Diploma in Information Technology
Interaction Design
Instruction for CA3 Group Assignment
April 2023 Semester

Assessment

100 Marks. (This assignment constitutes **40%** of the overall assessment. The group assignment will cover **30%** and the group presentation will cover **10%**.)

Rationale of Group Project

The rationale of the group project is to enable collaborative learning with your peers and learning to work as a team, which is commonplace in workplace environment. Students learn to apply theories taught in class and textbooks to real world situations.

In line with this objective, students are not allowed to reuse old assignments, or submit projects from previous semesters or copy largely from sources, particularly from the internet.

Forming Group

Students are to form groups of 3 students per group. As this a group project, each member is expected to put in his/her fair share of the effort into the project. It is essential that groups manage their group effectively to complete this project.

Students should resolve group dynamics issue and may seek the mediation through the lecturer as early as possible. Last minute mediation will not be entertained. Students may request for peer evaluation as a final resort if all mediation fails.

Finally, the lecturer reserves the right to assign a mark to an individual student different from the rest of the group if that student is deemed not to have put in his/her fair share of effort into the project.

Case Study:

Digital technology has been transforming the way we live and work for decades, and its impact has only grown stronger over time. Today, digital technology is ubiquitous in every aspect of our lives, from communication and entertainment to healthcare and transportation. In this article, we'll explore the advancements in digital technology and their implications for the future.

Advancements in Digital Technology

Artificial Intelligence (AI): AI has been one of the most significant advancements in digital technology in recent years. It involves the use of algorithms and machine

learning to analyse data and perform tasks that typically require human intelligence, such as natural language processing, image and voice recognition, and decision-making.

Internet of Things (IoT): The IoT refers to the network of physical objects that are connected to the internet and can communicate with each other, such as smart homes, wearables, and connected cars. The IoT has enabled the creation of intelligent and connected systems that can automate tasks and optimize processes.

Blockchain: Blockchain technology is a distributed ledger that allows for secure and transparent transactions. It has implications for a wide range of industries, including finance, healthcare, and supply chain management, where it can help to reduce fraud and improve efficiency.

Implications of Digital Technology

Disruption of Industries: Digital technology has disrupted traditional industries such as retail, music, and publishing. Companies that are slow to adopt digital technology risk becoming obsolete in today's market.

Job Automation: The rise of AI and automation has raised concerns about job displacement. Many jobs, particularly those involving repetitive tasks, are at risk of being automated, which could have significant economic and social consequences.

Privacy and Security: The vast amount of personal data that is collected and stored by digital technology has raised concerns about privacy and security. As companies collect and use more data, there is a risk of data breaches and identity theft.

Sustainability: Digital technology has the potential to create sustainable solutions by optimizing energy usage, reducing waste, and improving resource management. However, it also has a significant environmental impact due to the energy consumption and e-waste generated by digital devices.

Conclusion

Digital technology has the potential to transform our lives for the better, but it also presents significant challenges that must be addressed. As we continue to innovate and develop new technologies, it is important to consider the implications and potential consequences of these advancements. It is up to us to ensure that we use digital technology in a responsible and sustainable way, to create a better future for everyone.

The group task:
Study and research on the case study provided above. Your group is to write a research report with words not exceeding **6000** words and generate any kinds of illustrations/diagrams/prototypes where necessary. The group is to satisfy the following pointers:

1. Referring to the case study, pick an area of advancements in technology. Research on **ONE (1)** real-life company in that area and explain the problem spaces that have effects on operations/human factors.

   Side note: The problems could be related to efficiency, processes, challenges. Include evidence from published articles/online source. You can infer from the implications listed in the case study.

2. Based on the problems covered in point 1. Suggest a relevant solution that may be suitable for the company to adopt. The solution must be explained with in-depth details and in consideration of at least **TWO (2)** possible interaction types and **THREE (3)** possible interface types.

3. A Lifecycle model is necessary to capture and track a set of activities. Research and propose **ONE (1)** Lifecycle model that fits well with your solution development. Illustrate a well-design Lifecycle diagram using any design tools of your group's preference.

   Side note: You can propose any Lifecycle model from other sources. You are to illustrate the lifecycle model in **(.ppt or pptx)** format and submit it as a separate file.

4. Generate/Illustrate **ONE (1)** Low-Fidelity and **ONE (1)** High-Fidelity prototype.

   Side note: You are to choose the kind of low and high-fidelity prototype covered in this module. You are to use any design tools of your group's preference. You are to generate the prototypes in **(.ppt or pptx)** format and submit it as a separate file.

5. Using the prototype from point 4, select **ONE (1)** main data gathering technique and propose a detailed plan on how it will be conducted. Conduct a small-scale data gathering activity in accordance with the proposed plan. Organise the actual data gathered and reflect on the experience.

   Side note: The experience can include any challenges faced, good or bad occurrence and opinions.

6. Reusing the data gathered from point 5. Explain how you can analyse the data using basic Quantitative and Qualitative analysis. The explanation should

include diagrams, charts, or illustrations (any) that supports summarising and decision making.

7. Generate a well-design presentation slide that summaries point 1 to 6.

   Side note: The presentation slide will be used for the actual presentation.

For all pointers, you are required to relate and reference to the case study. Also, it is recommended that your explanation/illustration are as detailed as possible.

An assessment marks allocation for this research report can be found in the appendix of this assignment. Do note that the appendix is a guideline on how the group's research report will be evaluated.

Assessment Topics
Topics 1 to 17

Instructions
Submitting Assignment
All assignment files are to be submitted separately with file name, institution name, the module name, the semester and year and date of submission. Files to submit are as follows:

- A text file with a list of your Group students' name and the respective student's id.
- Contribution list (word document)
- Lifecycle model (.ppt or .pptx format)
- Low & high-fidelity prototype (.ppt or .pptx format)
- Group presentation slide (.ppt or .pptx format)

Students should keep a copy of assignment submitted.

Penalty Marks for Late Submission of Assignment
By one day: 20% to be deducted from total marks.
More than one day: submission will NOT be graded.

Important Dates of CA3 Assignment
CA3 Individual Assignment Deadline: 15 May 2023, 11.59 am
Zip all assignment file. Submit your assignment via Canvas. All assignment files must be submitted in order to be graded.

Lecturer Contact
You should contact your lecturer via your SIM email whenever you have any issue about your project.

Appendix

Requirement	Marks
Interaction Design CA3 (100 marks)	
Point 1 (Research & Problem Spaces)	20 marks
Point 2 (Relevant Solution)	20 marks
Point 3 (Lifecycle Model)	10 marks
Point 4 (Low & High-Fidelity Prototype)	10 marks
Point 5 (Data Gathering Technique)	20 marks
Point 6 (Basic Quantitative & Qualitative Analysis)	15 marks
Point 7 (Group Presentation Slide)	5 marks