Sprint 1 Plan

Team Members

Client: Shana Shaw
Project Owner (Sprint 1): Sai Patibandla
Scrum Master (Sprint 1): Arunima Chowdhury
Developer (Sprint 1): Joseph Cisneros, Zengqi Liu
Team Meetings: Monday, Wednesday, Friday after class (12.30 pm)

Project Overview

The goal of this project is to develop a software solution that automates the generation of block schedules for Engineering Academies (EA) across the state, starting with the Austin EA. The EA block scheduling system will be able to efficiently schedule math, science and engineering courses for both the fall and spring semesters. It will also ensure that no classes overlap while adhering to the prerequisites requirements. It aims to replace the current manual scheduling process, which involves manually processing spreadsheets, calendars and Google Forms. The software will be able to make the scheduling process for the Engineering Academics students and the administration smoother and more efficient in the admin side.

The project, which is designed for EA staff and students, provides a user-friendly interface that allows the staff and the students to create and manage schedules, making it easier to review, adjust and finalize the course schedules. By automating the scheduling process, it minimizes conflicts, ensures prerequisite requirements are met, and allows for quick modifications when necessary. The project is also supposed to provide a more structured and transparent way for students to plan their academic paths, helping them make informed decisions about their coursework. Moreover, it aims to reduce the administrative burden of manual scheduling, allowing the EA administration to focus on other essential tasks. Overall, the project is designed to improve efficiency and resource management for the Engineering Academies.

First Client Meeting

Date: 29th January, 2025

Time: 3:00 pm

Place: Online (Via Zoom)

Weekly Meeting Time: Every Wednesday at 3:00 pm (via Zoom)

Summary of the Meeting:

The primary goal of this meeting was to introduce the team to our customer, Professor Shana Shaw, and gain a deeper understanding of the Engineering Academies - Block Scheduling project. Professor Shaw provided an overview of the Engineering Academies program and explained how course scheduling currently functions within it. She also presented a demo of the previous team's work (Demo Link) and highlighted key requirements and modifications needed for this iteration. While the admin interface has already been partially deployed with several core functionalities in place, the major focus for this team will be completing the student interface and refining the backend and the admin interface.

The key development priorities include enabling students to create accounts, register for courses, set preferences, and select block schedules that fit their needs. On the admin side, improvements are required in block generation logic, bulk student additions via CSV imports, and the ability to remove students from blocks. For the first week, Professor Shaw recommended reviewing the existing codebase and conducting a knowledge transfer to identify any necessary modifications for discussion in the following week. The team has scheduled recurring weekly meetings with her every Wednesday. At the end of the meeting, she also provided a spreadsheet containing the course details for the Austin Engineering Academy's Spring 2025 semester.

Sprint Backlog

Sprint Goal

Understanding the customer requirements and analyzing the existing code base.
Creating the user stories

Stories pulled into the Sprint

Four stories were pulled in the sprint.

1. Ability for admins to add students in bulk
2. Student's ability to access the login and the homepage
3. Student's ability to register for courses
4. Student's ability to select a block

