



# **Sprint 1 Planning Document**

CS307 - Team 23

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## **Sprint Overview**

During this sprint, we aim to build the bare bones of our web application by setting up the main and local environment. Initially, most of our time will be spent on researching more about setting up Flask locally for every team member and use it with the Firebase wrapper, Pyrebase. Afterwards we will start writing the user interface templates (Web pages) and implement the authentication system. Having the templates ready on Sprint 1 assists us in focusing on the future backend user stories like the search engine and the review system. In addition, the review system is dependent on the authentication where users cannot post unless they are logged in. Therefore, we hope to complete it by the end of Sprint 1. Our goal for authentication is to make only Purdue students sign up and/or log in which will satisfy the Purdue exclusivity goal for the project.

**SCRUM master:** Sadiq Ahmed A Albinalshaikh

**Meeting Schedule:** Mondays at 2:30pm - 4:30pm. Additional meetings are planned as needed.

### **Risks and Challenges**

Some of the key challenges we will face during this sprint is setting up the environment and background infrastructure for our web application, and integrating the back end and front end of our application. The biggest challenge for this sprint is the Purdue email verification and ensuring our promise that our reviewers will only be customers from Purdue University. We will ensure that adequate verification and authentication is done to provide a holistic and true academic review of the courses offered at Purdue University

## Current Sprint Details

### User Story #1

As a user, I would like to sign up for an *easyA* account.

	Task	Estimated time	Owner
1	Create a sign-up page	3 hrs	Luciano
2	Create a user database	4 hrs	Sadiq
3	Connect the database to add new users	3 hrs	Pratyaksh
4	Test if the sign up page submits the valid user input and records it to the database correctly.	3 hrs	Sadiq
5	Test if the user database handles queries correctly and respond as expected per query.	2 hrs	Kaushik
6	Test if user data and encrypted password are being stored securely in the user database.	2 hrs	Kaushik

### Acceptance Criteria:

1. If the sign up was implemented and tested correctly, the user interface should be user friendly. If the user did not have an account they should be able to find the sign up page, fill in their credentials, and successfully submit their information easily.
2. If the user database was created and tested correctly, any queries to the user database should be satisfied appropriately when a user logs in, signs up, verifies their account, or changes their password.
3. If the user database was created and tested correctly, when a user signs up, their data and encrypted password should be recorded on the database. If they or someone else tries to sign up with the same email, they will be get an error saying that the email was already been used.

## User Story #2

As a user, I would like to log in to my account.

	Task	Estimated time	Owner
1	Create a log in page	3 hrs	Arshpreet
2	Setup Firebase Authentication for log in submissions and format (Email and Password)	3 hrs	Sadiq
3	Forbid non-verified accounts to log in	2 hrs	Sadiq
4	Test if the log in page submits the valid user input and checks if it exists in the user database	2 hrs	Pratyaksh
5	Test if logging in compares the credentials correctly the recorded data in the user database.	2 hrs	Pratyaksh
6	Test if a non-verified account could login or not.	3 hrs	Kaushik

### Acceptance Criteria:

1. If the login page was implemented and tested correctly, the user interface should be user friendly. Whenever the user wanted to log in they should be able to navigate to the log in page, fill in their log in credentials, and successfully log in easily.
2. If the Firebase Authentication was implemented and tested correctly, the user should be able to log in with the correct credentials. If they use the incorrect combination of email and password they should get an error saying so.
3. If the verification system was implemented and tested correctly, the non-verified account should not be able to log in unless they verify their email.

### User Story #3

As a user, I would like to log out from my account.

	Task	Estimated time	Owner
1	Create a log out button	3 hrs	Arshpreet
2	Set the user as logged out (guest)	3 hrs	Kaushik
3	Refresh the page and re-render the guest user interface after logging out	3 hrs	Kaushik
4	Test if the logout button functions as expected	2 hrs	Pratyaksh
5	Test if the user becomes a guest user after logging out	2 hrs	Sadiq

#### Acceptance Criteria:

1. If the log out button was implemented and tested correctly, the user should be able to find the log out button easily on the user interface.
2. If the log out functionality was implemented and tested correctly, the user should be able to set as guests whenever they click on the log out button.
3. If the log out functionality was implemented and tested correctly, after the user logs out successfully their user interface should change accordingly to the guest user interface. The guest user interface will show the login and sign up buttons again and limit the user from using any logged in user services.

