

Assignment 4: Human-Computer Interaction

This assignment is all about proposing a new design for an interactive device or piece of software using the concepts we learned in the HCI notes.

Directions

- Think about an activity or hobby you enjoy, or perhaps a task that is commonly done in your field of study. (From here on in, we'll refer to this as the "area of choice.") Is there some kind of technology that is used in the area of choice that would benefit from a redesign? Or is there a way that technology could make things better?
 - Your job is to design a new interactive device or piece of software that can make things easier or more enjoyable in your area of choice.
- In a Word document, begin by giving an **overview of the problem you are trying to solve or the reason you are proposing your design**. Include general background information on your area of choice and discuss specifically (in detail) the task(s) that your design will be related to. Include pictures if it helps. This section should be at least 500 words.
- In as many words as it takes, **describe your design in detail**, again using sketches, diagrams or other images if it helps. Include the following in your description:
 - How your design relates to the tasks described earlier. How is the problem being solved, or how does the design make life better for its users?
 - Address each of the six principles of design, and discuss how you have incorporated the advice/guidelines into your own design. Some careful web searching will likely find you more information about the topics if you need more ideas. (For example, search for "good design consistency" and you will find lots of useful results.)
 - Choose two of the six areas of cognition discussed in class and research these further using academic sources. What can you learn from these concepts and how will you incorporate this into your design?
 - Discuss how one or more of the levels of emotional design apply to your own design.
- Describe in detail **an evaluation study you could perform** should your design ever be implemented. You can choose any one of the methods presented by our guest lecturer (slides on WebCT).
- Include a **bibliography with at least three academic sources** (i.e. conference/workshop/journal papers) using Word's built-in "Citations & Bibliography" functionality. Use whatever citation style you prefer. These sources will most likely support your research on the aspects of cognition that you chose, but you can also use them to support the validity of other aspects of your design as well.
 - On campus, you can access academic papers online for free via <http://www.library.carleton.ca/>

- At home, you can also access these for free if you are a full time student. You will be asked to log in with the bar-code number on your student card and your Carleton Central PIN. Access the journals through the same website.
- **Organize the document** in a logical way, using headings and title styles.

Ideas for inspiration

- Is there something in your area of choice that is done mostly manually, be it on paper or with lots of manual work with data on a computer? Can you see ways to improve this?
- Think about the Epic Win video we saw at the beginning of the course. Is there a game you could design to inform or change peoples' attitudes in your area of choice?
- You don't have to focus on software – anything with a computer chip inside will work. Be creative! If you like working with kids, for example, what sort of interactive toys could you design for certain activities?

Marking Scheme

Marks	Requirement
2	A general overview of the area of choice gives the reader a good sense for what happens in that area.
2	Details about the specific tasks related to the proposed design are clear and complete.
1	The proposed design relates to the area of choice and the tasks described earlier.
1	It is clear what problem is being solved or what is being improved for the users.
12	Each of the six principles of design was addressed, and applied in a reasonable way to the proposed design (2 marks each).
4	Two aspects of cognition were researched and discussed (2 marks each).
4	The two aspects of cognition were applied in a reasonable way to the proposed design (2 marks each).
3	The discussion of emotional design is correct and reasonably applied to the proposed design.
5	A comprehensive evaluation study is proposed using one of the techniques shown in class.
2	The document has a bibliography created with Word's built-in functionality.
3	There are at least three academic sources used properly in the document.
1	The document is well organized and uses appropriate title and heading styles.
40	TOTAL