COMPSCI 345 / SOFTENG 350

Human-Computer Interaction

Assignment 3: Realizing a Design

- Worth 10% of your final grade
- This assignment is due Sunday 22nd May 11:59pm
- This assignment must be done **individually**

Aims

The aim of this project is to give you experience in designing and implementing a prototype graphical user interface.

Background and Scope

This assignment builds on assignment 2. Now your task is to further develop the design of the desktop interface as an HTML-based prototype for one scenario of use of the system.

1. Note that you are *not* bound to your Assignment 2 work as a specification; that is:
    a. You do *not* have to match the lo-fi designs your group did, but you may if you wish
    b. You do *not* have to implement any or all or the features in your Assignment 2 design, but you may implement some of them if you wish
2. Exclude from your prototype (and its description, e.g. your statement of the scenario) any steps involving system access and authentication. Assume the user has their browser open to the main screen of the home automation application as configured for their home.
3. Do not include a splash screen.
4. If you envision the first screen as a main menu with access to a wide range of functions outside of your chosen scenario, only the pathway (buttons, links, etc.) relevant to your scenario should function.
5. Out-of-scope links should not cause errors if clicked, but do not need to be appropriately tool-tipped.

Details

Create and submit deliverables for the following tasks.

Task One: Design Documentation

(a) Walkthrough with wireframes: Briefly outline an appropriate persona and the scenario that fits what your prototype does (no more than 150 words). Using three to five illustrative diagrams and surrounding narrative text (no word limit, but more isn't always better), step the reader through how the prototype works. The diagrams should NOT be screen dumps from the HTML prototype (the Task Two deliverable), but higher-level illustrations of layout such as produced from a wire-framing tool. The diagrams should not use coloured backgrounds, do not have to include full realistic data, and should represent images by a description of the intended image inside its bounding box.

(b) Colour scheme: Describe the basic type of your site's colour scheme (e.g. monochromatic). List all the colours used in your prototype and their role, showing a block of colour and the RGB value. E.g.

	RGB: 53, 94, 145	Navigation pane background

Provide a brief rationale (no more than 100 words) for your overall colour choices.

(c) Layout scheme: Provide a description of your approach regarding choices of lines and borders, backgrounds, use of white space, icons and any other methods for grouping, segmenting or giving a particular graphical 'feel' to the site. You do not need to illustrate the components – presumably the prototype does this, but you should provide a brief overall description and rationale (no more than 150 words) that includes two to four specific aspects of your strategy.

(d) Resources used: List all external resources used for Task Two as a bulleted list or table including the source and description of the role it plays in your design. This should include all JavaScript libraries you included and any images that you did not create yourself.

Include all this as a single document called Design.* with * equal to .doc, .docx, .rtf or .pdf as appropriate to the format of your document file.

Task Two: Implementation Tasks

Implement the design described in Task One using standardised Web browser technologies of HTML5, CSS and Javascript only. Note:

1. There are, of course, many productivity frameworks to accelerate Web development. For this assignment you are to directly author the HTML documents, e.g. using atom or Notepad++.
2. You ARE allowed to use any freely available libraries you find useful such as jQuery or Bootstrap Components, as long as the technology is entirely composed of HTML, CSS and Javascript (and any supporting image files). Be sure to document these in Task One part (d).
3. Use DHTML/DOM methods to simulate underlying data where necessary to the dynamics of your prototype (e.g. HTML sessionStorage). Use image files from photos to simulate camera feeds (document source of images in Task One part (d) if you didn't take the photos yourself).
4. Do NOT use applets, Flash or Silverlight and do NOT use a database management system (MySQL, Access, etc.).
5. You may NOT use application templates or any complete application solutions (e.g. a .NET MVC project) or any solution that is specific to a given platform (Windows, iOS, etc.).
6. Where differences in browser behaviour may be important, use the version of Google Chrome installed in the computer labs as your reference.

If you have a question about whether something is allowed, contact the tutor or the lecturer. Keep in mind the mark scheme (see end of this assignment sheet) and that the emphasis is on *design*. The prototype is meant to illustrate the quality of the design – the prototype with the most functionality, or even the cleverest programming, will not necessarily get the best mark.

Submission

Before you submit CHECK THAT ALL YOUR LINKS ARE RELATIVE so that the markers can unzip your folder and everything will work. The simplest and most reliable package will be

one where all the files go into a single directory, although subdirectories are likely (and probably best for readability) where large publicly available libraries have been included.

Submit a single zip file (and use ZIP format, not RAR or other) that contains the following via the online Dropbox by the deadline:

- Design document for Task One
- Your Web site prototype for Task Two, including home page and any other pages that the user navigates to depending on your design, with any supporting files that are needed for the site to be run by the marker. Include all HTML files, style sheet files (unless you did all styles internal or inline), Javascript files (again, unless internal to the HTML files) and image files.
- Please name your submission file using your UPI (e.g., bpli001.zip).

You can make as many submissions as you like, but only your last submission will be marked. **You should plan to spend no more than 30 hours on this assignment.**

Marking Guide

Markers will assess your deliverables out of **100 marks** as follows:

Design components	**Aspects**	**Marks**
Walkthrough and wireframes	Understandable	5
	Complete to appropriate level of detail	10
	Matches to prototype	5
Colour scheme	Has a good explanation	5
	Supports attractive prototype with functional contrast	10
Layout scheme	Has a good explanation	5
	Supports clear visual grouping in the prototype	10
	Attractive and consistent layout	10
Prototype fitness for scenario *(beyond marks implicit in colour and layout schemes)*	Intuitive and efficient for task	10
	Provides appropriate feedback	10
	Complete for scenario attempted	10
	Takes on a substantial interaction task (has depth)	10