Sprint 3 Retrospective

CS 307 Fall 2022

Team 9 - Purdue Course Finder

Alex Kobus, Alex Plump, Tommy Lane, Peter Zong

What went well

In general,

We implemented more map functions including, but not limited to, clicking building highlights, walking/biking/driving routes in between buildings, and filtering the map by favorites. We added extra features to the sidebar including the ability to view classrooms in buildings, showing only personal favorites in the sidebar, searching for a specific course, searching for courses using a prefix, and a link from classrooms to see their sections. Finally, we added more pages like the schedule page, suggestions page, the statistics page, and we updated the tutorial to reflect all the changes we added.

User story 1

As a User, I would like to be able to click a highlighted building on the map to see more information about it and the rooms in it.

#	Task Description	Estimated Time	Developer
1	Make the building highlights clickable	1 hour	Alex K
2	Make the sidebar update to view the rooms in a selected building	3 hours	Alex K
3	Make the building highlight color change when it has been selected from the map	1 hour	Alex K
4	Test that clicking the building highlights correctly selects the building and updates the sidebar	2 hours	Alex K

Completed:

Clicking on a building highlight on the map will cause the building to become selected. The map will zoom in towards that building and the highlight will change color. The sidebar will update to show a list of classrooms inside of that building. There are documented manual tests for this feature.

User story 2

As a User, I would like to create a personal schedule for all my classes in a week.

#	Task Description	Estimated Time	Developer
1	Create layout for schedules page	5 hours	Peter
2	Setup base infrastructure that determines how and where items will be displayed.	3 hours	Peter
3	Fill schedule with user-favorited sections	1 hour	Peter
4	Test the personal schedule page	2 hours	Peter

Completed:

When logged in, if the user has favorited sections and then clicks the "My Schedule" button, a schedule page with meeting events of the section meetings is shown in a grid-like fashion. The meeting events are properly located in the correct column (corresponding to the day of the week) and the correct row (corresponding to the time of day) locations. There are tests for this feature.

User story 3

As a User, I would like to see the estimated path it takes to walk and bike between my classes.

#	Task Description	Estimated Time	Developer
1	Create an API Key for the Google Directions API	2 hours	Alex K
2	Generate building coordinates for start and end of routes	2 hours	Alex P
3	Button that shows a popup to choose 2 buildings	3 hours	Alex P
4	Calculate map routing between chosen buildings.	3 hours	Alex P
5	Display route on map	3 hours	Alex P
6	Test the routing functionality	2 hours	Alex P

Completed:

Pressing the "Route" button causes a popup to appear where the user has the option to select a starting and ending location from a drop-down menu. When they confirm the route on the popup, the popup closes, and the route between the two buildings is calculated and displayed onto the map. There are tests for this feature.

User story 4

As a User, I would like to see a suggestion page to request features.

#	Task Description	Estimated Time	Developer
1	Create the layout for the suggestions page	2 hours	Alex K
2	Link the suggestions page to the backend to submit suggestions	2 hours	Alex K
3	Create suggestions endpoint in backend	1 hour	Tommy
4	Write suggestions to file in backend	2 hours	Tommy
5	Test the suggestions page	2 hours	Alex K

Completed:

There is now a suggestions page accessible through floating buttons in the bottom right of the home page. This page contains a textbox and a submit button. Submitting text will cause it to be saved into the backend under the email of the authenticated user. An unauthenticated user will have their suggestion recorded as an anonymous user. There are tests for this feature.

User story 5

As a User, I would like to search for a specific course or course level under a subject.

#	Task Description	Estimated Time	Developer
1	Allow functionality to search for a specific course in a subject by number	2 hours	Peter
2	Allow functionality to search for all courses in a subject under a specific course level	1 hour	Peter
3	Test the new search functionality	2 hours	Peter

Completed:

In the sidebar, when you search for a course subject followed by a specific course number, such as CS 307 or CS 30700, only courses in that subject containing that course number will show up. When you search for a course subject followed by a single digit (representing the course level), such as CS 1, only courses of the 100 level in that subject will show up. There are tests for this feature.

User story 6

As a User, I would like the sidebar to show classrooms in a building after selecting that building.

#	Task Description	Estimated Time	Developer
1	Add classroom endpoint to the backend	5 hours	Tommy
2	Make building click query the server for classroom information	2 hours	Alex P
3	Display each classroom for a building	3 hours	Alex P
4	Test viewing classrooms on the sidebar	2 hours	Alex P

Completed:

An endpoint was created on the backend that allows the frontend to access classroom information given a building short code. In the sidebar, when choosing a building, there is now the option to click a building. This in turn changes the filter on the sidebar to classrooms, queries the backend for classrooms in that building, and then shows a list of classrooms pertaining to the building chosen. There are tests for this feature.

User story 7

As a User, I would like to select a classroom from the sidebar to see information about the classes in it.

