Group Project:
Engaging Communities

Deadline: 24th November 2017

Your team is preparing for the CHI' 2018 Student Design Competition. The theme this year is 'Engaging Communities'. Your task is to use human-centred design approaches to develop a new way to support, empower, or change the behaviour of a group around a shared area of interest.

Deliverables:

i. **Lifecycle Diagram & Artefacts**
You are to submit a schematic representation summarizing the design process undertaken by the group during the entire project duration. No marks would be awarded for stages in the design process if it is not substantiated with relevant evidences. You may choose to maintain a website or a physical folder to keep track of the artefacts created as a result of the group discussion.

ii. **Video Prototype**
Create a video illustrating how your solution fits of the users with the help of scenarios. The video must illustrate some details of the interface and information presented. The video should not be longer than 5 minutes and file-size no larger than 200Mb.

iii. **Individual observation and reflection**
This piece of the coursework can be written in a first-person narrative. The purpose of this piece of work is to help you be aware of your own design practice. In addition to answering the questions presented in the 'Individual Reflection' section, you are expected to include additional observations made that came about as you were doing the project. No marks would be awarded if claims are not supported by a description of observations.

iv. **Self and peer assessment form**
You are to assess yourself and include an assessment for each of your group member with respect to their contribution to each task in the group work. You are to submit only ONE excel file containing all the assessment details of yourself and your team mates. This is an individual submission. Name the file in the following format: `PracticalSession_GroupName_YourName.`
Example: `P3_W1_Andrew.xls`

Assessment Details:

This assessment component contributes 25% of your final grade:

i. Design Process Map + Video Prototype = 15%
ii. Individual observation and reflection = 10%

Individual Marks = Design Process Map x IWF + Individual observation and reflection

Important Notes:

- The focus of this project is not about how beautiful your creation looks but the design process that you undertook to ensure that the design is usable by your target users and how it meets their requirements.

- No marks would be awarded for individual components in the portfolio if it is not referenced in the design process map and/or there is no evidence presented to support items claimed to be done.

Part 1 – Problem Identification

Discuss with your group members the purpose (focus) of your product. Submit a write-up of the solution on your website. The write-up should include a brief overview of the problem at hand, motivation for coming up with the product and who your target users/potential buyers/investors are.

Part 2 – Getting started on the solution

Perform PACT analysis on your proposed solution to help you think about all the factors that needs to be considered while designing the system.

Group Activities:

a. Identify the stakeholders and different types of users for your application. In your answer, include a list of user characteristics that you need to take into consideration while designing your solution.
b. What kind of tasks must your application be able to do? For the main tasks of the application (if necessary), list out of the steps needed to perform these tasks.
c. When do users perform these tasks and how would it affect your interface design?
d. What type of information is needed by your application and how do you obtain these information from the users?
e. What type of information/output does your user expect to obtain from your application?
f. Review your answers in (a) to (e). Do you think you have all the needed information to design the product?
   If no, list out the areas that you are in doubt. If yes, provide arguments and supporting evidence on how you reach this conclusion.

Individual Reflection:

a. Why do you think you are asked to apply PACT analysis?
b. Can you make do without PACT analysis? If so, explain how you ensure that the needs of your users are taken into consideration during the design.

Part 3 – User Research

From Part 1 & 2, your team have developed some form of understanding of the problem at hand and its solution. You are to conduct user research to determine if your assumptions of the problem space and its solution reflects circumstances in reality.

Group Activities:

a. Design user research methods to validate your findings. Justify your choice of research methods and tools used with respect to the type of information that you would like to collect and how you would collect this information.
b. Conduct the research methods that you have developed in Question (a) with actual stakeholders/users. Due to the time constraint, you are given the option to decide the sample size (total number of participants) for each method. However, you need to make sure that the sample size is appropriate with the chosen method and population. You will also need to justify why you chose the target population i.e. who exactly are these people, how is the proposed solution beneficial or of use to these people and how you actually selected the participants during the study.
c. Based on your research findings:
   (i) Generate a list of requirements that should be demonstrated by your proposed solution. Classify the requirements according to the different types of

requirements covered in class. Alternatively, refer to Chapter 10 of Preece's Interaction Design.

