, to have communication with those VIP or industry.

Mostly students thinks that they able to direct have a communication with the head or VIP. Before having any communication with the others, having an appointment is important for student to know that they are unable to meet the head or VIP simply. This project help in guiding student in the perfect ways. The project also helps many students able to find job directly after graduate from UTM. Self-directed Learning Tools (SDL) of this subject had help final year students a lot in their working with employee.

There is one part it is assessment and feedback mechanisms; it is self-directed learning tools often incorporate mechanisms for self-assessment and feedback. This allows students to evaluate their own progress and understanding, promoting a reflective learning process. Example, the presenter said that they get feedback from the industry, so they able to guide the students in working or processing interview for their final year project.

Implementing a self-directed learning tools framework requires a combination of technology, pedagogy, and support structures to ensure that learners can navigate their educational journeys effectively and efficiently. It empowers individuals to become lifelong learners, capable of adapting to evolving knowledge landscapes.

PROGRAMMING RESILIENCE SKILLS THROUGH

COMPETITION-BASED LEARNING USING

MOBILE ROBOTS IN REAL-TIME SOFTWARE ENGINEERING COURSE

(NAM SOOK JING)

Reflecting on the presented content regarding the implementation of the Collaborative Assignments and Projects (CAP) framework in teaching Real-Time Software Engineering (RTSE), I am impressed by the forward-thinking approach and innovative elements woven into this educational initiative.

The decision to integrate CAP into the RTSE course signifies a commitment to nurturing collaborative problem-solving skills. It's evident that the goal is to create a learning environment that goes beyond conventional methods, aiming to mirror the challenges of real-world software engineering. This aligns with my belief in the importance of practical, hands-on learning for effective career preparation.

The inclusion of Programming Resilience and Competition-Based Learning (CBL) adds a layer of sophistication to the educational experience. Recognizing the need for resilience and adaptability alongside technical skills is a progressive perspective. The emphasis on problem-based tasks and the use of the Programming Resilience Scale demonstrates a holistic understanding of the skills demanded in the software engineering field.

The detailed breakdown of objectives, methodology, and innovative elements indicates a thoughtful and well-structured design. The incorporation of various instructional methods and assessment tools reflects a comprehensive strategy for ensuring students' grasp and application of RTSE concepts. This inclusive approach accommodates diverse learning styles, enhancing the overall learning experience.

The continuous refinement of the CAP framework and the introduction of competition-based learning using mobile robots introduce an element of novelty and relevance. This dynamic approach not only keeps the course content current but also engages students in a way that mirrors real-world industry expectations.

Acknowledging the potential for commercialization and the accolades received further validates the impact of this educational initiative. It not only signifies academic success but also recognizes the initiative's broader influence and potential beyond academia.

In conclusion, this content has prompted me to consider the evolving landscape of education, especially in the software engineering domain. It reinforces my belief in the significance of adaptability, resilience, and hands-on learning to equip students for successful professional journeys. This self-reflection has deepened my appreciation for innovative teaching methodologies and their role in shaping the skills of future software engineers.

NXT-PRIME IN EDUCATIONAL ROBOTICS

(JULKER NAYEEN)

Being present for the NALI 2023 program was illuminating. Beyond the fascinating project interview, NALI 2023 was a fantastic experience. Numerous eminent speakers graced the occasion, each of whom added insightful commentary to the conversation on innovation and education. Another source of inspiration came from working with my group members during the program. Converging viewpoints and concepts with like-minded people produced a synergistic atmosphere that encouraged collaboration and friendship. The interesting interview I had regarding the "MINI INDUSTRY NXT-PRIME IN EDUCATIONAL ROBOTICS" project. Students can now learn robotics using LEGO MINDSTORMS NXT and LEGO SPIKE PRIME EDUCATION. The Burger Factory interactive module, built with BRICKLINK STUDIO 2.0, gives learning an interactive element by elucidating the design and operation of robots.

I was most impressed by the project's wide range of applications. It complements the Standard-Based Curriculum and Assessment Document (DSKP) of the RBT topic and improves the Teaching Process (PdP) for food technology RBT subjects. The project provides students with a practical experience in the field of robotics by efficiently bridging the knowledge gap between theory and implementation.

By introducing machine learning into the classroom, the MINI INDUSTRY NXT-PRIME project also helps students get ready for the demands of the Industrial Revolution 4.0 (IR 4.0). Its wider influence on industry and education is demonstrated by its possible commercial usage as a marketing tool and vocational tool. This initiative stands out as a useful resource for educators at all levels of education as it fosters interest, saves time, and creates realistic simulations amongst the changes in education. It's a fresh approach that reflects the progressive spirit of the NALI 2023 program and inspires as well as educates.

CONCLUSION

Conclusion, we learn a lot from the event NALI 2023. Different participant in NALI 2023 had bring many benefits to us. The NALI 2023 programme at University Technology Malaysia (UTM) showcased a diverse range of projects, each contributing significantly to the academic and practical development of the participants. The various projects, such as the Direct Entry Management System (DEMS), UTM Eco Mobile App, Self-Directed Learning Tool, Programming Resilience Skills through Competition-Based Learning, and NXT-Prime in Educational Robotics, exemplify the program's commitment to bridging the gap between theory and real-world applications.

Moreover, the program facilitated networking opportunities, allowing participants to connect with professionals and enthusiasts, fostering meaningful conversations and potential collaborations for the future. The emphasis on innovative teaching methodologies, practical experiences, and adaptability reflects the evolving landscape of education, particularly in fields like artificial intelligence, information and communication technology, and software engineering.

Finally, each project presented from the UTM Eco Mobile App's biodiversity geotagged ecotourism experience to the MINI INDUSTRY NXT-PRIME in Educational Robotics, showcased a commitment to addressing real-world challenges and preparing students for the demands of the future. Overall, the NALI 2023 program left a lasting impact on the participants, contributing to their intellectual growth and providing valuable connections in their study journey or working journey of continuous learning in education.

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