#	Task Description	Estimated Time	Developer
1	Add room schedule endpoint to backend	5 hours	Tommy
2	Query backend to gather all sections.	3 hours	Alex P
3	Connect schedule page with room selection from sidebar	1 hour	Alex P
4	Display section schedules for selected room on the schedule page	2 hours	Alex P
5	Test the classroom schedule page	2 hours	Alex P

Completed:

An endpoint was created on the backend that allows the frontend to request all sections, times, professors, available seats, and other information about a classroom. In the sidebar, each classroom now has an additional button that directly takes the user to the schedule page. From there, each meeting that takes place in the chosen room is displayed on a grid with days of the week on the top, and hours on the left side, just as the Purdue week-by-week schedule does. There are tests for this feature.

User story 8

As a User, I would like to filter the map and sidebar to only display my favorites.

#	Task Description	Estimated Time	Developer
1	Add ability to filter buildings, courses, classrooms, or section by the user's favorites on the sidebar	2 hours	Peter
2	Link the sidebar favorites filtering to the map	3 hours	Peter
3	Test the favorites filters	2 hours	Peter

Completed:

In the sidebar, when you search for anything and are logged in, you can favorite the items displayed. By clicking the "Favorites Only" checkbox, only your favorited items will show up. Additionally, when viewing only favorited buildings, only those buildings in your favorites list will be highlighted on the map. There are tests for this feature.

User story 9

As a User I would like to filter the buildings that I see highlighted on the map by building name, class location and section location.

#	Task Description	Estimated Time	Developer
1	Link the sidebar filtering for courses, sections, and buildings to the map	5 hours	Alex K
2	When buildings are filtered from the sidebar, only show the building highlights for the results from that filter	2 hours	Alex K
3	When a course is selected from the sidebar, only highlight buildings that sections of that class occur in	2 hours	Alex K
4	When a section is selected from the sidebar, change the color of the building highlight for the building that section occurs in	2 hours	Alex K
5	Test that the sidebar filtering correctly displays only relevant buildings on the map	4 hours	Alex K

Completed:

When selecting a class from the sidebar, the map will update to only have highlights on the buildings that contain sections of that class. When selecting a section from the sidebar, the map will zoom in toward the building containing that section, and that building highlight will change color. When searching for buildings in the sidebar, the map will update to only show highlights for buildings returned by that search query (There was a bug introduced by another feature that caused this to not work during our presentation. This bug has already been identified and fixed). There are documented manual tests for all of this functionality.

User story 10

As a User, I would like to see a schedule page that shows all sections of a selected course each week.

#	Task Description	Estimated Time	Developer
1	Link sidebar course list to schedules page	2 hours	Peter
2	Display section schedules for selected course on the schedule page	2 hours	Peter
3	When clicked, a popup with more detailed information about a course and section should appear.	3 hours	Peter
4	Add section endpoint in backend to return information about a specific section	3 hours	Tommy
5	Modify existing favorite sections endpoint to return additional meeting data	2 hours	Tommy
6	Test the course schedule page	2 hours	Peter

Completed:

For each course, classroom, and section item in the sidebar, you can access its schedule page by clicking on the corresponding "View Schedule" button. When clicking on a classroom, all meetings held in that classroom throughout the week are displayed on the schedule. When clicking on a course, all section meetings belonging to that course are displayed on the schedule. When clicking on a section, all section meetings for that specific section are displayed on the schedule. When clicking on a schedule event on the schedule page, a popup appears with more detailed information about the course and section. There are tests for this feature.

User story 11

As a user, I would like to see statistics that show how often a classroom or building is used. (if time allows)

#	Task Description	Estimated Time	Developer
1	Create the layout for the statistics page	4 hours	Alex P
2	Add backend endpoint for statistics	5 hours	Tommy
3	Test the Statistics Page	3 hours	Tommy
4	Update tutorial page	3 hours	Tommy
5	Add floating button to home page to access statistics page and tutorial page	2 hours	Tommy

Completed:

There is now a statistics page accessible through floating buttons at the bottom right of the home page. The statistics page begins by loading in statistics from each building and showing a loading bar until that is done. It will display information about each building such as total number of meetings and total number of rooms among other things. The tutorial page was updated for these changes and others. The floating buttons were also added as part of this story. There are tests for this story.

What did not go well

Specific Building Filtering

When filtering the sidebar for buildings, a user can leave the field blank and receive all buildings. Their other option is to start typing some part of either the name or short code, such as "arm", which returns the **Arm**ory, **Arm**strong, and Ph**arm**acy buildings. When filtering buildings in the sidebar, the map highlights should also be updated so that only the buildings returned by the search are highlighted. A bug introduced by another feature of the application caused this to not work during our presentation. This bug has already been identified and fixed at the time of writing this document.

How should we improve?

- We should write tests sooner rather than later to help us make sure the software continues to work.
- We should perform manual tests more often to ensure that adding new features does not break existing functionality in our UI.
- During our development, we didn't intentionally incorporate all of our non-functional requirements.