## User Story #4

As a user, I would like to change my password after logging in.

	Task	Estimated time	Owner
1	Include “Change Password” option in the account drop down menu	4 hrs	Arshpreet
2	Create a change my password page	5 hrs	Luciano, Arshpreet
3	Check if the old password matches the users’ credentials	2 hrs	Arshpreet, Pratyaksh
4	Update the account’s password in the database with the new encrypted password.	2 hrs	Arshpreet, Pratyaksh
5	Test if the database updates the correct user’s password	5 hrs	Kaushik

### Acceptance Criteria:

1. If the dropdown menu was implemented and tested correctly, when the user clicks on the menu button after logging in they should be able to see “Change Password option and redirected correctly to the change password page.
2. If the change password user interface was implemented and tested correctly, the user should be able to enter their old and new passwords and submit them successfully.
3. If the user inputs the incorrect old password they should get an error saying so.
4. If the user submits their password change successfully, the user database should select the correct user and updates their old encrypted password with the new encrypted password appropriately.

## User Story #5

As a user, I would like to have an account menu for changing my password and logging out.

	Task	Estimated time	Owner
1	Create a drop down menu with “Change Password” and “Log out” options.	4 hrs	Luciano, Arshpreet
2	Make the options in the drop down menu redirect the user accordingly.	2 hrs	Luciano, Arshpreet
3	Create a button that shows up the drop down menu to the user.	4 hrs	Luciano, Arshpreet
4	Test if the “Change Password” Button successfully redirects to change password page	1 hr	Pratyaksh
5	Test if the “Log out” button functions correctly and logs the user out.	1 hrs	Pratyaksh

### Acceptance Criteria:

1. If the user interface for the drop down menu was implemented and tested correctly, when the user clicks on the account menu button, the drop down menu should pop up and list all the available options.
2. If per option functionality were implemented and tested correctly, when the user clicks “Change Password” they should be redirect to the change password page. When the user clicks on “Log out” they should be logged out successfully.
3. Guests should not be able to see the account menu button this applies to logged out users as well.

## User Story #6

As a user, I would like to know if I am logged in or not.

	Task	Estimated time	Owner
1	Show user's email and account menu button when the user is logged in	3 hrs	Luciano
2	Show the login and sign up buttons when the user is not logged in	3 hrs	Arshpreet
3	Set up the navigation for both the login and sign up button.	2 hrs	Arshpreet
4	Test the implemented buttons and account status visibility on all pages.	3 hrs	Pratyaksh

### Acceptance Criteria:

1. A logged in user should be able to see their email on the top right corner of the web-app if they are logged in.
2. A guest user should be able to see the login and sign up buttons on the top right corner of the web-app. When the user clicks on either button they should be redirected to the correct page.
3. If the user authentication was implemented and tested correctly, the user should be able to post reviews, upvote/downvote, and report reviews.



## User Story #7

As a user, I would like to reset my password if I forget it.

	Task	Estimated time	Owner
1	Create a button in the login page for “Forgot Password?”	1 hrs	Arshpreet
2	Create a password reset page	2 hrs	Luciano
3	Check if the submitted email is in the user database	2 hrs	Pratyaksh
4	Generate a unique link that lets the user reset their account password and make it expire in 48 hours.	4 hrs	Pratyaksh
5	Email the unique link to the user’s email	2 hrs	Pratyaksh
6	Debug and test implementations using manual testing and unit tests.	5 hrs	Kaushik

### Acceptance Criteria:

1. When the user clicks on the “Forgot Password?” they should be redirected correctly to the password reset page that asks for their email.
2. When the user submits an email for an account that is recorded in the database, they should receive an email with a link that expires in 48 hours. If the email does not exist in the database, then they should get an error saying so.
3. When the user clicks on the link in the email before its expiration, they should be directed to the password reset page where they enter their new password. If the link was expired, they should get an error saying so.
4. When the user submits their new password, the user database should select the correct user and update their old encrypted password with the new encrypted password.

