Criterion A: Planning

The scenario

The client of this project is Dean Kirkness, Director of Communications and Marketing at my school, and a key supervisor for the school's Merchandise club, which is responsible for direct interaction with the student body for many marketing purposes. With extensive understanding and involvement in the school community's marketing and communication needs, the client is ideal for this project.

An issue that the school community is facing is the lack of a reliable platform for selling and buying used belongings among students on campus. Current available options, such as Facebook marketplace or direct 1-to-1 communication between students, are not suitable because Facebook marketplace is only available to people with a Facebook account, which an abundance of students do not have, and direct communication between students is problematic because it is inefficient and difficult to facilitate. The client agrees that implementing a solution through this project is important because a viable marketplace platform can result in less waste and greater sustainability efforts because it becomes easier to repurpose old belongings for different people and therefore reducing the need to buy new items.

Communication with the client was mainly done over email (see appendix), but some meetings were also held (which were not recorded, but are in the record of tasks).

Rationale for proposed solution

After consulting with the client, the proposed solution is an online website hosted on a Flask (Python) backend server with a HTML, CSS and Javascript frontend design. The platform is a webpage because it is accessible to everyone at school simultaneously and because it requires no pre-installed software to be accessible. Users will be able to access the webpage with a Google login, because every student/faculty has a school-issued Google account. A Flask backend server will be used because it is a modern, light and scalable web-development framework. It is open source, meaning it is free with extensive documentation. Flask is also compatible with a large number of extensions/additional libraries for increased functionality (such as forms, databases and user authentication). While other backend options such as Django might help build larger and more complex web applications, Flask "accelerates development of simple web applications by providing the required functionality" [1], therefore being ideal for this project.

A database is required to store item posts and user information, and the Python SQL toolkit and Object Relational Mapper called SQLAlchemy [2] will be used because it can be run directly in the Python Flask application and has extensive documentation available.

The templating engine Jinja (compatible with Flask) can be used in the frontend HTML for efficient layout control and versatility.

Success criteria

The user is able to

1. Log-in with school Google account
2. Post items for sale with the information
    a. Name of product
    b. Quantity
    c. Expiration date (if food/drinks)
    d. Category of item (clothing, food, drinks etc.)
    e. Price
    f. Picture of item
    g. General information, free text
3. Buy item(s) from a seller and specify
    a. Number of items
    b. Message from buyer
4. See historical personal profile with
    a. Current listings
    b. Purchase history
5. Filter listings by
    a. Category
    b. Search term
6. View all listings
    a. Publish date new-old
    b. Publish date old-new
    c. Price high-low
    d. Price low-high

These success criteria were approved by the client, see appendix in section [H].

Word count: 428