Team 18 Sprint 2 Planning Document

TEAM MEMBERS: Danielle Ejiogu, Daniel Fakunle, Murtuza Kagalwala, Lucas Munteanu, Jenna Rigdon, & Samson Tesfagiorgis

PROJECT NAME: Shift

Sprint Overview

In this sprint we aim to complete our user stories from the first sprint and get ourselves up to where we should have been. We also aim to finalize AWS connections and deployment of our application. For this sprint we aim to add some more functionality to give our app more features and make it more user friendly. We also will try to add the CI/CD pipeline in this sprint to complete automated testing and make it easier for us as a team to push changes.

Scrum Master: Murtuza Kagalwala

Meeting Plan: Monday/Tuesday/Wednesday @ 9:30 p.m.

Risks and Challenges

Our team will continue to circumvent the learning curve associated with the technologies we will be effectively integrating these technologies in our project. This sprint will have a lot of moving parts. We continue recouping the unfinished parts of Sprint 1 whilst implementing Sprint 2's user stories, this will require much communication from all team members so everyone is aware of what new dependencies are in play as more functionalities get developed. A big risk that we are trying to take for this sprint is the setup of the CI/CD pipeline.

Current Sprint Detail (Sprint 2)

User Story 1

As a user, I would like to be able to specify my hall, such that I can search for other users in my hall.

#	Description	Estimated Time	Owner
1	Implement functionality for assigning a hall association	2 hours	Lucas
2	Implement UI to search for members within the users hall	2 hours	Daniel
3	Implement functionality for searching for other hall members	3 hours	Daniel
4	Debugging & Unit Testing	2 hours	Daniel

Acceptance Criteria

- Given that the functionality for assigning a hall association is implemented correctly, when a user updates their hall association in the user profile settings, the system should store and display the selected hall association for that user.
- Given that the functionality for searching for members within the user's hall is implemented correctly, when a user navigates to the search page and selects the hall filter, the system should display a list of users belonging to the user's specified hall.
- Given that the UI for searching for hall members is implemented correctly, when a user clicks on a search result, the system should navigate to the user profile page for the selected member, displaying relevant information such as their hall association.

User Story 2

As an REA or REC, I would like to view at a glance the current status of RAs, e.g., active, inactive, unavailable.

#	Description	Estimated Time	Owner
1	Implement functionality for admins to view the current status of users	4 hours	Daniel
2	Implement functionality to return the current status of a specified RA	3 hours	Daniel
3	Debugging & Unit Testing	3 hours	Daniel

Acceptance Criteria

- Given the status functionality is implemented correctly, an REA or REC can view a list of their assigned RAs and their status.
- Given that the status functionality is implemented correctly, when an RA specifies their status, it will be reflected in the list view of their REA/REC.

- Given that the status functionality is implemented correctly, when an RA signs out and logs in, their status will be persisted.

User Story 3

As an REA, I would like to be able to temporarily disable or delete accounts of the RAs.

#	Description	Estimated Time	Owner
1	Implement REA ability to delete accounts of RA's	2 hours	Lucas
2	Implement REA ability to disable accounts of RA's	2 hours	Lucas
3	Implement corresponding UI functionality to select which RAs to enable, disable, or delete.	3 hours	Daniel
4	Debugging & Unit Testing	3 hours	Daniel, Lucas

Acceptance Criteria

- Given that the functionality is implemented correctly an REA should be able to delete an RA's account, meaning that the specific RA's information would be gone from the system and if they tried to login again they would be unable to.
- Given that the functionality is implemented correctly an REA should be able to disable an RA's account, meaning that the specific RA's information would be unable to login.
- Given that the functionality is implemented correctly, a disabled RA account can be reenabled by an REA.

User Story 4

As an REC, I would like to be able to temporarily disable or delete accounts of the RAs and REAs.

#	Description	Estimated Time	Owner
1	Implement REC ability to disable accounts of RA's and REA's	1 hour	Lucas
2	Implement REC ability to disable accounts of RA's and REA's	1 hour	Lucas
3	Implement corresponding UI functionality to select which RAs or REAs to enable, disable, or delete.	3 hours	Daniel
4	Debugging & Unit Testing	3 hours	Daniel, Lucas

Acceptance Criteria

- Given that the functionality is implemented correctly, an REC should be able to delete a specific RA or REA's account, meaning that the specific RA's information would be gone from the system and if they tried to login again they would be unable to.

- Given that the functionality is implemented correctly, an REC should be able to disable an RA's account, meaning that the specific RA or REA's i would be unable to login.
- Given that the functionality is implemented correctly, a disabled REA/RA account can be reenabled by an REC.

User Story 5

As a user, I would like to be able to select from a variety of themes, allowing me to personalize my visual experience.