## User Story #8

As a user, I would like to see a course rating in the course review page.

	Task	Estimated time	Owner
1	Create a page to reflect the current course offered at Purdue University	5 hrs	Luciano
2	Create a UI to reflect the course rating at the course page	3 hrs	Arshpreet
3	Retrieve the course rating from the database.	3 hrs	Kaushik
4	Test if the page correctly updates the the course rating to reflect on the module	1 hrs	Kaushik
5	Test if the page correctly displays the respective course rating	1 hrs	Pratyaksh

### Acceptance Criteria:

1. When the user navigates to a specific course page, they should be directed to the correct course page.
2. When the user navigates to the course review page, they should be able to view the 5-start rating of the course.
3. When a specific course received a review post, its rating should be updated both in the database and the user interface correctly.

## User Story #9

As a user, I would like to see a course description in the course review page.

	Task	Estimated time	Owner
1	Create the course database	5 hrs	Sadiq
2	Create a UI to contain the course description for the respective course	2 hrs	Arshpreet
3	Record the course description in the database	2 hrs	Sadiq
4	Test if the page correctly displays the course description for the respective course	1 hrs	Kaushik

### Acceptance Criteria:

1. The course database should contain a table that resembles the course information like name, rating, and description.
2. When the user navigates to a specific course page, the correct description should be requested from the database and rendered in the appropriate location in the page.
3. The web-app administrators should be able to add courses along with their descriptions to the database easily.

## User Story #10

As a user, I would like to know that all reviews are from Purdue students.

	Task	Estimated time	Owner
1	Create an email verification system to verify that a signed up user owns a functional Purdue email.	12 hrs	Luciano, Arshpreet, Sadiq
2	Create a system to forbid non-Purdue users from signing up.	12 hrs	Luciano, Arshpreet, Sadiq
3	Limit unverified users to login until they are verified.	4 hrs	Kaushik, Pratyaksh
4	Show “Purdue Student” as the author name of all review posts.	2 hrs	Kaushik, Pratyaksh
5	Debug and test the implementations using unit testing for each task.	27 hrs	Sadiq, Pratyaksh, Kaushik

### Acceptance Criteria:

1. When a new user signs up they should receive an email for verifying their account. The verification of the account is up to the real owner of the Purdue email. If the email does not exist, then the user will get an error saying so.
2. When a user tries to sign up they should not be able to sign up unless they use an email that ends with “@purdue.edu” An error will forbid the user from signing up with an email that does not have the Purdue domain.
3. When a user tries to login with their unverified account, they should get an error saying that they must complete their verification to login.
4. On the course review page, reviews’ authors will be as “Purdue Student.”

## User Story #11

As an administrator, I would like only Purdue students with “@purdue.edu” emails to be able to sign up.

	Task	Estimated time	Owner
1	From a front-end point of view: Use regular expressions to only accept “XXX@purdue.edu” formats in sign up, log in, and password reset.	2 hrs	Sadiq, Arshpreet
2	Implement a backend input sanitization to verify the input again and avoid web attacks that would involve code injection.	4 hrs	Pratyaksh, Kaushik
3	Give an error to the user in case the input fails in either front-end or back-end verification,	2 hrs	Luciano
4	Debug and test the implementations using unit testing for each task.	12 hrs	Sadiq, Pratyaksh, Kaushik

### Acceptance Criteria:

1. The user should only be permitted to sign up if their entered email ends with “@purdue.edu”
2. In case the user was able to bypass the regular expression conditions, the backend server should check the input again if it was a Purdue email. Also, it should treat any inputs as text where it will not execute any code injections.
3. When the user submits credentials that conflict with the conditions above, then they should get an error saying that the input is invalid.

