Apollo

Sprint 1 Retrospective

Team 4

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What Went Well

Team 4's first sprint was incredibly successful all things considered. All six team members went from having little to no experience with web development to becoming intermediate MERN Stack Developers. This fact alone was very encouraging to the team.

In addition to expanding our skill set, Team 4 was able to successfully create the general structure of our project. This included user account and profile functionality, course homepages, dining hall homepages, and the base search functionality.

Late in the sprint, we also found value in meeting in-person as a team to have a group coding session. This was helpful because it made communication significantly easier and made the debugging process much more efficient.

User Story #1

As a user, I want to be able to create an account.

Tasks	Status	Estimated Time	Owner
Login page	Completed	2 hours	Edward
Create Account page	Completed	2 hours	Ali
Save information to database	Completed	2 hours (each)	Daniel / Brandon
Pull information from the database	Completed	2 hours (each)	Jacob / Sai
Testing	Completed	2 hour (each)	Ali, Edward

Completed

We successfully created a method of signing up for an account and developing the appropriate backend api and frontend forms for that. We also were able to set up the users that would be used throughout the rest of the application.

User Story #2

As a user, I want to be able to set my role (student vs prof)

Tasks	Status	Estimated Time	Owner
Send verification email to {user}@purdue.edu	Completed	4 hours (each)	Brandon / Sai
Check Purdue directory to see if user is professor	In progress	5 hours (each)	Jacob / Daniel
Display role on profile	Completed	2 hours	Edward
Interface for setting role	Completed	2 hours	Ali

Completed

We enabled a method for verifying whether a user is a student or professor by cross checking the Purdue Directory of CS professors. This was done by checking the list of professors and sending verification emails to verify that a user is in fact using a Purdue email. We also created the related UI elements to display the role on the profile page.

User Story #3

As a user, I want to be able to add my major (students) / area of practice (professors) to my profile.

Tasks	Status	Estimated Time	Owner
Display major on profile	Completed	2 hours	Ali
Interface for setting major	Completed	2 hours	Edward
Store major in database	Completed	1 hours	Brandon

Completed

We made a way of setting a student's major and updating it accordingly in the MongoDB database. This included creating the appropriate fields for displaying that and editing it. Our edit api call handled receiving that data and modifying it on the database.

User Story #4

As a user, I want to be able to link my social media accounts (Facebook, Twitter, Instagram) onto my Apollo profile.

Tasks	Status	Estimated Time	Owner
Display Links on Profile	Completed	1 hour	Ali
Interface for setting/changing links	Completed	2 hours	Edward
Create buttons for the respective link	Completed	2 hours	Ali
Send data to database	Completed	2 hours	Brandon
Create unit test to check functionality of media link buttons	Completed	2 hours	Sai

Completed

We created the capability for users to link their social media accounts through the edit profile page. This was then implemented into the profile page where users can click on icons for the major social media websites so that they can be redirected to the user's accounts.

User Story #5

As a user, I want to be able to add my class to my profile.

Tasks	Status	Estimated Time	Owner
Add classes to profile	Completed	1 hour	Edward
Send data to database	Completed	2 hours	Daniel
View classes on profile	Completed	2 hours	Edward
Change classes on profile	Completed	2 hours	Brandon
Create unit test to check functionality	Completed	2 hours	Brandon

Completed

Users are able to add their class as a freshman, sophomore, etc. to their profile for other users to see.

User Story #6

As a user, I want to add my current courses to my profile.

Tasks	Status	Estimated Time	Owner
Collect a list of all classes currently offered	In progress	4 hours (each)	Jacob/Daniel
Store a list of all classes currently offered	In progress	3 hours	Jacob
Search classes from list	Completed	2 hours (each)	Jacob/Daniel
Add current courses to profile	Completed	2 hours	Sai
Create unit tests to ensure functionality	Completed	2 hours	Sai

Completed

We collected data on all the CS courses offered during the Spring 2023 semester. Users can add their current courses to their profile from the list of courses that we collected.

User Story #7

As a user, I want to be able to add a profile picture to my profile.

Tasks	Status	Estimated Time	Owner
Create the UI to pick the icon from the system storage.	In progress	2 hours	Ali
Update the DB with the new profile picture for that specific account.	Completed	2 hours	Daniel
Display profile picture on profile page and header page	Completed	2 hours	Edward
Test icon permeation.	Completed	2 hours	Sai

Completed

Allows users to be able to upload a picture selected from their device to their profile and set it as a profile picture. The picture is stored on the server with a unique identifier for each user.