#	Description	Estimated Time	Owner
1	Determine and style alternative themes for the UI	3 hours	Danielle
2	Add functionality for user selection of alternative themes	4 hours	Danielle
3	Debugging & Unit Testing	3 hours	Danielle

Acceptance Criteria

- Given that the functionality for selecting different themes is implemented correctly, the user can select from a list of themes in their settings page, and the theme will be reflected in the UI.
- Given that the functionality for selecting different themes is implemented correctly, when the user signs out then logs in, the selected theme will be persisted.
- Given the functionality for selecting different themes is implemented correctly, the selected theme of the user from a previous session won't be reflected in a new session.

User Story 6

As an REA or REC, I would like to have the option of creating a welcome page that outlines the rules of scheduling and a brief overview of the website, when I add an RA who is just starting their new job with us.

#	Description	Estimated Time	Owner
1	Create the welcome page for new RA's	3 hours	Danielle
2	Add functionality for REA's/RA's to specify rules	3 hours	Samson
3	Add functionality for REA/RA's to specify display preferences for the welcome page	3 hours	Danielle
4	Debugging & Unit Testing	3 hours	Danielle

Acceptance Criteria

- Given that the welcome page functionality is implemented correctly, when a new RA logs into their account, the welcome page will be displayed.
- Given that the welcome page functionality is implemented correctly, the user can only use the application once they have accepted the rules.

- Given that the welcome page functionality is implemented correctly, the user can turn off the welcome page in their settings.

User Story 7

As a user, I would like to see whether or not an RA has clocked in for their shift.

#	Description	Estimated Time	Owner
1	Implement view that allows REA to view all RA's status (clocked in or not)	4 hours	Danielle
2	Create functionality to send RA clock-in status	2 hour	Lucas
3	Debugging & Unit Testing	2 hours	Danielle

Acceptance Criteria

- Given that the functionality is implemented correctly a user can click on the current day and see a list of RA's for that day of the shift.
- Given that the functionality is implemented correctly a user should be able to view whether an RA has clocked in
- Given that the functionality is implemented correctly a user should be able to view whether an RA has not clocked in

User Story 8

As an RA, I would like to be able to see which RA's are available on any given day (for duty switches, etc.).

#	Description	Estimated Time	Owner
1	Implement corresponding UI functionality to be able to view availability of selected RA	4 hours	Daniel
2	Create functionality to send availabilities schedule of other RA	3 hours	Samson
3	Debugging & Unit Testing	3 hours	Samson

Acceptance Criteria

- Given that the functionality is implemented correctly an RA will be able to view the other available RA's for any given day.
- Given that the functionality is implemented correctly, an RA will be able to send their availability schedule to another RA.
- Given that the schedule is sent, a notification is sent to the receiving RA indicating that availability was shared with them.

User Story 9

As an REA or REC, I would like to be able to manually assign shifts to RAs.

#	Description	Estimated Time	Owner
1	Implement corresponding UI functionality to access an RAs schedule	3 hours	Samson
2	Create functionality to add events or shifts to RAs schedules	2 hours	Jenna
3	Implement in-app notification for manual schedule changes	3 hours	Samson
3	Debugging & Unit Testing	3 hours	Jenna

Acceptance Criteria

- Given that manual shift assignment is implemented correctly, an REA/REC can add a shift to an RAs schedule .
- Given that manual shift assignment is implemented correctly, the respective RA can view the changes made to the schedule.
- Given that manual shift assignment is implemented correctly, the respective RA will be automatically notified of the manual schedule change.

User Story 10

As an REA or REC, I would like the option to generate a daily, weekly, or monthly report detailing the shifts completed by RAs (e.g., hours worked, duties completed, absences, etc.).

#	Description	Estimated Time	Owner
1	Implement functionality that allows for compilation of an REA/REC's RA's data.	4 hours	Jenna
2	Implement corresponding UI functionality	4 hours	Samson
3	Debugging & Unit Testing	2 hours	Jenna

Acceptance Criteria

- Given that the functionality for compiling RA data is implemented correctly, an REA or REC can generate a report summarizing the shifts completed by RAs for the specified day, including details such as hours worked, duties completed, and absences.
- Given the UI is implemented correctly, the REA/REC can switch between daily, weekly and monthly views of the report.
- Given the report functionality is implemented correctly, when there is a change in the data for the respective RA, the REA/REC can update the report.

User Story 11

As a user, I would like to export my schedule for use on other calendar applications/websites such as Google Calendar.

#	Description	Estimated Time	Owner
1	Implement corresponding UI functionality to allow user to export their schedule	6 hours	Murtuza
2	Debugging & Unit Testing	4 hours	Murtuza

Acceptance Criteria

- Given that functionality is implemented correctly, a user is able to export their schedule to a file.
- Given that the export functionality is implemented correctly, the user should be able to view the exported file.
- Given that functionality is implemented correctly, the schedule from Shift is populated as events in the calendar app it's exported to.

User Story 12

As a user, I would like to be able to synchronize my schedule with an external calendar service such as Google Calendar or Outlook Calendar.

#	Description	Estimated Time	Owner
1	Implement corresponding UI functionality to connect external calendar with schedule within Shift	6 hours	Murtuza
2	Debugging & Unit Testing	4 hours	Murtuza

Acceptance Criteria

- Given a user has a Google calendar or Outlook calendar, they can import their schedule to Shift.
- Given the previous is functional, events that are imported can be deleted and edited.
- Given the user tries to import an invalid calendar, their Shift calendar will remain unchanged.

