Team Project Guidelines & Checklist

CSC2005/ICT2102 Human Computer Interaction

DUE DATE: SAT 4 DEC 2021, 2359 HRS

Documents, video and any non-code items should be committed both in the **team document repo**. Code and implementation should be committed in the **team code repo**.

Project Report

The final report should be in a document in PDF format (Max 35 pages excluding appendix) named `csc2005-team<number>-2021-finalreport.pdf` or `ict2102-team<number>-2021-finalreport.pdf` and submitted to the **team document repo** in a folder named "final_report"

The following list describes then recommended structure and sections to be included the report but are not intended to be the exact names of the section titles. This is not exhaustive, and sections and naming can be modified depending on what was done in the project.

1. **Introduction**

Description of the project, the chosen activities and tasks, and how it corresponds to the design theme.

2. **Needfinding**

- Description and overview of the needfinding methods
    - Justify the needfinding methods used
    - Description of how the needfinding was conducted
    - Any important photos or diagrams (the rest go into the Appendix)
    - Results and conclusions after conducting the needfinding

- Description and overview of task analysis (if any)
    - Description on how the task analysis was conducted
    - Any important diagrams for the task analysis (the rest go into the Appendix)
    - Results and conclusions after conducting the task analysis
- The identified user needs (Minimum 5)
    - Description of the identified user needs
    - Justify the user needs using the results obtained from the needfinding and task analysis methods
    - Any implications that will affect the final design
- Brief conclusion and results from this section

3. Storyboards & Prototypes

- Design ideas brainstorming process
    - Description of the design ideas and the brainstorming process
    - Include any main photos, diagrams, sketches or idea graph (the rest go into the Appendix)
- Two story boards (with two different design ideas)
    - Title, label and number the storyboards
    - Provide a brief written description for each story board, stating the design idea, functionality or use case depicted in the story board, and how it solves the user needs
    - Describe which storyboard was finally chosen, and explain why
- Two low-fidelity user interface paper prototypes (with two different designs)
    - Title and caption the user interface prototypes, each interface (screen) of the prototype should be numbered/labeled
    - Each prototype sequence should match the chosen storyboard
    - Describe how each user interface paper prototype sequence works, and UI screen flow, the design concepts used
    - Describe which lo-fi UI prototype was finally chosen, and justify why

    - Justify why this final UI prototype was chosen to be made into a full prototype, by discussing the merits of the design in terms of the HCI principles and conceptual model (e.g. metaphor, mappings etc.)

4. Heuristic & Think Aloud Evaluation

- Description of the process of heuristic evaluation with the other team
    - Photos and images of any additional prototypes created (the rest go into the Appendix)
- Results of the heuristic evaluation, issues found with the prototypes
    - Prioritized set of heuristics and their severity ratings, after analyzing the evaluation results.
    - Illustrated heuristics and severity on a graph or in a table

- Description and process of think-aloud evaluation with another team
    - Video of the paper prototype think aloud (YouTube link in the Appendix)
    - (1) Usability script and (2) Task list in the appendix of the report
- Results of the think-aloud evaluation, and issues found with the prototypes
    - Describe the scenario and the 4-5 tasks that were performed for the think-aloud
    - Description of the think-aloud evaluation results
    - Table of issues or problems encountered per task (or similar table)
    - State the solutions to address each issue identified
- Solutions to all issues found during evaluation
    - Description of solutions to the issues found with the paper prototypes
    - Describe specific changes to the prototypes to address the issues
    - Revised medium or hi-fidelity prototypes to illustrate the changes and solutions created (the rest go into the Appendix)
- Summary and conclusion of the entire evaluation process

5. Implementation

- Software tools and methods
    - Description of the choice of tools, software, API and other libraries that were used
    - Justification of why these software tools and methods were used
- Implementation plan and process
    - Describe the components implemented, people responsible, time taken and any other processes
    - Use the implementation plan worksheet (goes into the Appendix)
- High level architecture or block diagram of the team's specific implementation
- Figures or screenshots from the implementation, any database tables, etc. (Rest go into the appendix)
- Description of changes to the implementation vs. prototypes
    - Justify and describe any changes to the implemented interfaces and functionalities, when compared to the mid/hi-fidelity prototypes.
    - (Time constraints or lack of programming proficiency cannot be used as a justification…)

6. Experimentation

- State the hypothesis
- Experiment design
    - Name the design that was used and justify it with two reasons
    - Task the users performed (attach information sheet in appendix)
    - State the independent, dependent and control variable(s) of the experiment
    - The type of data that was collected and how it was collected. State the relation between data collected and the hypothesis in a single sentence.
- Analysis for the experiment
    - Clearly labelled table and graph showing the data obtained from the experiment.
    - Which statistical test was used? Justify with at least two reasons.

    - The result of the statistical test (in proper format) and this aligns to the table/graph in the previous step
    - What is the conclusion regarding the hypothesis?
- Concluding the experiment
    - Use ladder of validity to comment upon one limitation of the experiment (any one validity type will be sufficient).
    - State two confounding variables for the experiment. State why they are confounding variables (State in a single sentence for each of the two variables)

7. Conclusion

Summarize the work and state any conclusions from the project

Appendix

Use the Appendix to add figures/tables which are not necessary to be included in the main report, but will be useful for the reader to refer to (some examples are provided below)

- The consent forms that were used
- The task information sheets given to participants
- All the data collected for the experiments
- The questionnaire that was used/screen shots of usage statistics (if any)
- Screen shot of statistical test result from the online tool used
- Screen shot of descriptive statistics from the online tool used

Video

- ~2-3 mins long
- Demonstration of the main use cases and features
- Video file to be put in the team GitHub docs repo
- Upload on YouTube, provide the link

Presentation

- Max 10 mins
- Presentation slides should include an introduction, needfinding and results gathered, storyboards and paper prototypes, evaluation results, experiment results and a short demo

Code

- Code should be committed in the team GitHub code repo
- Regular code commits
- Well commented and self-documenting
- Must compile and build

END OF DOCUMENT