User Story #8

As a user, I want the ability to make my personal information secure (public vs. private profiles).

Tasks	Status	Estimated Time	Owner
Add toggle in edit profile	Completed	1 hour	Edward
Hide personal info when user is private	Completed	2 hours	Ali
Store public / private account in database	Completed	4 hours	Brandon
Retrieve public / private account in database	Completed	4 hours	Daniel
Test functionality	Completed	1 hour	Daniel

Completed

We implemented a toggle inside the “edit account” page that allowed users to toggle their profiles to either public or private. When set to private, other users can only see your name and major. The default state is public.

User Story #9

As a user, I want to be able to reset my password.

Tasks	Status	Estimated Time	Owner
Add forgot my password to login page	Completed	1 hours	Edward
Forgot my password UI	Completed	1 hour	Edward
Send email to reset password	Completed	4 hour	Jacob
Add password change to the edit profile UI	Completed	2 hours	Ali
Update password	Completed	2 hours	Jacob
Test functionality	Completed	1 hour	Jacob

Completed

Users are able to reset their password through the “forgot my password” page and through the “edit profile” page. Upon entering the email tied to their account, users are sent an email with a link to reset their password. The link will bring them to a page with two text boxes for them to enter a new password and confirm their new password. Upon clicking submit, their password is changed.

User Story #10

As a user, I want to add an “about me” section on my account.

Tasks	Status	Estimated Time	Owner
Add “about me” display field in the user’s profile	Completed	2 hours	Sai
Add a button that allows a user to modify their about me section	Completed	2 hours	Edward
Store “about me” in	Completed	1 hour	Brandon

Tasks	Status	Estimated Time	Owner
database			
Manual Testing	Completed	2 hours	Sai

Completed

After creating a way to store user data we were able to allow users to add text to the “about me” section of their profile. Users will be able to change their “about me” section in the “edit profile” page. Each change will be stored in the user’s data in the database.

User Story #12

As a user, I want to be able to go to a class’ homepage when I click on a class.

Tasks	Status	Estimated Time	Owner
Gather list of courses	In progress	See Story 6	Jacob / Daniel
Create database request	Completed	2 hours	Brandon
Create class homepage skeleton	Completed	3 hours	Edward

Completed

After gathering the course data mentioned in User Story 6, we implemented a course homepage to display the data. Upon searching / clicking on a class, users are directed to the respective homepage.

User Story #29

As a user, I want to be able to view a dining court’s homepage when I click on it.

Tasks	Status	Estimated Time	Owner
Make dining court display text an interactive hyperlink button	Completed	1 hour	Edward
Direct link in a new tab or the same tab	Completed	1 hour	Ali
Decide between absolute and relative links when	Completed	2 hours	Brandon

Tasks	Status	Estimated Time	Owner
both are available			
Manually test that all hyperlinks work	Completed	2 hours	Sai

Completed

After gathering the dining hall data, we implemented a dining hall homepage to display the data. Upon searching / clicking on a dining hall, users are directed to the respective homepage.

User Story #39

As a user, I want to be able to search for classes.

Tasks	Status	Estimated Time	Owner
Design the UI for the search bar and dropdown	Completed	4 hours (each)	Ali / Edward
Backend should query for what is entered in the search bar.	Completed	4 hours	Brandon
Algorithm to predict what the user is typing out and give suggestions.	Completed	5 hours (each)	Daniel / Jacob
Unit testing for specific queries.	Completed	2 hours	Sai

Completed

After collecting data from courses in User Story 6, we plugged that data into a search bar that would narrow down / predict what the user was searching for as they typed.

User Story #40

As a user, I want to be able to search for other users on Apollo

Tasks	Status	Estimated Time	Owner
Design UI for how searching for users will look	Completed	2 hours	Edward

Tasks	Status	Estimated Time	Owner
Implement proper algorithms to minimize time that users spend searching.	Completed	3 hours	Brandon
Autofill depending on the closest matching user	Completed	2 hours	Sai
Adjust dropdown to show possible search matches	Completed	2 hours (each)	Ali / Edward

Completed

With the data gathered from other users in the database, using the same method in User story 39, users will be able to use the search bar to gather information from the database. The user will have to type in the full username of desired search. The user will then be redirected to the visited user's profile page if the page is set to public.

User Story #42

As a user, I want to be able to search for dining courts

Tasks	Status	Estimated Time	Owner
Collect all the dining court locations.	Completed	4 hours	Daniel
Make the general page for the displayed dining court.	Completed	4 hours	Ali

Completed

Users are able able to search for dining courts using the same methods of user story #40 and #39 via search bar in the homepage.

