


<p><b>Petra University</b> (Private Accredited University) Faculty of Information Technology</p>	 جامعة البترا	<p>جامعة البترا (جامعة خاصة معتمدة) كلية تكنولوجيا المعلومات</p>
<p>Course Title: Human Computer Interaction Course No.:603393</p>		<p>اسم الطالب:</p>
<p>Instructor Name: Mr. Izzeddin A. Matar</p>	<p><b>Second Exam</b></p>	<p>الرقم الجامعي:</p>
<p>Date:</p>		<p>الشعبة:</p>
<p>Time: 8:00-9:00am</p>	<p>2015-2016 (2)</p>	<p>الدرجة: المجموع: /20</p>

### Course Intended Learning Outcomes (ILOs) and their Alignment with Program ILOs:

#### C. Practical Skills

#### D. Transferable Skills

### Project Overview

This project in this course will be individual. It will involve proposing some computing-related task/problem to develop interface design alternatives for the task/problem and implement a prototype of your design. Ideally, the topic of the project will be a problem that matters to some "real-life" people. The project consists of the following parts:

- **Part 0 - Topic Definition**
- **Part 1 - Understanding the Problem**
- **Part 2 - Paper Prototype and Design**
- **Part 3 - Implementation**
- **Part 4 - Presentation**

### Project Report

Each part of the project will include a deliverable report which includes a brief (paragraph) description of the problem/task. In any case, it should be professionally prepared, concise yet expressive, grammatically sound, illustrative of your efforts and process, and easy to view and understand.

## Part 0 - Topic Definition – Pick a Problem

### *Due date:*

The first part of the project is relatively simple. You must identify the problem area that you will be working on. The problem can be identified from the following areas:

1. The student can pick a device such as answering machine with selective playing, deleting of recorded calls; copy machine with 2-sided copying; cell phone for placing calls using an address book; VCR or DVD/R: basic setup (which channels, clock, input source, record speed, etc.); television with contrast, brightness, channels, input sources; High definition television with various wide-screen modes; digital camera including taking pictures, specifying different resolutions, turning on and off the flash, etc.; microwave with cooking, defrost, set current time, timed cooking, etc.; wall Oven, with bake, broil, self-clean, timer for timed cooking, etc.; washing machine, with parameters for water temperature, different cycles, etc.; robotic vacuum cleaner (speed, obstacle avoidance); augmented calculator (e.g., ability to see past computations, etc.); alarm clock (set time, set alarm, multiple alarms, snooze); audio book player (select book, navigate chapters); text messaging phone application.
2. The student can evaluate the University of Petra web page and propose a new version for the web.
3. The student can design a problem related to socio-organizational context such as booking system for an international airline for use by associated travel agents to sell flights directly to the public; tomorrow's hospital that allows the nurse to walk around the ward to a patient's bedside; a system to help people to manage their 'to do' list, an information system that provides information about course contents and requirements, university and local facilities, fees, and admission procedures.

## Part 1 - Understanding the Problem

### *Due date:*

The key goal of the first part of the project is to deeply understand that **domain problem** that you are addressing, its set of relevant users, and the issues and constraints that are involved in the problem. If the task has an existing system/interface, you should perform an interpretive evaluation of that system to help you learn more about it. Most important is to identify important characteristics of the problem that will influence your subsequent design.

Your report and deliverable for this part should deeply examine the problem of study. Who are the potential users? What tasks do they seek

to perform? What functionality should the system provide? Basically, you are setting up a set of constraints for your subsequent design. What criteria should be used to judge if your design is a success or not?

## **Part 2 – Paper Prototype and Design**

*Due date:*

The key goal of Part 2 of the project is to develop a set of design alternatives for your problem. This is the stage of "informed brainstorming". These multiple design alternatives should explore the potential **design** for the problem.

In this part of the project you will develop mock-ups, storyboards, and sketches of your interface designs. That is, you should provide pencil-and-paper or electronic images of the interface at various stages; you do not need to build a working prototype. Your design sketches should be sufficiently detailed for a potential user to provide useful feedback about the design, however. Along with your design mock-ups, you should provide a brief narrative walk-through of how the system will work. Perhaps most importantly, you should also include your justifications for why design decisions were made, and what you consider to be the relative strengths and weaknesses of your different designs.

The design process you follow here is important. It should be more like a brainstorming session. Your project report should include all the explanatory material mentioned above as well as all the design sketches, drafts, storyboards, etc., that you generated. If some of your sketches are on paper, either scan or photograph the material and convert it to an appropriate electronic format.

## **Part 3 - Implementation**

*Due date:*

In part 3 of the project, you will implement a detailed prototype of your interface. You can use any prototyping tools that you would like to assist this process (e.g., VB, MS Visio, etc.). You should be able to get much of the interface functionality working, but clearly you will not be able to implement all back-end application functionality.

Your write-up for this part should include a description of your system prototype. You can include screen dumps to help explain it and text to describe how a user would interact with it. The key component to include in your project report is a justification of why you settled on the design that you chose. What's special about this particular design with respect your problem?

## **Project Presentation**

*Last week of classes*

The design project will accumulate in a session in which each student presents his/her system to the class in 15 minutes including summary and walk-through of their design and prototype. You want to make sure that your objectives in the project are discussed, your system is clearly presented, and that your design process is communicated.