Story Assignment

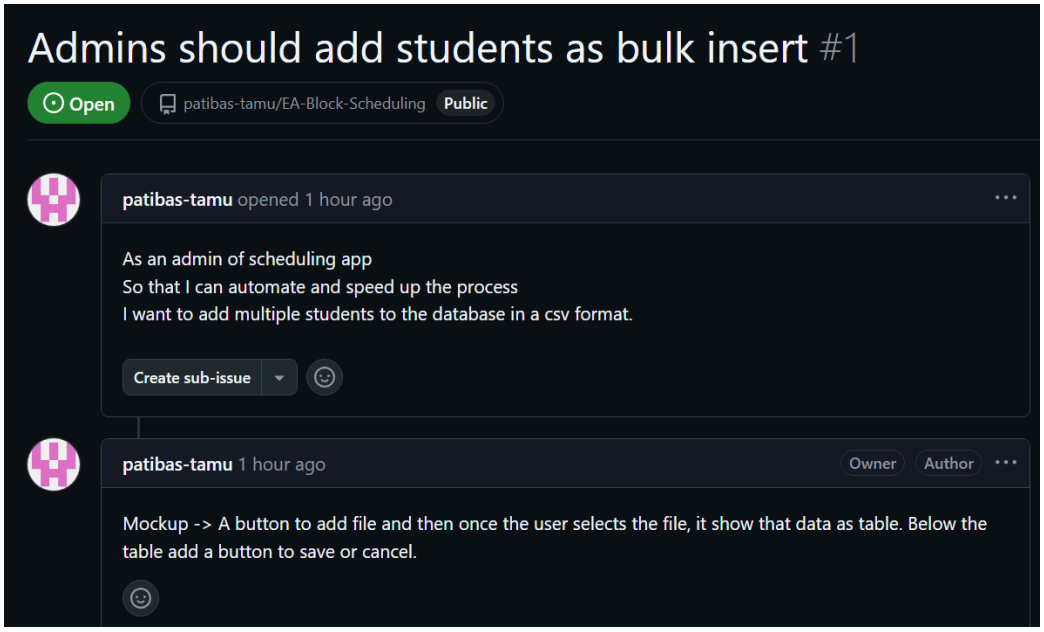
1. Joseph
2. Arunima
3. Sai
4. Zengqi

Task

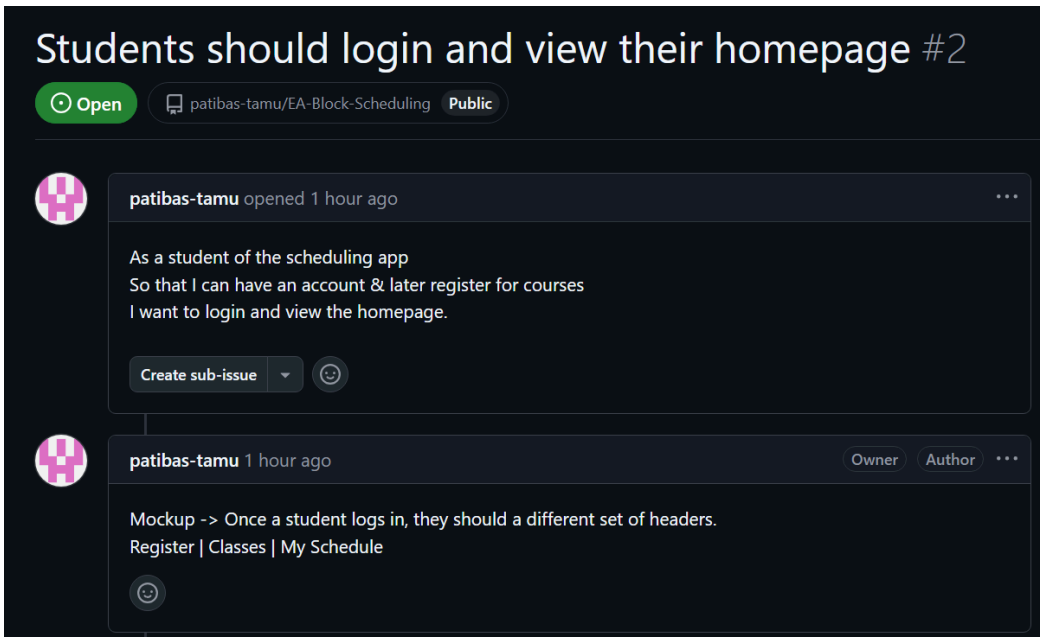
Create the UI mockups. (by 31st January)
Begin integrating the UI (Continue till next sprint)
For Sprint 1, the team will mostly focus on analyzing the existing code and get feedback from the customer about the UI.

