Team 9 Sprint 2 Planning Document

CS 307 Fall 2022

Purdue Course Finder

Alex Kobus, Alex Plump, Tommy Lane, Peter Zong

Sprint Overview

During this sprint, we want to make more progress getting our frontend to a more usable and user-friendly state. We'd like to get the core functionality of our project design, the map, on the main page to get it closer to the mockup. Also, next to the map, we'd like to get the sidebar implemented to allow courses and buildings to be filtered and scrolled through. It is also a priority to make sure authentication requirements are only present where required.

Scrum Master: Alex Kobus

Meeting Plan: 7 PM – Monday/Wednesday

Risks and Challenges:

In this sprint, as the project continues to grow, we may face some problems keeping complexity down while adding more features. We will also be continuing to add some more libraries as necessary and will need to be sure to use them correctly, specifically for map related tasks. Testing will also be a larger priority in this sprint. Many of us do not have extensive testing experience and figuring out exactly how to go about testing certain parts of our project may prove difficult.

2. Current Sprint Detail

User story 1

As a User, I would like to see a birds-eye view map of Purdue.

#	Task Description	Estimated Time	Developer
1	Replace the temporary homepage with a page for the map on our frontend	2 hours	Alex K
2	Add the Google Maps API to our project to display a dynamic map	5 hours	Alex K
3	Setup the map to default at the Purdue West Lafayette Campus	2 hours	Alex K
4	Test the map page to ensure that it appears as expected and is interactive as expected	3 hours	Alex K

Acceptance Criteria

- Given the home page is configured correctly, the application's default route will show the map.
- Given the map is configured correctly, it will default to viewing a map of Purdue's campus.
- Given the map is configured correctly, the user will be able to zoom and pan on the map.

User story 2

As a User, I would like to see a sidebar that shows a list of all classes, sections, and buildings

#	Task Description	Estimated Time	Developer
1	Create a component for the sidebar and add it to the home page	3 hours	Peter
2	Fill in the sidebar with building information as components	2 hours	Peter
3	Add course and section information to the sidebar as components	3 hours	Peter
4	Add a search bar and filter button at the top of the sidebar	1 hour	Peter
5	Unit and manual testing	2 hours	Peter

Acceptance Criteria

- Given the sidebar component is designed correctly, when a user views the info in the sidebar, the components should be displayed clearly in a vertical list with a search bar and filter button at the top
- Given the course component is implemented correctly, when a user clicks the course component, then the sidebar should refresh and display sections that are a part of that course
- Given the sidebar component is correctly added to the homepage, when a user views the home page, then the sidebar should be displayed on the left side of the screen, left of the map from the top to the bottom of the window

User story 3

As a User, I would like to view a list of my favorite buildings, classrooms, classes, and sections

#	Task Description	Estimated Time	Developer
1	Design and create Favorites page UI	1 hour	Peter
2	Display separate lists for each favorite category	3 hours	Peter
3	Implement functionality to remove favorites on this page	2 hours	Peter
4	Unit and manual testing	2 hours	Peter

Acceptance Criteria

- Given the page is set up correctly, when a user visits this page, they should be able to view their favorites in separate lists by category
- Given the remove favorites option is implemented correctly, when a user removes a favorite, it should be removed from the database and should not show up even after page refresh
- Given the link to the database is correct, when a user views their favorites on this page, it should match up with the starred favorites in the sidebar

User story 4

As a User, I would like to see campus buildings highlighted on the map.

#	Task Description	Estimated Time	Developer
1	Generate geographical coordinates for each building	2 hours	Alex P
2	Create coordinate polygon shapes for each Purdue Building	3 hours	Alex P
3	Display each shape on the map	3 hours	Alex P
4	Unit and manual testing	2 hours	Alex P

Acceptance Criteria

- Given the coordinates are correctly calculated, when the shapes are constructed, then they correctly represent the outline of each building.
- Given the shapes are built correctly, when they are rendered, they should all have lines connected and be closed shapes.
- Given the map is built correctly, when accessing the map, then it should display each building's shape correctly where it is on the map.

User story 5

As a User, I would like to filter the sidebar to show only relevant buildings, courses, and sections.

