University of Colorado
Department of Computer Science
CSCI 3308

Milestone 2

Purple Cobras

Team Members

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1 Project Management Tool

1.1 Project Management Software

The project management tool that the Purple Cobras will be using is Trello. Trello will organize tasks that need to be completed, sections of the project that are currently being worked on, and tasks that have been done. Trello can be used to schedule due dates for specific tasks. This will hold members accountable to complete their tasks on time. Trello is a great way of visualize tasks during the month by viewing dates on a calender. Team Purple Cobras also uses Trello's labeling system that uses different colors to specify the kind of task and who will be completing the task. It should also be mentioned that Trello lends itself well the the Kanban approach of scheduling.

1.2 Requirements

FR 1: The Study Buddy app shall keep a database of user names and passwords that is private.

DR 1.1: The Study Buddy app shall use a password security algorithm to keep the database private.

DR 1.2: The Study Buddy app shall ensure every username is unique, and inform a new user creating an account if a username is already taken.

DR 1.3: The Study Buddy app shall ensure every password is strong. This means that every password will require one uppercase letter, one number, one special character, and each password will have a minimum of six characters.

DR 1.4: The Study Buddy app shall allow users to reset their password in the event that they've forgotten it.

FR 2: The Study Buddy app shall keep a database of user searchable information on other users' class information.

DR 2.1: The Study Buddy app shall use a SQL table to hold user searchable information.

DR 2.2: The Study Buddy app shall accept users' class schedule information, school, email, and availability.

DR 2.2.1: The Study Buddy app shall enforce a predefined format for naming classes so that two users can not enter in the same class under different names.

DR 2.2.2: The Study Buddy app shall provide examples of acceptable user input.

FR 3: The Study Buddy app shall be compatible with all mainstream internet browsers.

DR 3.1: The Study Buddy app shall not use any packages that are uniquely available to specific browsers.

FR 4: The Study Buddy app shall erase user searchable information at the end of every semester.

DR 4.1: The Study Buddy app shall clear the SQL table holding the user searchable information on January first and June first.

DR 4.2: The Study Buddy app shall keep track of time.

DR 4.3: The Study Buddy app shall remind users that the database will be cleared a week in advance.

FR 5: The Study Buddy app shall allow users be able to search its database to discover other users with the same classes.

DR 5.1: The Study Buddy app shall query the table of user searchable information based on user input and display the query to the user.

DR 5.2: The Study Buddy app shall only allow a user to search once they have supplied a class roster in their profile.

DR 5.3: The Study Buddy app shall allow users to search its database using plain strings in a search field.

FR 6: Study Buddy app users shall be able to change their user searchable information.

DR 6.1: The Study Buddy app shall modify the table of user searchable information based on user input.

DR 6.2: The Study Buddy app shall allow users to modify their searchable information through a user profile page.

DR 6.3: The Study Buddy app shall give each user a profile page with which they can view and modify their searchable information.

FR 8: The Study Buddy app shall provide users with a login page on which they'll be able to enter their username and password in order to access their profile page and search field.

DR 8.1: The login page shall give users the option of displaying their password within the login field as either characters or dots.

1.3 Project Plan

The First Sprint will include an initialized relational database using PostgreSQL, initialized user-facing documents using HTML/CSS, initial integration between middle layer and the databases using nodeJS/JavaScript, and testing of the initial integration.

Week 1: Back-End/Relational Databases: Construct the data schema for both the User Log-in RDB and the User Search RDB, using PostgresQL.

Week 2: Front-End: Construct rough drafts of user-facing Ux elements in HTML/CSS.

Week 3: Integration Layer: Construct initial integration between RDBs and Front-End, using Node.JS and/or JavaScript.

The Second Sprint will build the functionality of the individual front-end components, such as the user profile page, account creation/log-in, the database search page, and integration of front-end components to the relational database.

Week 1: Front-End: Implementation of markdown with respect to user accessibility and aesthetics. Implementation of Account Log-in/Creation page, Classified Searching Page, and User Profile Page.

Weeks 2 and 3: Integration Layer and Back-End: Implement middle layer integration such that searching will properly query the classifieds database, return correct results, implement password salting and hashing, storing in the log-in database. Middle layer will work closely with Back-End such that the data schema makes sense with the node.JS implementation.

The Final Sprint will focus on final quality analysis, debugging, finishing any unfinished implementations and aesthetic polish.

Week 1: Front-End: Final polish on user interface functionality and aesthetics.

Week 2 All Layers: Final quality analysis pass on all aspects of functionality and user accessibility in order to ensure the product is fully functional for full release.