User Stories

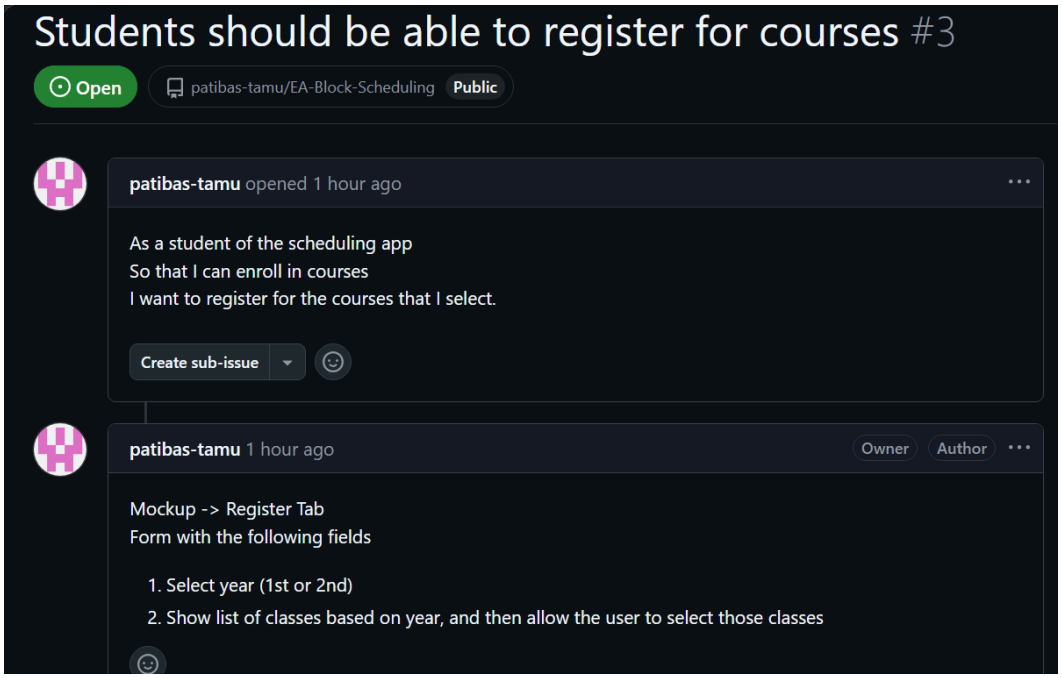
User story 1

- 

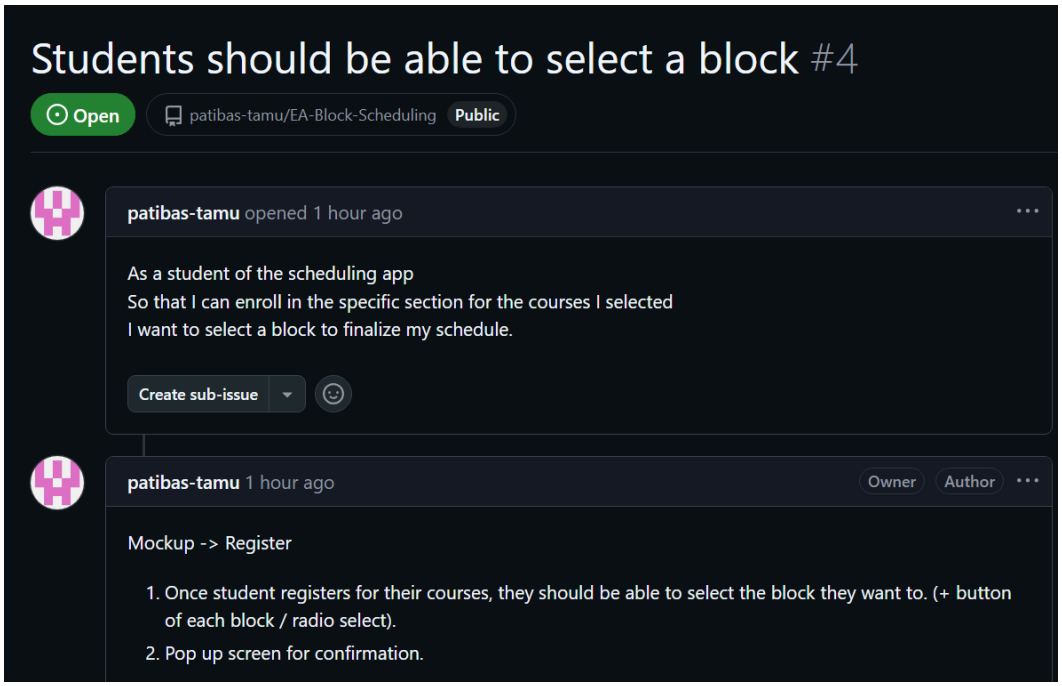
User story 2

- 

User story 3

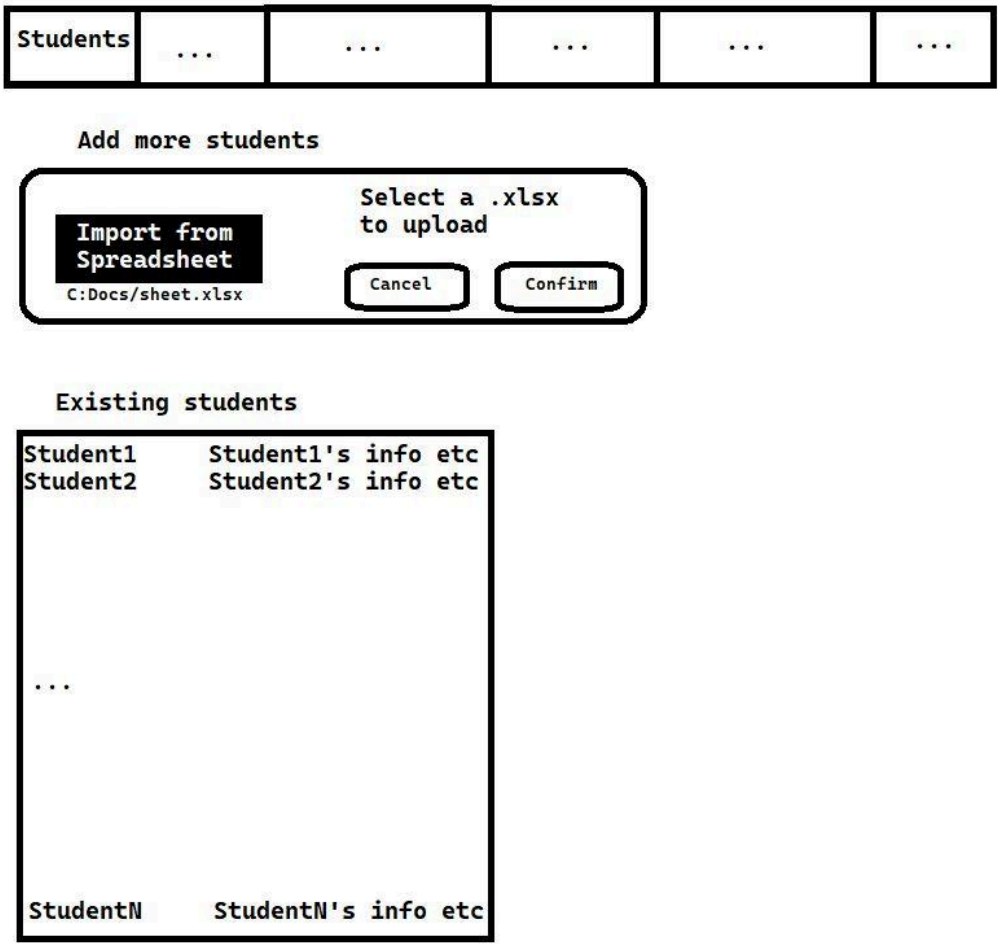
- 

User story 4

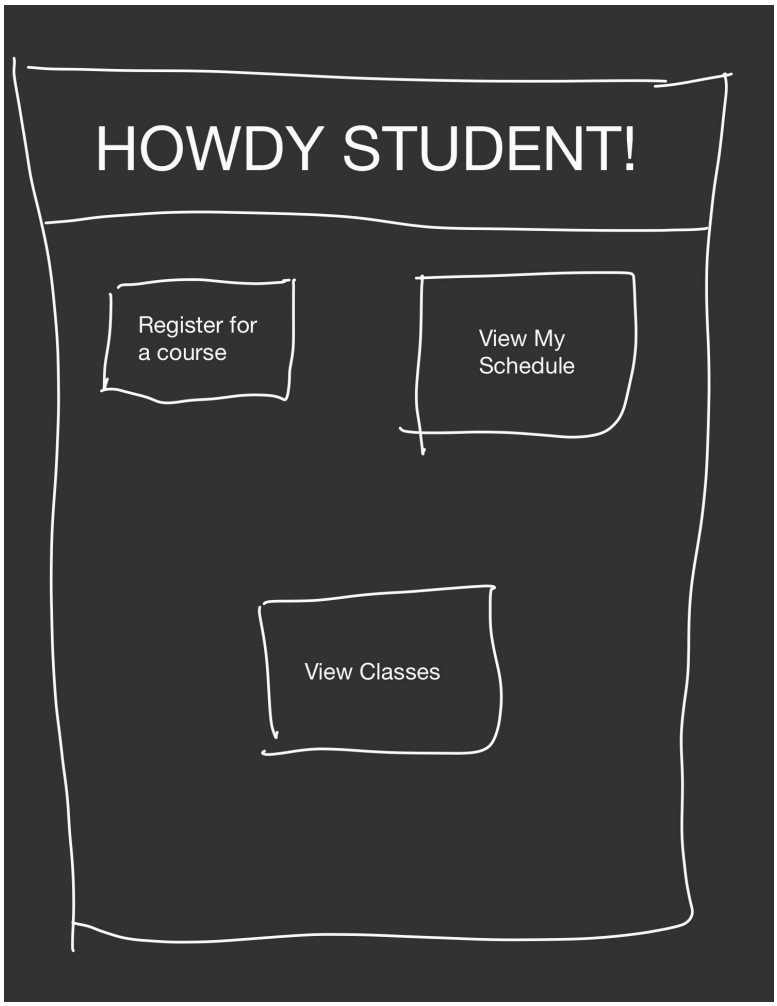
- 

UI Mockups

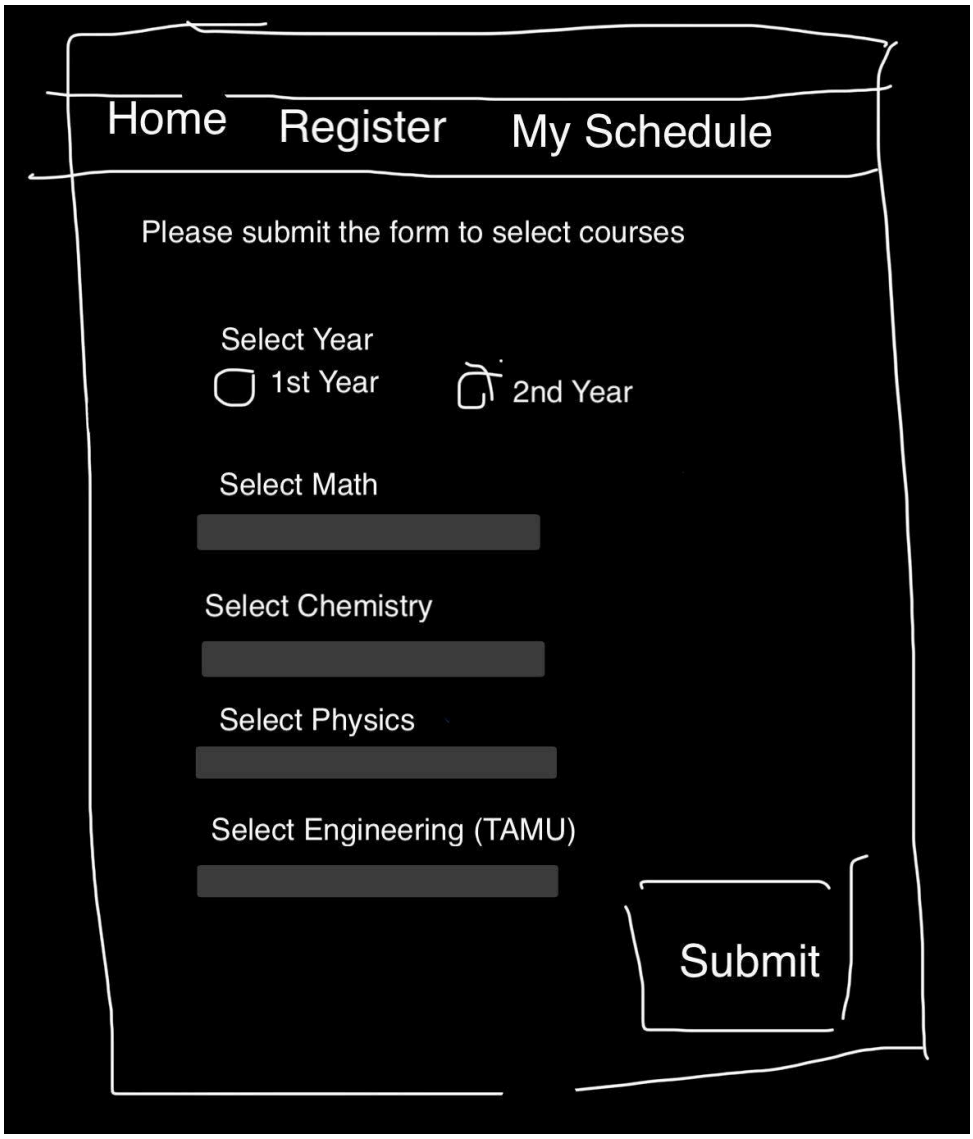
User story 1



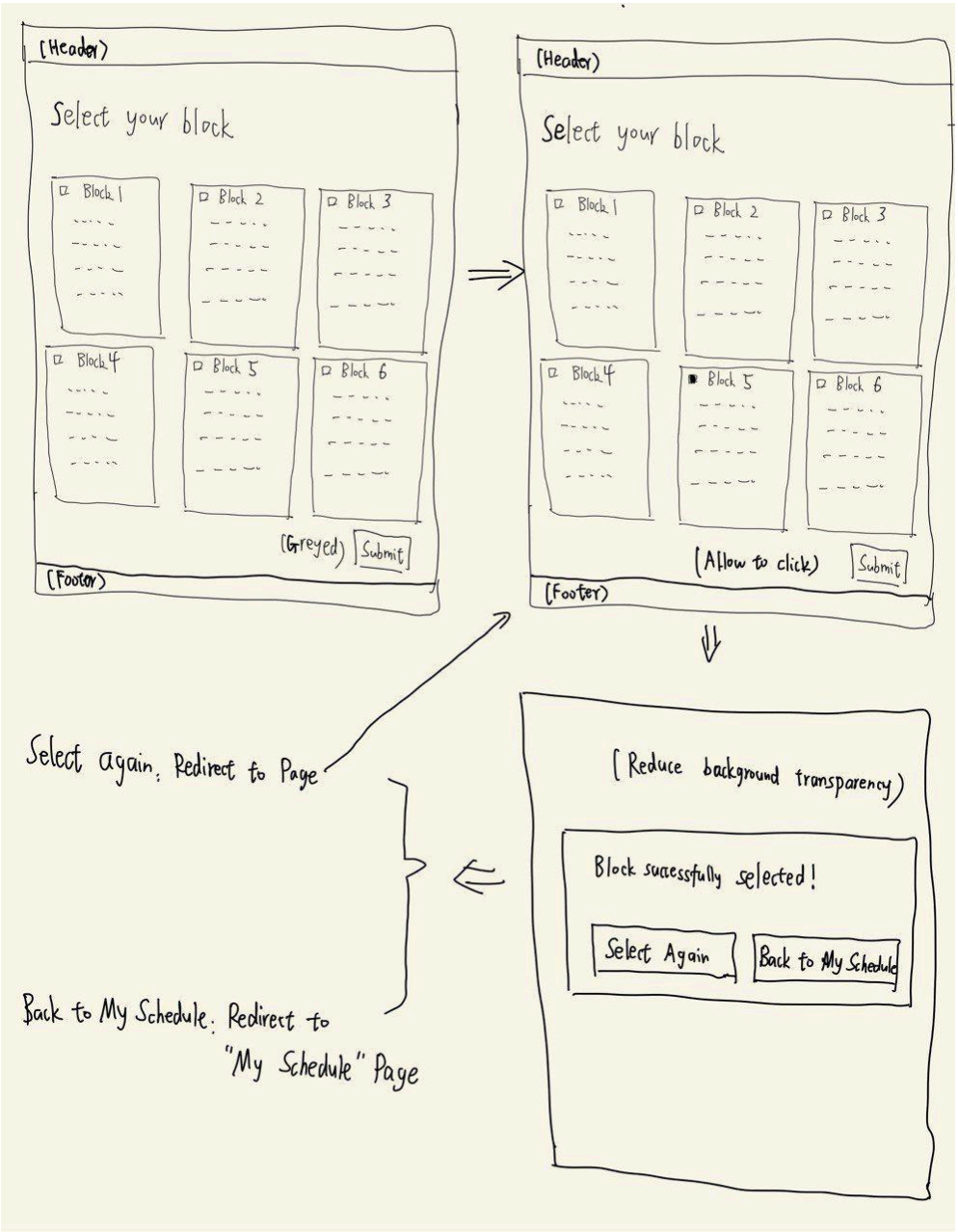
User story 2


HOWDY STUDENT!
Register for a course
View My Schedule
View Classes

User story 3


Home
Register
My Schedule
Please submit the form to select courses
Select Year
1st Year
2nd Year
Select Math
Select Chemistry
Select Physics
Select Engineering (TAMU)
Submit

User story 4


[Header]
Select your block
Block 1
Block 2
Block 3
Block 4
Block 5
Block 6
[Greyed)
Submit
[Footer]
[Header]
Select your block
Block 1
Block 2
Block 3
Block 4
Block 5
Block 6