(ii) Describe in detail the tasks to be performed by the users using your proposed solution. You are recommended to use an appropriate task description tool for this.

Individual Reflection:

a. Are the research methods that you have chosen sufficient to collect what you need?
b. How do you choose the subjects in your study? Is there a relationship between your users/stakeholders and the demographics of the study?
c. How do you know what you have collected is correct?
d. When should you stop your data gathering and proceeding with the following stage of interaction design designing?
e. Compare your findings in Part 3 to that of Part 2. Is there any difference between the original idea of the proposed solution and what you have found from your study?
f. How do you think your findings from this part of the project affect the designed solution?
g. What do you think would happen if you skip Part 3 and dive straight into Part 4?

Part 4 – Design Alternatives, Prototyping and Evaluation

At this point of the project, you should have a good understanding of the problem and stakeholders/users' needs. In this part of the project, you are going to come up with as many design alternatives as possible of your solution outlook that addresses the problem space. A way to go about this is to schedule a mutual time for your group so that you can brainstorm, sketch the ideas and discuss about the design.

IMPORTANT: Do not get each team member in the group to sketch a few designs then pool these designs as your idea submission and/or randomly selecting one of the designs as your final design. Marks would only be given if you can defend your design decisions.

You are NOT required to build a full working prototype. However, your design should be detailed enough for a potential user to provide feedback to the design.

Group Activities:

a. Generate design alternatives of your proposed solution. You are given the freedom to choose the type of tools to do this. Remember that the main purpose of this project is to focus on the design process that you took to create a usable solution and not how well you use the tools. For each design alternative, justify your design decisions by making annotations and providing a brief walkthrough. Your final submission must have at least THREE design alternatives and a description of how each design is evaluated.
b. Imagine that you are planning to pitch your idea to investors. Create a suitable mock-up of your solution. You should get all the interface functionality to be working. Once again, you are given the freedom to choose the type of tools and format to do this. However, you must justify your choice of tool and the fidelity of your mock-up in the final submission.
c. Perform Heuristic Evaluation on the mock-up that you have developed in (b).
d. Analyse your evaluation findings in (d) and make a list of improvements according to the severity of the problem.
e. Design the research methodology to perform user evaluation on your mock-up.
f. Create a video presentation of your final design showcasing the usability of your mock-up.

Individual Reflection:

a. While you are working in a group as a design team, does misunderstandings happen in the team? If so, what do you think is the cause of it?
b. What is the purpose of creating many design alternatives at the start of the design cycle?
c. How do you convey your design ideas to your team mates at the early stages of designing? Evaluate your current approach with respect to the tools required and its purpose. How effective do you think was the chosen approach?
d. How do you convey your design ideas to stakeholders or people outside your design team? Does this approach differ from your answer in (c) and if so, why can't you use the same approach?
e. How many design iterations did your team undergo before you all produced a 'satisfying design'? In your answer, define what happens in a design iteration.
f. How do you decide when to stop sketching and when to move onto a more concrete implementation?
g. What difficulties did you face while performing Heuristic Evaluation in the team? Is this a common problem among your team members or just you?
h. Compare and contrast what you have done in Part 3 - User Research and this part of the project.

Part 5 – Thinking about Implementation

In this part of the project, you are to plan how to fully implement your solution and design the methodology to perform user evaluation. You do **NOT** have to implement the full solution. The whole purpose of this part of the project is for you to apply the skills/knowledge from what you have learnt not only from this subject but also other computing subjects in order to create a working prototype.

Group Activities:

Draw a block diagram to illustrate to your investors components that needs to be developed before the product can be officially launched to the public.

Individual Reflection:

As a UI/UX designer, in your opinion, how much of the back-end technical skills/knowledge do you need to know? Justify your answer.