User Story #56

As a student, I want to see other people's plan of study in terms of future classes they would like to take or are looking to take.

Tasks	Status	Estimated Time	Owner
Look at the schedules of other students	Completed	2 hour	Sai

Tasks	Status	Estimated Time	Owner
Show what classes the other students are planning to take in the next semester	Completed	2 hour	Sai

Completed

We collected data on all the CS courses offered during the Spring 2023 semester. Users can add their plan of study / courses they would like to take to their profile from the list of courses that we collected.

What Did Not Go Well

Overall, Sprint 1 was a success for Team 4; however, that is not to say that everything went perfectly. Three areas of concern were general planning, frontend / backend communication, and delegation of work.

Week 1 was primarily focused on learning and prototyping. This inevitably resulted in a late start to Sprint 1 and caused a fair level of stress and chaos during the last week of the sprint.

While we had constructed the planning document, it was not utilized nearly as much as it should have been. This integrated confusion and unnecessary clarification during meetings. There were also a few instances in which a few team members unknowingly worked to complete the same task which resulted in multiple solutions to a task and a waste of precious hours. Additionally, we wrote some acceptance criteria that ended up being implemented differently than stated because the original plan was not the ideal solution. This caused some confusion during our sprint demo.

Throughout the sprint, communication between frontend / backend was lacking. Hours were wasted trying to understand or debug someone's uncommented code for something as simple as an API request just to find out that they were utilizing it incorrectly.

Lastly, the delegation of work was not distributed effectively. We initially put four people on the backend and two on the frontend. This was intentionally done because we thought that backend setup would take much more time than it did. Unfortunately, this put a fair amount of pressure on the frontend who ended up doing a lot of "overtime" work during the final week of the sprint. We also quickly learned that delegating a handful of people to a specific user story slowed the development process down.

User Story #2

As a user, I want to be able to set my role (student vs prof)

Tasks	Status	Estimated Time	Owner
Check Purdue directory to see if user is professor	In progress	5 hours (each)	Jacob / Daniel

Not Completed

Currently, we are only able to verify CS professors. We plan to expand verification to all professors in future sprints.

User Story #6

As a user, I want to add my current courses to my profile.

Tasks	Status	Estimated Time	Owner
Collect a list of all classes currently offered	In progress	4 hours (each)	Jacob/Daniel
Store a list of all classes currently offered	In progress	3 hours	Jacob

Not Completed

Currently, we only have collected data on Spring 2023 CS courses. We plan to expand our collection of courses in future sprints.

User Story #7

As a user, I want to be able to add a profile picture to my profile.

Tasks	Status	Estimated Time	Owner
Create the UI to pick the icon from the system storage.	In progress	2 hours	Ali

Not Completed

We ran into some issues with picking a profile picture from the user's system storage and decided for this sprint to have the capability to pick various colors for the profile. There were also some limitations that we ran into with storing profile pictures on MongoDB database so opted for fewer options until we figured out a better solution for storing them.

User Story #12

As a user, I want to be able to go to a class' homepage when I click on a class.

Tasks	Status	Estimated Time	Owner
Gather list of courses	In progress	See Story 6	Jacob / Daniel

Not Completed

Our current database contains all the CS related courses. This was to check if our search capabilities work with a smaller subset of all classes at Purdue. We plan to scrape the last of the data and find more detailed descriptions of the courses at Purdue.

How We Plan to Improve

In order to continue learning the art of software development, Team 4 plans to address all three of the main issues described in the prior section.

First and foremost, we will address our failure to effectively plan. Having closed out our first sprint, Team 4 has a greater understanding of how to properly split up a user story into proper tasks and estimate the length it will take to complete. We will utilize in-person group meetings for sprint planning and consult the frontend / backend developer directly for time estimations. We will also reference and update the sprint planning document more frequently throughout the sprint.

Second, we will address our failure to effectively communicate between frontend / backend developers. We will be more conscious of leaving comments in our code and displaying clear and concise examples of how to use specific API calls, functions, etc. when necessary. Additionally, before implementing the backend, developers will fully understand what the frontend needs. The backend will be designed to fit the frontend—not the other way around.

Third, we will address our failure to effectively delegate work. This sprint, we plan to have the frontend and backend equally balanced. There will be three developers for the frontend and three developers for the backend. We also plan to delegate only two people per user story.

We believe that implementing these adjustments into our developmental process will greatly improve efficiency and productivity. Team 4 looks forward to the start of Sprint 2.