#	Task Description	Estimated Time	Developer
1	Change filter popup with radio buttons for buildings, courses, and sections.	3 hours	Alex P
2	Read search bar input and send request to server with current toggled filter.	3 hours	Alex P
3	(Server) Read client request and query database for respective information.	2 hours	Tommy
4	Read server response and create scrollable panes for each returned object.	3 hours	Alex P
5	Unit and manual testing	2 hours	Alex P

Acceptance Criteria

- Given the filter button is set up correctly, when it is pressed, the page will generate a popup with buttons for each filter option.
- Given the search button is created correctly, when it is pressed, it sends a request to the server pertaining to the search and the current filter option.
- Given the server response returns the correct information, when the response is given back to the client, it will generate a list from the list of objects it was given.

User story 6

As a User, I would like to see campus buildings labeled on the map.

#	Task Description	Estimated Time	Developer
1	Ensure Purdue API building name codes match up to labels on map.	2 hours	Alex P
2	Attach each building's name code to the corresponding shape.	2 hours	Alex P
3	Display the building name code within the buildings on the map.	3 hours	Alex P
4	Test to ensure the buildings are correctly labeled	2 hours	Alex P

Acceptance Criteria

- Given the Building naming scheme is configured correctly, when the name codes for building are generated, they should match up to what is output from the Purdue course API.
- Given each building object is a connectible object, when the labels are generated, they should be linked to their corresponding building.
- Given the map is set up correctly, when the map is rendered, then a building's name code should be shown where the building is.

User story 7

As a User, I would like to see section days, locations, and instructors for courses in the sidebar

#	Task Description	Estimated Time	Developer
1	Modify the sections endpoint to send the days for each section	2 hours	Tommy
2	Add section days to the sidebar	2 hours	Peter
3	Modify the sections endpoint to send the locations of each section.	2 hours	Tommy
4	Add section locations to the sidebar	2 hours	Peter
5	Modify the sections endpoint to send the instructors of each section	2 hours	Tommy
6	Add section instructors to the sidebar	2 hours	Peter
7	Unit and manual testing	2 hours	Tommy, Peter

Acceptance Criteria

- Given the sidebar is configured correctly, section days will be displayed when viewing sections on the sidebar.
- Given the sidebar is configured correctly, section locations will be displayed when viewing sections on the sidebar.
- Given the sidebar is configured correctly, section instructors will be displayed when viewing sections on the sidebar.

User story 8

As a User, I would like to only access pages that require accounts when logged in

#	Task Description	Estimated Time	Developer
1	Check for a login token on pages that require accounts	1 hour	Alex K
2	Redirect users to login page if they are accessing a restricted page while not logged in	2 hours	Alex K
3	Add buttons on the homepage that only appear if the user is logged in or not logged in	3 hours	Alex K
4	Make favorite buttons only appear when the user is logged in	2 hours	Alex K
5	Test to ensure the pages redirect correctly if not logged in and load correctly if logged in	2 hours	Alex K
6	Test to ensure buttons appear correctly when logged in and disappear correctly when not logged in	2 hours	Alex K

Acceptance Criteria

- Given the frontend correctly redirects users, when a user attempts to access a page which requires authentication without being logged in the frontend will redirect the user to the login page.
- Given the frontend is configured correctly, links on the homepage to pages that require accounts should not appear when the user is not logged in
- Given the frontend is configured correctly, links on the homepage to pages that require accounts should appear when the user is logged in

User story 9

As a User, I would like to have favorite buildings, classes, and sections that are saved across sessions

#	Task Description	Estimated Time	Developer
1	Add database tables and relationships to support favorites	3 hours	Tommy
2	Add favoriting “Star” in sidebar components UI that connects to the backend	2 hours	Peter
3	Create API endpoints for adding, removing, and retrieving favorites	2 hours	Tommy
4	Unit and manual testing	2 hours	Tommy, Peter

Acceptance Criteria

- Given the API endpoint for adding or removing favorites is properly implemented, when making those API calls, the database will be updated to reflect the action requested.
- Given the API is properly secured, when accessing these endpoints without being logged in, the client will receive a 403 error.
- Given the API persists data correctly, when utilizing the favorites endpoints, the responses and actions will be relevant to the user currently authenticated.
- Given the “Star” is properly implemented, when clicking the star, it will toggle the favoriting of whichever item contained the star on the frontend.

User story 10

As a User, I would like to search the map for a building's location.

#	Task Description	Estimated Time	Developer
1	Link sidebar filtering functionality to the map	3 hours	Alex K
2	Pan to a building when it is selected from the sidebar	2 hours	Alex K
3	After User Story 4 is complete, change the color of the highlight on the currently selected building to make it stand out	2 hours	Alex K
4	Test that the sidebar filtering correctly links to the map and the map responds correctly (change highlight color & pan to building) when buildings are selected	2 hours	Alex K

Acceptance Criteria

- Given the filtering is linked correctly, the map component should be able to tell what is being selected from the sidebar component.
- Given the map is configured correctly, when a building is selected from the sidebar, the map should pan over to the location of the selected building
- Given the building highlights are configured correctly, the currently selected building should be highlighted a different color from the other highlighted buildings.

