Project 1: Interface Design

CSE 331
Fall 2017
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Your Task

You and your team have been recruited to design the interface for a photo sharing site. Since it's an early-stage project, the interface need only provide a limited amount of functionality.

Upload – The user should be able to upload a photo, along with a text description.

Overview – The user should be able to see thumbnails for all available photos.

Detail – The user should be able to see a full size version of each image and its description.

Edit – The user should be able to update the description for an existing image.

Delete – The user should be able to remove an image from the site.

The backend functionality for each of these has been created for you (see the documentation for details). You will be responsible for designing the front end, implementing it, and running a usability evaluation.

Design

There are numerous, perhaps infinite, possibilities for designs that provide the above functionality. To help sort through the design space, you should draw on the principles and approaches that we have covered and will continue to cover in class.

Implementation

You will be given an overview of using Javascript and jQuery for interface development. You and your team will be required to implement an interface that provides the above enumerated functionality. You can choose to implement this functionality in any way you like using any libraries you like. The implemented interface should be able to run on any web server. You will use localhost web server on your own machine for development. Evaluation will be done using Prof. Baumer's server.

Setting up a web server on your machine differs based on your operating system and the version you are running. The following links contain some suggestions, but they are neither perfect nor definitive:

https://www.maketecheasier.com/setup-local-web-server-all-platforms/

https://developer.mozilla.org/en-

US/docs/Learn/Common_questions/set_up_a_local_testing_server

Evaluation

One of the most important aspects of interface design is enabling users to accomplish the tasks they need to in an easy, efficient manner. This requirement provides two easy-to-measure metrics: time and errors. How long does it take a user to complete a given task? How many errors do they make?

In the interest of simplicity, we will focus primarily on *time*. You will need to design an interface that provides all the above functionality and enables users to do it as quickly as possible.

Deliverables

You and your team will be responsible for three deliverables.

The Interface

By 10:00 a.m. on Monday, October 2, you will need to upload a zip file containing the source code for your front end. This interface will then be deployed on a public-facing web server, which will facilitate the evaluation described below. A functional interface will constitute 20% of the grade for this project.

Design Rationale

Along with the source code for your interface, you and your team will submit a written description of the design. This description will provide the rationale for and the justification behind your design. The document can include concept sketches, annotated inspirations, screenshots of early prototypes, screenshots of the final version, and whatever other visuals help you effectively convey the design rational. The readings from class will provide you with examples of written design rationales and with justifications to use in supporting your design decisions. The written design rationale will constitute 40% of the grade for this project.

Performance Evaluation

During class on Wednesday, October 4, your interface will be subjected to a usability evaluation. Your classmates will be given a series of tasks to perform with your interface. Each of these tasks will be timed, using an infrastructure set up by Prof. Baumer. The exact tasks will not be specified in advance, but they will use the full extent of the functionality described above. Each student in the class will perform each task with each interface.

After completion of the usability trials, you will be given timing data showing how fast each study participant (anonymized) completed each task. You will then use this information to write a report on the effectiveness of your interface. You should highlight both strengths and weaknesses of the design exposed during the evaluation, as well as how you would use the results to improve the design. The written performance evaluation will constitute 40%of the grade for this project.

To encourage both efficiency-enabling designs and fast completion of tasks, the following incentive structure will be used. The design that enables the fastest average time on each task will receive a bonus of 1%. The design that achieves the fastest overall average time for completion of all tasks will also receive a bonus of 1%. Finally, for each design, the student who completes all tasks the fastest will receive a bonus of 1%. These bonuses can be earned cumulatively.