WebApps - Milestone Report

Beatrix de Wilde, Chase Hellemans, Gagan Kaur, Henry Cuttell

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1 Initial Ideas

- Film-night Movie finder - **Chosen Idea**
- Map of collaborative holiday photos
- Past paper collaborative answers application
- Student housing search to find accommodation for students

2 Group Structure and Division of Work

We had an initial meeting, set up by our team leader Beatrix, where we brainstormed ideas. Once we had decided on what we wanted to do and discussed implementation options, we talked about who was interested in doing different sections. For the initial part, Chase worked on the server side interactions with Node.js and Socket.io. Gagan worked on a rudimentary front page and worked on the interface for room creation and connected it with the help of Chase. Henry worked on using the TMDb API to query the films we wanted to use and worked with Chase connecting it all together. Beatrix has worked on a login page and connection with the database used to store user details. As we work on our sections we discuss our progress and re-prioritise depending on how things are going.

3 Short Description of App

When a group of friends get together to watch a movie, there are often debates (and sometimes arguments) over which film everybody wants to watch. The decision process can also take a very long time as people have many different preferences when it comes to movies.

Therefore our goal was to create an application which enables many people to come to a quick conclusion over the choice of film to watch, without having any arguments and enabling everyone to state their opinion without anyone feeling pressured to agree on a film they don't want to watch.

The idea is that each user joins a 'room' on our application which will present them with films where they can select either 'yes' or 'no'. When everyone in the room has said 'yes' to a particular film, the app directs them to a page informing them that a decision has been reached. This means the app will keep

presenting the users with films (indefinitely) until they come to an agreement. We will implement an advanced settings option in the next few weeks to enable the room creator to put a limit on the number of films shown to each user (along with other advanced options) if time is a limiting factor.

4 Choice of implementation languages

We have chosen Socket.io with Node.js for our back-end as Socket.io allows for easy communication between the servers and clients without concern about cross-browser compatibility. Furthermore, Socket.io with Node.js was made with Single-Page Applications in mind, which is a design that we chose to make the user experience more fluid. Socket.io abstracts many tranports into a single API, and as our team had limited experience in the field of Web Development, this combination was really simple to use to achieve our goal.

Node.js allows our server to be run as a JavaScript program which handles client and room connection, fetching from the Movie Database API and voting calculations. We are using Express for our web framework for the routing. Client-side calculations and presentation is also done using JavaScript/jQuery and so having the whole project in one language means it is simpler to work with.

We are using the provided postgreSQL database. To connect the database to our server we are using `node-postgres`, a postgreSQL client for node.js. This fits in nicely with the rest of the server code. We are using the Apache 2 server to host our application.

5 User Interactivity

We plan to implement an optional login system where the user will be able to access their default film preferences. The room's film suggestions will be filtered depending on these preferences. The user will select their default preferences on sign up. Alternatively a user will be able to just enter the room as a guest. If every user enters as a guest (so no film preferences exist) then default popular films are suggested. The login page will just consist of three buttons 'guest', 'sign in' and 'sign up'.

Once the user has either logged in or entered as a guest they are given the choice between creating a new room or joining a room. On room creation a unique ID is given for the room. This unique ID can then be used by all the other users to join the room. The room page will consist of two buttons 'join' and 'create' and a room ID input for the join choice. Once the room is created a list of the users in the room is shown. The room creator is given the option of starting the film selection at any number of users. They are also given the option of using their default film preferences or selecting new preferences.

Once film selection has begun then all the users in the room may select 'yes' or 'no' for each film at their own pace. Once every user has selected 'yes' to the same film then that film will be suggested. After a certain number of films if no film has been unanimously chosen then the most popular film is suggested.