

COSC3331 Human-Computer Interaction

(Assignment 1)

Submit through Blackboard before midnight Feb 11, 2020.

Question 1: Rapid Prototyping.

Part 1: Designing a Teaching Theater Control Panel (50 points).

Suppose you are asked to design the facility control panel for a teaching theater. The purpose is to make it easy to use even for novice users. The control panel is used by the instructor to control and monitor the status of the following facilities:

- There is one instructor computer screen, a keyboard, and a mouse. There are also 10 student computer screens, keyboards, and mice (numbered from 1 to 10, and each computer also has a 6-alphanumeric-character name). Finally, there is one projector which projects the computer display to a large whiteboard. The instructor should have full control of them, including but not limited to:
 - o Sending the content on the instructor's screen to all the students' screens and/or the projector.
 - o Taking a student's screen content (by specifying the number or the name) and sending it to all the other students' screens and/or the instructor's screen, and/or the projector.
 - o Taking a student's keyboard and/or mouse (by specifying the number or the name), which means the keyboard input and/or the mouse input to the student's will be from the instructor's keyboard and/or mouse.
 - o Releasing all control so each student has full control of his screen, keyboard, and mouse.
- The instructor should also be able to control the intensity of the lights in the room. There should be nine lighting levels, ranging from high to low.

Guidelines

- Visual Basic or similar design environment is recommended. So basically just drag-and-drop controls to enhance your interface and set options in the properties dialog. No coding is required. However, some obvious restrictions should be enforced when appropriate. E.g., if you use groups of radio boxes, there should be one and only one item in each group that is selected.
- You should use only a single form.

- The focus is on the interface, and the grading criterion is centered on your interface design. Use command-buttons, check boxes, images, color, labels, etc. wherever and whichever way you feel is right.
- Please attach the screen shot as your answer for part 1.

Part 2: Justify your design based on the guidelines, principles and theories in Chapter 2 (20 points).

Question 2: Name a piece of software you often use where it is easy to produce an error. Explain ways you could improve the interface to better prevent errors (15 points).

Question 3: Give a brief explanation of the Eight Golden Rules of Interface Design. State an example you have seen on a device, computer interface or web site that violates those rules (15 points).