## User Story #12

As an administrator, I would like newly signed up users to verify their ownership of their Purdue emails.

	Task	Estimated time	Owner
1	Verify that the email exists and working.	4 hrs	Sadiq
2	Send an email confirmation to the newly signed up user with a verification link that expires in 48 hours.	8 hrs	Arshpreet, Sadiq
3	Give an error to the user in case they use an non-existing email, login unverified, or use an expired verification link.	4 hrs	Luciano
4	Delete unverified users after their confirmation links expire.	4 hrs	Arshpreet, Sadiq
5	Debug and test the implementations using unit testing for each task.	16 hrs	Sadiq, Pratyaksh, Kaushik

### Acceptance Criteria:

1. If the inputted email's mailbox exists, the user should be able to sign up. If not, the submission will not be recorded.
2. When a user sign up, an email should be sent to the user with a confirmation link that is generated by a random token.
3. When the user clicks on the link, the server should update the database to mark the user as verified then show the user a "Successful Confirmation" page.
4. When the user input a non-existing email, they should get an error saying invalid email.
5. If the user uses a link after 48 hours from signing up, they should get an error saying invalid or expired link.
6. The server should delete the recorded user data from the database after 48 hours from signing up if it is still marked as unverified. As a consequence, the user should be able to sign up again.

### User Story #13

As a user, I would like to have an easy navigitable user interface throughout the website.

	Task	Estimated time	Owner
1	Design the web and file storage necessary for an intuitive flow	2 hrs	Luciano, Arshpreet
2	Set up the HTML skeleton and navigation between the different pages	4 hrs	Luciano
3	Add necessary CSS to allow user to have an identifiable visual contrast	2 hrs	Luciano
4	Add necessary JavaScript to make the website more responsive for to the user	3 hrs	Luciano
5	Debug and test the responsiveness and syntax of the web pages	4 hrs	Luciano

### Acceptance Criteria:

1. Navigation for all users should be intuitive and require minimal guidance.
2. Users should not be stuck on any page without a way to go back to previous pages.
3. The web page theme should look pleasant without having blue-ish or bright colors that induce eye strain.

## User Story #14

As a user, I would like to log in/sign up from any webpage in *easyA*.

	Task	Estimated time	Owner
1	Set up a navigation bar that contains the login and sign up buttons	2 hrs	Arshpreet
2	Set up necessary forms for the user to submit their information	4 hrs	Arshpreet
3	Make buttons disappear according the user's status if they were logged in or not	4 hrs	Arshpreet
4	Test that the buttons work as expected on all pages	1 hr	Luciano, Arshpreet

### Acceptance Criteria:

1. Logging in and signing should be easy and intuitive from any page in the website.
2. Users should be redirected to their previous page after logging in/signing up.
3. Guests should see the login and sign up buttons on all pages.



## User Story #15

As a user, I would like to log out from any webpage in *easyA*.

	Task	Estimated time	Owner
1	For logged in users, make the account menu that contains the log out button visible on all pages	2 hrs	Arshpreet
2	Check the status of the users if they are logged in or not	2 hrs	Arshpreet
3	Make the account email and account menu button disappear after logging out	2 hrs	Arshpreet
4	Test that logging out works properly on all pages	1 hr	Luciano, Arshpreet

### Acceptance Criteria:

1. Logging out should be easy and intuitive from any page in the website.
2. Logging out should not redirect the user to any other page and only refreshes the current page.
3. The account email and account should disappear and the log in and sign up button show up again.

