Human Computer Interaction

Term Project

Group Attempt: Allowed (Max: 2)

The sole-aim of HCI is to develop such systems that are easier to use, so that people can achieve their goals faster, with less mistakes and greater satisfaction. Generally, understanding and satisfaction are much more important factors while performing task by the users to achieve their goals. HCI doesn't deals how to design just a pretty interface but also facilitate users to provide interface level understanding with its additional features like learnability, Flexibility, and Robustness: it dictates how a system reacts to what, and how information is obtained from and presented to the user. HCI is therefore about interaction as well as interface, and hence cannot be stuck on as a last minute thought. A superb interface may help cover up the cracks in a poor system, but if the underlying interaction is not well thought-out, the system will fail.

What we started in this course will be ended on HCI Course project and its presentation. You should follow some instructions for achieving maximum score. I personally don't impose any constraint on you but this time you are required to follow the following strictly for the betterment of design.

Instructions

1. **Make it your own interface to show your effort (optional).**
2. **Don't plagiarize, as similar content will be awarded to Grade Zero in HCI Course.**
3. **Your effort will be decided and tune me to evaluate you accordingly.**
4. **You have no option except doing this in a group attempt.**
5. **A group may be an individual or two members.**
6. **Evaluation will be done in a group also.**
7. **If someone has query in his/her mind, please read this document carefully again.**
8. **Work smart not hard except while presenting.**
9. **Unique thing is a precious one so try to design your interface with uniqueness.**
10. **Uniqueness doesn't means totally using different concepts as we already discussed this in HCI that leads your interface inconsistent.**
11. **Your evaluation will be done on simple analogy as follow.**

"The more you contribute, the more you gain"

Emerging areas of HCI:

You may select the following suggested areas for your HCI course project.

- ✓ **Affective detection and recognition**
- ✓ **Smart interfaces**
- ✓ **E-commerce**
- ✓ **Human motion tracking**
- ✓ **Gesture recognition**
- ✓ **Multimodal event detection and recognition**
- ✓ **Human motion and gesture recognition**
- ✓ **HCI issues in image/video retrieval**
- ✓ **Input and interaction techniques**
- ✓ **Intelligent Virtual Environments**
- ✓ **Multilingual website for a literary society**

You have to follow the below defined HCI-Oriented Design Lifecycle to produce appropriate **(five)** deliverables. The key users of the system shall be the users and other users for evaluation and for the purpose of buying. Following issues need to be addressed:

- **Identify Stakeholders and obtain user ideas about the proposed system**

  It will be Included the following.

  a) Identify the stakeholders involved (documented in the report).
  b) Discuss the system with the prospective users/customers.
  c) Compare it to an existing one.
  d) For a unique design, identify the weaknesses and strengths of the existing system.

- **Identify various tasks involved**

  Using the hierarchical task analysis technique to identify various tasks involved, if a task analysis document of a prior developed system is available then rethink over the old design and make appropriate changes (if possible), which can accumulate the new design requirements.

- **Allocate function to Tasks**

  After producing the task analysis document, allocate functions to the tasks, these functions should be either Human (H) or Computer (C) oriented or both (H-C).

- **Recording of design decisions**
  a) Interaction design and interface design decision the following.
  b) How the system responds to things?
  c) How and what information is presented and entered.
  d) Architectural and detailed design.

  Note. You may represent this information and decisions using the design rationale.

Deliverable No: 1

(Project Proposal)

Max Marks: 10

Requirements:

Company Name:

Company Logo:

Team Members:

Project Title:

Project Logo:

Team Member Roles:

Problem Statement:

Project Scope:

Project Purpose:

Project Objectives:

Project Description:

Deliverable No: 2

(Requirements/Architecture)

Max Marks: 10

Project Requirements:

Clearly mention the requirements of the system i.e. what functions would the system will perform. The requirements must fulfil the scope and objectives defined in deliverable 1.

Architecture:

You have to make high level architecture diagram of your project. Architecture must show the interaction of different modules. At this stage the architecture will be conceptual and logical and will be refined as we move on.

*At the end you are require to present working software/application so your scope and requirements must be well defined before implementing the architecture

Deliverable No: 3 (Prototype)

Max Marks: 10

Prototype

- Produce screen shorts of your main/significant use cases or functional requirements.
- You can use any tool for interface design.
- Show the proper navigation among pages/modules of your project to complete a user task.
- Also clearly mention which task user is going to perform in a step by step manner.
- Make prototype for Seven (7) major requirements.
- You should have must apply all the principles of HCI.
- Screenshots/ Diagrams taken from any source will be consider as plagiarized and will be taken as a serious case.
- Minimum penalty F grade in course for plagiarized prototypes.

Note: At the end you are require to present working software/application so your prototypes must be implementable.

Deliverable No: 4 (Implementation + Presentation)

Max Marks: 10

Implementation

- Implement **Three Major Requirements** of your project in real environment. Show the navigation between different pages.
- You have to submit screen shots of user activity i.e. if user is using the system then how he/she will proceed. Which screens would be showed? How would the user activity end?
- Remember this is the **first working prototype** of your system, and you have to implement it in real environment, it may be subject to change after user feedback (in later deliverables). But your design should be clear and appropriate.
- Keep in mind that you have to submit all scenarios of each requirement i.e. showing one user's actions and reactions to the system while performing different tasks.
- Don't confuse it with deliverable # 3 screen shots (They were just showing your screen layouts or user interface).

Deliverable No: 5 (Questionnaire and Survey)

Max Marks: 100

Questionnaire

This extended exercise is designed to give you practice in writing, testing and administering a questionnaire to a true user population. Although it does not train you in the very fine points of questionnaire design, it does alert you to the basic problems in obtaining valid responses from people. In addition to practice in valid questionnaire design and questionnaire administration, the exercise asks you to focus on finding information about a user interface to a new system The 4 steps of this exercise are:

1. **Selecting your project interface.**
2. **Preparation of a draft questionnaire (1-2 pages).**
3. **Preparation of a final questionnaire.**
4. **Filling the questionnaire from 30-50 users**

Survey

Based on the information, collected from the filled questionnaires, you have to conduct a survey. For this you will scale the options provided in the answers and set the highest priorities to that option which is chosen by the majority users in the close ended questions. Similarly, you will pick the suggestions given by the majority users in open ended questions. (You can make a graph to depict your findings clearly). Clearly mention all the problems that are discovered with the help of your survey. You will rectify these issues or anomalies related to your system design in the demos of your project and will also mention about them in the final report.

Note you have to submit draft questionnaire, final questionnaire, filled questionnaires and survey. Remember it's a feedback process, your system will be used by 30-50 users and you will take their opinion about the interface usage and design evaluation via questionnaires.

End