[Allow to click)
Submit
[Footer]
Select again: Redirect to Page
Back to My Schedule: Redirect to "My Schedule" Page
[Reduce background transparency)
Block successfully selected!
Select Again
Back to My Schedule

Legacy Code

The first step in working on the Engineering Academies Block Scheduling project is to thoroughly understand and analyze the existing legacy code. Since the team got access to the GitHub repository on January 30th, there has not been sufficient time to fully review the codebase. However, in the coming week, the team plans to set up a development environment, check out any scratch branches, and run the application in a production-like setting. Additionally, the team will inspect the database schema to understand how the scheduling logic is implemented. They will begin by identifying key classes and relationships, and analyzing the most important data structures. The goal is to pinpoint areas where changes are needed to assess the code base's structure and how it's maintained.

The team has already created updated user stories that align with the project's requirements. Professor Shana Shaw noted that while the admin interface includes some basic functionalities, there is significant room for improvement. The team's key focus is on creating the student interface, which requires major updates. The primary tasks for the student interface side is creating a login page for students, allowing them to register for courses, select their course preferences, and implementing logic for block generation based on prerequisites, section availability, and the student's academic year. Students should also be able to select their preferred block based on their choices. The major development required for this task is to integrate the back end logic for the login and authentication page for the students, student registration page and block generation page and then also integrate the UI for these tasks. On the admin side, some improvements are required which include enabling bulk CSV imports where each row would be a student. This will create the users as students in the database. The team also needs to create an export functionality to view all the students enrolled in the course. Moreover, the admin should be able to modify a student's assigned block if needed.

The team has outlined the overall requirements for this project. For the first sprint, the team will solely focus on knowledge transfer by thoroughly reviewing the existing implementation and identifying redundant or outdated components. The team has decided that they will begin by designing the UI for the student interface and in the subsequent sprints they will begin implementing foundational improvements and assess whether the code is adequately tested. Proper unit and integration testing will be done before making any significant changes. Following the agile methodology, the team will continuously document changes through GitHub. Weekly meetings with Professor Shaw will help validate the team's progress and adjust priorities as needed.

Links

Github Repo:

https://github.com/patibas-tamu/EA-Block-Scheduling

Github Project Board:

https://github.com/users/patibas-tamu/projects/2

Slack Link:

https://spring606proj-u7o6084.slack.com/archives/C08A3EL1J7R