User story 11

As a Developer, I would like the application to be hosted on AWS.

#	Task Description	Estimated Time	Developer
1	Host frontend on AWS	5 hours	Tommy
2	Host backend on AWS	5 hours	Tommy
3	Add GitHub actions workflows to deploy the project to AWS	4 hours	Tommy

Acceptance Criteria

- Given the frontend has been properly hosted on AWS, when going to a designated AWS-hosted website, the frontend will be displayed.
- Given the backend has been properly hosted on AWS, when making API calls to a designated AWS-provided URL, the expected backend responses will be returned.
- Given a GitHub action workflow exists to deploy to AWS, when running the workflow, the current version of the project should be uploaded and deployed to AWS.

3. Backlog

1. Usage

As a User,

a. ~~I would like to see a tutorial that explains how to use the software.~~
b. I would like to see an option to select a specific semester to view the courses offered that semester.

2. Map

As a User,

a. ~~I would like to see a birds-eye view map of Purdue.~~
b. ~~I would like to search the map for a building's location.~~
c. ~~I would like to see a sidebar that shows a list of all classes, sections, and buildings.~~
d. ~~I would like to see campus buildings highlighted on the map.~~
e. ~~I would like to see campus buildings labeled on the map.~~
f. I would like to be able to click a highlighted building on the map to see more information about it, the rooms in it, and the classes in it.
g. I would like to filter the buildings that I see highlighted on the map by name, class location, and section location.

3. Account

As a User,

a. ~~I would like a dedicated page for signing up.~~
b. ~~I would like a dedicated page for logging in.~~
c. ~~I would like to delete an account.~~
d. ~~I would like to change my account email and password.~~
e. ~~I would like to only access pages that require accounts when logged in~~

4. General Filter

As a Student,

a. ~~I would like to filter the sidebar to show only relevant buildings, classrooms, courses, and sections.~~

b. I would like to filter the map to show only relevant buildings, classrooms, courses, and sections.
c. I would like the option to manually input parameters to search for a course/building in case the filters return no results.

5. Favorites

As a User,

a. ~~I would like to favorite buildings, classrooms, classes, and sections that are saved across sessions~~
b. ~~I would like I would like to view a list of my favorite buildings, classrooms, classes, and sections~~
c. I would like to filter the map and sidebar by my favorite buildings, rooms, classes, and sections.

6. Personal Schedule

As a Student,

a. I would like to create a personal schedule for all my classes in a week.
b. I would like to see the estimated time it takes to walk between my classes.
c. I would like to see the estimated time it takes to bike between my classes.

7. Courses and Classrooms

As a User,

a. ~~I would like to see information about current Purdue courses~~
b. ~~I would like to see section times, locations, and instructors for courses.~~
c. I would like the sidebar to show classrooms in a building after selecting that building.
d. I would like to select a classroom from the sidebar to see more information about it and the classes in it.

As a Student,

e. I would like to see a schedule page that shows all class meetings in a selected room each week.
f. I would like to see a schedule page that shows all meetings of a selected class in each week.

As a Professor,

g. I would like to see the number of seats in a classroom.
h. ~~I would like to see the number of students registered in a section.~~
i. I would like to see statistics that show how often a classroom or building is used. (if time allows)

8. Miscellaneous

As a User,

a. I would like to see a suggestion page to request features (if time allows).

9. Developer

As a Developer,

a. ~~I would like to store user account information in a SQL database.~~
b. ~~I would like to save encrypted account login information in a database.~~
c. ~~I would like to save backend logs of what pages are accessed most frequently.~~
d. I would like to restrict schedule creation specifically to users that are logged in.
e. ~~I would like the application to be hosted on AWS.~~

Non-Functional Requirements

1. As a User, I would like the application to be easy to understand and intuitive.
2. As a User, I would like the application to be fast.
3. As a User, I would like the application to be secure.
4. As a Developer, I would like to optimize the web application, so that response times are lower than 1 second.
5. As a Developer, I would like to optimize the web application, so that page loading times are lower than 500 ms.
6. As a Developer, I would like to create the application in a way that allows it to be adapted to include other universities. (if time allows)
7. As a Developer, I would like to have developer roles on accounts for testing and any account resolutions (like resetting passwords). (if time allows)