2 Plan Cycle within the Project Management Method

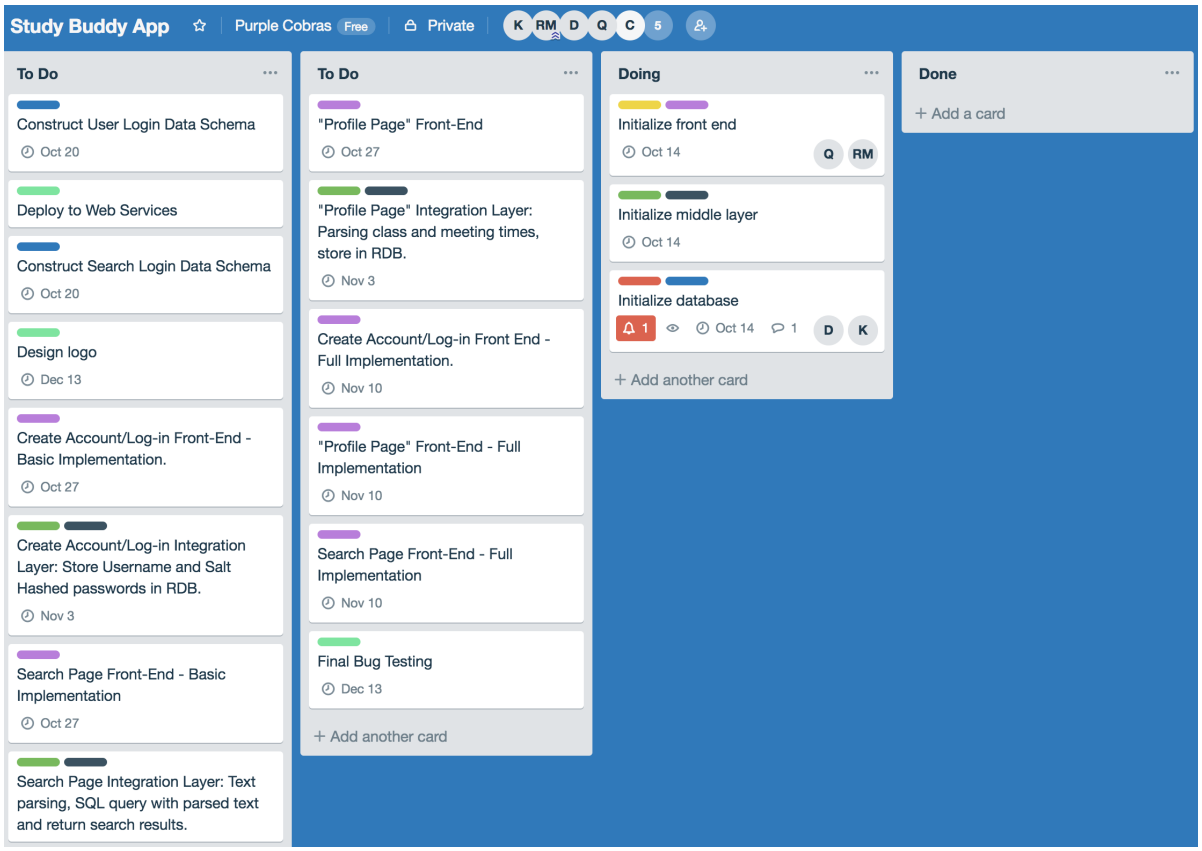

Figure 1: Screen shot of Trello Kanban To Do list. The yellow, navy blue, and red tags specify the team members working on the tasks. The yellow tag means that Qinglu and Rachel will be working on the task, the navy blue tag means that Christian will be working on the task, and finally the red tag means that Kin and Drake will be working on the task. The purple, green, and blue tags specify the kind of task that it is. The purple tag means that the task is a front end task, the green tag means that the task is a middle layer task, and finally the blue tag means that it is a database task. Lastly, the teal tag means that the task cannot be easily grouped with other tasks.

3 Agile Methodology

In the sprint meeting, Rachel noted that she created a Google Drive to store all the project materials. She also set up the Trello as team Purple Cobra's project management tool to keep track on the progress. Qinglu went over how she laid the basic design of our user front end. Both Qinglu and Rachel decided to work on initializing the front end of the Study Buddy app. This task will be completed by by October 14. Christian discussed the research he has done on node.JS and JavaScript for middle-layer integration. Christian volunteered to work on initializing the middle layer by October 14. Drake and Kin went over their work to design a basic database layout. They decided that they would contimue to work together to initialize the database by October 14.

In the retrospective sprint meeting, the team discussed how the sprint went and areas of improvement for next time. Overall, the team did a good job working individually to solve their current problems. However, some members spent too much time discussing what they had accomplished while others were reluctant to participate. In the future, each member should participate equally and fully in the sprint meetings. One thing that the team did well was deciding how to divide up the work for the next week. This is one of the more important aspects of the sprint meeting since it dictates the progress that is expected to be made by the next meeting. Overall the sprint went well, but there is still room for imporvement.