## Remaining Backlog

### Functional Requirements

- ~~1. As a user, I would like to have an easy navigatable user interface throughout the website.~~
- ~~2. As a user, I would like to log in from any webpage in *easyA*.~~
- ~~3. As a user, I would like to log out from any webpage in *easyA*.~~
4. As a user, I would like to easily access *easyA* on my phone or tablet.
5. As a user, I would like to sort reviews chronologically.
6. As a user, I would like to sort reviews based on their upvotes.
7. As a user, I would like to filter specific course reviews by professors teaching the course.
8. As a user, I would like to filter specific course reviews by tags.
9. As a user, I would like to filter a specific professor reviews by course.
10. As a user, I would like to search for courses by name.
11. As a user, I would like to have suggestions while typing in the search bar.
12. As a user, I would like to have an auto-complete dropdown menu for choosing the professor I am reviewing.
13. As a user, I would like to easily post a review for a course.
14. As a user, I would like to delete my post.
15. As a user, I would like to report inappropriate reviews.
16. As a user, I would like to upvote/downvote reviews.
17. As a user, I would like to reach the reviewer to ask him or her follow-up questions.
18. As a user, I would like to be redirected to the professor's rating from RateMyProfessor.com after clicking on the professor's name in a review post.
19. As a user, I would like to know when the reviewer took the course.
20. As a user, I would like to know what grade the reviewer got.
21. As a user, I would like to tag my reviews.
- ~~22. As a user, I would like to sign up for an *easyA* account.~~
- ~~23. As a user, I would like to log in to my account.~~
- ~~24. As a user, I would like to log out from my account.~~
- ~~25. As a user, I would like to change my password after logging in.~~
- ~~26. As a user, I would like to have an account menu for changing my password and logging out.~~
- ~~27. As a user, I would like to know that I am signed in or not.~~
- ~~28. As a user, I would like to reset my password if I forget it.~~
29. As a user, I would like to be prompted to login when I attempt to post, upvote/downvote, or report.
30. As a user, I would like to access reviews for a course without having to sign up.
31. As a user, I would like to share course or professor reviews through social media.

32. As a user, I would like to use the text-to-speech feature to read reviews aloud.
33. As a user, I would like to translate non-English reviews to English.
- ~~34. As a user, I would like to see a course rating in the course review page.~~
- ~~35. As a user, I would like to see a course description in the course review page.~~
- ~~36. As a user, I would like to know that all reviews are from Purdue students.~~
37. As a user, I would like to know that my information will be secure.
38. As a user, I would like my identity to be protected from the readers.
39. As a user, I would like to contact the website administrators for any inquiries like a request to add a course or professor to the database.
40. As an administrator, I would like to ban certain users from using the website services.
- ~~41. As an administrator, I would like only Purdue students with “@purdue.edu” emails to be able to sign up.~~
- ~~42. As an administrator, I would like newly signed up users to verify their ownership of their Purdue emails.~~
43. As an administrator, I would like to be able to delete any user’s post.
44. As an administrator, I would like to view and take action on reported reviews.
45. As an administrator, I would like to manage the website by extending control over course descriptions, professors and course listings.
46. As an administrator, I would like to be notified by email about any user inquiry.

### **Non-functional Requirements**

1. As a user, I would like to run the website smoothly without any discomfort.
2. As a user, the webpages load fast in less than 2 seconds.
3. As a user, I would like to have a minimalist user interface that serves the purpose.
4. As a user, I would like to be able to interact with the user interface easily.
5. As a user, I would like to navigate the website without getting lost between the pages.
6. As a user, I would like my information to be encrypted from others and administrators 24/7.
7. As a developer, I would like the web application to load 10 course reviews at a time.
8. As a developer, I would like the web application to support 100 user requests simultaneously and upgradeable if needed.
9. As a developer, I would like the web application to be safe from outside attacks 24/7.
10. As a developer, I would like a 5 GB expandable storage space for the web content.
11. As a developer, I would like a 1 GB expandable storage space for the database.
12. As a developer, I would like the web application to support storage enough for 40000 users.
13. As a developer, I would like to be able to easily add upgrades to the web application.
14. As a developer, I would like to work on the website locally through XAMPP.

15. As a developer, I would like to use version control (git) to maintain any changes happen to the web application.
16. As a developer, I would like to host and publicize the website through a public domain and a public server.