

# Milestone 4 – Planning

## Results of the Retrospective on the First Iteration

The first sprint cycle in our development of RateMyCourse saw the groundwork for a foundation be put into full effect. After a top down design was drawn up, and requirements set; work began on the fundamental elements of RateMyCourse; an info-centric application with sleek visuals and a smooth user interface.

To create the most informative and helpful app for CU students RateMyCourse required a vast amount of data on courses offered at CU. With the FCQ information we were given, we now have over 6,000 courses in our SQL database. Each course has 12 metrics which we have to base the development of our unique rating system on. The database has been populated and through the use of Google's cloud services and the MySQL skills developed in class we were able to easily set up a series of tables and relations that we will eventually turn into graphic information.

The development of a sleek user interface was something we knew going into development would be one of the most critical aspects of RateMyCourse. That is why work on the html side of things got put underway as soon as possible. Once we found a suitable IDE named Brackets, we were able to quickly develop a home page and test its functionality right from within the IDE. Doing so streamlined the development and debugging process which saves us an enormous amount of time on our front end development. Currently we have a populated data-base with a sleek homepage to wet our appetites going into the second sprint cycle, there were some aspects of our process however that have slowed our development and must be addressed in future sprints. One such aspect has been the lack of communication between different development teams within the group. The group was split into two teams primarily, the Database team and the UI team, now while both of these teams were able to design and implement their respective portions of the project adequately and effectively; the integration of these two sides has been largely ignored and we face major risk of not having a successful project if we can't get these two parts working together.

## Additional Requirements

1. The search box MUST have CourseName table from SQL read to it (live search works)
2. Construct the UI of the "Course info page" aka the resulting page from clicking a course in the resulting list from the search (resulting html page from submitting a search)
3. Fix some UI issues: blur the background-image and fix the font scaling its own size based off a user zooming in and out
4. The development of a rating system based on the current FCQ data must be developed to give students an informative and varied take on the courses they're considering
5. We must find some sort of visualization tool which we can use to create the graphics (graphs, charts, rating system) for our results page.

6. Connection of the SQL database and the HTML web page must be implemented so we can dynamically create results pages based off user queries.

## Planning Cycle:

### Results from Sprint Cycle 1:

**RateMyCourse-Sprint Cycle 1 - 10/10/16-10/31/16** Team Course Warriors ☆ Team Visible

- Requirements**
  - 1. Populated SQL Database with a list of courses as our metadata.
  - 2. The first HTML page of this web service will be the "search engine" page.
  - 3. The search will result in a "requested" HTML page. This requested page will be a search engine result list.
  - 4. The "request of the request" will be the HTML page with the appropriate course description based on what the user requested.
- Plan**
  - 1. Download FCQ spreadsheet
  - 2. Convert FCQ excel spread sheet information into usable SQL data
  - 3. Associate Course information with course name.
  - 4. Associate professors with the classes that they teach
- Design**
  - 1. Use highly styleized graphs to better visualize data received from the FCQ spreadsheet.
  - 2. 1st HTML page will be search engine
  - 3. Database Design: Tables
  - 4. Database Design: Relations
- Development**
  - 1. Create the database with proper tables and relations.
  - 2. Populate the database with current information
  - 3. Assign primary keys to their corresponding foreign keys.
  - 4. Develop SQL queries for Course Name, Professor Rating, average GPA, credits, class distribution
- Testing**
  - 1. A user test will test base functionality of the current user interface design.
  - 2. User will be able to open and see raw FCQ info for a limited number of courses
  - 3. Open web-page, search bar should be present. Type one of the several classes ready to be searched. Results should display raw FCQ info with it's associated with class.
  - 4. An automated test script for the database management system.

### Results from Sprint Cycle 2:

**RateMyCourse-Sprint Cycle 2-** Team Course Warriors ☆ Team Visible

- Requirements**
  - The SQL database and HTML webpage should be linked so that the app dynamically creates results pages based off user queries
  - Visualization of FCQ data using charts graphs and other graphical tools
  - A concise and well rounded ratings system to accurately portray students feelings towards courses offered at CU
- Plan**
  - Research how to connect HTML with SQL database and implement as soon as possible.
  - Find a vizulization tool which will help us dynamically creat graphs and charts of pertinant FCQ information.
  - Create a list of attributes for a class we wish to display to the user for our ratings system.
- Design**
  - The user should input a search request for a course and the site should dynamically display a results page with all relevant information.
  - A select number of attributes will be displayed graphically such as grade distribution(pi chart), Course Rating (meter), and course difficulty(maybe average over time), and numbers of hours spent (Histogram)
- Development:**
  - The integration of the database and UI must be done using a combination of java script and restful services to GET the relevant information needed to display the attributes and information we decide to implement
  - Once a visual tool has been selected and we are dynamically fetching results based off search request. We should develop basic trend models using the data provided for courses, such as averages, medians, max and min etc.

