Project Part 1: Concept

Due: by email to 709082367@qq.com, single PDF file named CST_P1_YourName(e.g.,CST_P1_XXX.pdf).

Decide on an HCI project topic for this class (an interactive computer-based application) and write a project concept document with the structure indicated below. Nole that your project will focus on your software/system's inferactlon with users and its interface details.

The notation <X, Y> applles as follows: X items for a team of one, Y for a team of two.

0 Cover page: university, department, course, project title, project part, author, instructor, date

1 Abstract: Between 80 and 120 words, concisely explain what this project is about.

2 Description: Between 700 and 1200 words, indicate the following:

A. Product details

- Main goals (indicate what are the main objectives of this project)
- Main funclonality and/or characteristics
- Planned technology. e.g., software platform, languages, libraries, tools
- Notes on extsting similar/related systems: their utility, good characterlstics and limitations or advantages and disadvantages (provide references)

B.Expected significance and impact

- Intended users and key usability goals
- New/innovative aspects of your proposed project (e.g., enhancements over extsting solutions)
- Expected impact of your solutions in global, economic, environmental, and societal contexts(briefly comment on each of these)
- Note(s) on how this project could contribute to your own professional growth

3 Project Rosources

- Provide al least <4, 4> related references (journal articles, conference papers, or books)
- Include links to at least <1, 2> websites with related resources.

Project Part 2: Requirements Discovery and Specification

Due: Friday December 26, by email to the instructor (709082367@qq.com), single PDF file named "P2_XX" where XX is your name

Points: 100

Write a document that covers the required functionality of your software. Follow the structure below. Remember that your project should focus on interaction and interface details rather than on algorithmic aspects.

Note that in the following the notation **<X/Y>** means X applies to a team of 1, Y to a team of 2, students.

0 Cover page: department, university, project title, author(s), instructor, date

1 Abstract (between 100 and 120 words) – revised version of your project's abstract written for P-1: Concept

2 Requirements discovery – use *interviews* and/or *questionnaires* to gather requirements from **<2/3>** target users. You can either involve actual users (preferably) or play the role(s) of these users. Prepare a list with at least **<8/10>** questions and *summarize* the answers received on 2 or 3 pages, 1.5 line spaced, Times New Roman 11 (or similar), 1-inch all margins.

3 Use cases and HCI scenarios

- Create *a persona* for your project and write at least **<1/2>** *HCI scenarios* for this persona. The HCI scenarios should cover a use case or a combination of use cases (see below).
- Provide a *use case diagram* for your software with at least **<8/10>** use cases. Briefly describe each use case (2-3 lines each).

4 Functional requirements

Provide a list of *functional requirements*, organized on three levels:

- Level 1: Functions and features that will be covered in the prototype's interface due in December 2020 and will be fully implemented (from an execution point of view).
- Level 2: Functions and features that will be covered in the prototype's interface due in December 2020 but will not be fully implemented.
- Level 3: Functions and features that will not be covered in the above prototype, but would be useful in a possible continuation of the project beyond the time frame of this course.

To describe your system's functionality and features you can use any technique or combination of techniques, including but not limited to: user requirements, system requirements, form-based specifications, or structured words. The idea is to provide a clear and detailed description of what your system is supposed to do, and under what circumstances or constraints.

Project Part 3: Design

Due: Sunday Jan 3, 11:59 pm, by email to the instructor (709082367@qq.com), single PDF file named “P3_XX” where XX is your number

Write a document that covers the design of your interactive computer-based product. Follow the structure below. Remember that your project should focus on interaction and interface details rather than on algorithmic aspects.

Note that **<X/Y>** means X applies to a team of 1, Y to a team of 2 students.

0 Cover page: department, university, project title, author(s), instructor, date

1 Abstract (between 100 and 120 words) – revised version of your project’s abstract written forP-2: Requirements Discovery and Specification.

2 High level design: include here the following:

a. ***A system-level structural diagram*** (e.g., a system context diagram, a site map, an architectural diagram, or an architectural pattern). In other words, describe the high level structure(components and their relationships) of your product.

b. **A *system-level behavioral diagram*** (an activity chart or state-chart) that describe the overallinteractive operation of your product.

3 *Static interface design*: provide at least **<4/6>** *snapshots* of your product’s interface, with briefaccompanying explanations and descriptions. Focus on the more important aspects of the interface, avoid duplications, and relate the snapshots to the functionality and features presentedin Project Part 2 (Requirements).

4 *Alternative designs*: at least **<1/2>** alternative design solutions (snapshots) considered but notused in the project (e.g., different arrangements of the main window(s), different color schemes, different help structures, etc.). Briefly describe the alternatives, indicate what solutions were chosen (you should make references to the previous snapshots or place the alternatives side by side), and briefly explain why the alternatives were not chosen. Consider larger scope, more significant design decisions rather than small design details.

5 Annotated resources/references

- At least **<4/5>** annotated references (between 50 and 80 words each): journal articles,conference papers, books, websites. A mixture of all these is recommended.

6 Contributions of team members

- Be specific about what each of the team members contributed to this document.

Project Part 4: Prototype Implementation

Due: **Demos with Source code to the instructor** on Jan 9 or 10, 2021
(709082367@qq.com)

1. Deliverables of Part 4 of the Project

This final part of the project involves demonstrating your project to the instructor, and submitting the commented source code of your prototype software by email to the instructor.

a. **Demo to the instructor**. Several use cases should be illustrated by demonstrating the interface and the functionality of your software to the instructor. At the time your demo is scheduled you should be prepared with the program "ready to run" and have a sequence of use cases prepared.
It is required that you have a printout prepared with specific use/test cases or requirements that you plan to demonstrate.

b. **Source code.** The commented source code of your program should be submitted by email to the instructor (single ZIP file named P4_CST_XX.zip, where XX is your name).

Course Paper

Due: Jan. 16, 2021 (hard deadline, single PDF file sent to the instructor by email – use file name CST_paper_YourName.pdf).

The course paper, based on the project completed in this course, should follow the **CHI-2020 format for Extended Abstracts papers** available at
https://chi2020.acm.org/authors/chi-proceedings-format/
(see bottom of the page, **section CHI Extended Abstracts Format**). Your paper should be at least 4 full pages long (and maximum 6 pages), including references.
Additional information on CHI-2020 is available at https://chi2020.acm.org/
More details on Late-Breaking Works papers (which you should check) can be found at
https://chi2020.acm.org/authors/late-breaking-works/