User Story 13

As a user, I would like to be able to download the schedule as a PDF.

#	Description	Estimated Time	Owner
1	Implement corresponding UI functionality for a user to convert their schedule as a PDF	3 hours	Samson
2	Debugging & Unit Testing	3 hours	Samson

Acceptance Criteria

- Given a user has an empty schedule, then they should not be able to download a PDF, as they do not need to save an empty schedule.
- Given a user has a schedule, then they should be able to download a legible PDF with their information.
- Given a user has a schedule and has selected what days they want to export in the PDF, then they should be able to download a PDF formatted to their selection(s).

User Story 14

As an RA, I would like to be able to select whether or not I can view and select conflicting shifts (i.e., I can access shifts which may overlap with my other events because I am unable to attend any other available ones).

#	Description	Estimated Time	Owner
1	Implement functionality to view all possible shifts	2 hours	Lucas
2	Implement functionality to view only compatible shifts	3 hours	Lucas
3	Implement corresponding UI functionality to change view settings / connection	4 hours	Samson
4	Debugging & Unit Testing	3 hours	Lucas, Jenna

Acceptance Criteria

- Given an RA has a view of their shifts, they have the option to see the shifts that conflict with their current schedule.
- Given the previous works, an RA can select the conflicting option instead and change their schedule.
- Given an RA has an event during a shift, the shift will be hidden from the RA unless shown.

User Story 15

As an REA or REC, I would like to be able to add special rules to shifts (e.g., certain halls, such as coeds, must have RAs of the opposite gender while performing certain duties).

#	Description	Estimated Time	Owner
1	Provide page for REAs and RECs to apply certain rules to shifts	3 hours	Samson
2	Create functionality to apply specific rules to shifts	2 hours	Lucas
3	Create functionality to prohibit certain RAs from accessing shifts that do not apply to them	2 hours	Lucas

4	Debugging & Unit Testing	3 hours	Lucas, Jenna

Acceptance Criteria

- Given a user is an executive, they will have access to a page for adding shifts for their RAs.
- Given adding shifts is functional, REA/RECs can add additional requirements/notes to a shift.
- Given an RA can view available shifts, shifts that have requirements that an RA don't meet will not be available to pick up.

User Story 16

As an REA or REC, I would like to view the number as well as the types of shifts completed by an RA.

#	Description	Estimated Time	Owner
1	Create functionality to collect and send information of specific RAs	3 hours	Lucas
2	Implement UI to display statistics of requested RA	3 hours	Daniel
3	Debugging & Unit Testing	3 hours	Lucas, Jenna

Acceptance Criteria

- Given an RA completes a shift, the shift details will be added to their metrics.
- Given an REA/REC has RA's assigned to them properly, they can view the metrics for their RA's work schedule.
- Given there is a clear difference between weekend and weekday shifts, REA/RECs can differentiate RA's past shifts between the two.

User Story 17

As a user, I want to be able to set notification preferences, allowing me to choose how and when I receive alerts about shifts, announcements, or other important updates.

#	Description	Estimated Time	Owner
1	Create a field in settings where the user can set notification preference.	1 hour	Daniel
2	Create selection field for each type of alert for user to check (shift drops, new schedule, messages, upcoming events)	2 hours	Daniel
3	Implement notification process for user's and their specified notifications preferences	5 hours	Daniel, Jenna
4	Debugging & Unit Testing	3 hours	Jenna

Acceptance Criteria

- Given a user has access to a functional settings page, they can specify whether they prefer notifications as a message or email.
- Given a user has selected fields for specific actions they want notifications for, they can option for which events they prefer to be notified about.
- Given the notification process is functional, users will only receive notifications for what they specified in their settings.

User Story 18

As a user, I would like to receive email notifications to be notified of schedule changes or upcoming events.

#	Description	Estimated Time	Owner
1	Implement functionality where changes to schedules and/or availabilities sends notification	3 hours	Danielle
2	Allow users to specify how far from upcoming events, they would want a notification	1 hour	Samson
3	Notify RAs when their shift drop is approved/denied	3 hours	Danielle
4	Debugging & Unit Testing	3 hours	Jenna

Acceptance Criteria

- Given that the users have a platform to specify their notification preferences for upcoming events, the users will receive proper notification in the timeframe they specified.
- Given a user's schedule is changed, they will receive a notification after its change.
- Given a user has requested a shift drop, they will be notified when the decision is made by an executive.

Non-Functional Work

CI/CD Pipeline

We would like to implement our CI/CD pipeline to help automate our test-cases and ease our code deployment process. We would like to do a quick analysis of whether or not we still want to continue our CI/CD pipeline implementation with Docker and Jenkins, or if we would want to consider Ansible instead. That should take about an hour. Next we will have to learn either technologies, and if we go with the latter, we will have to see if there are any modifications that need to be made for the current Docker file to continue with Jenkins. We estimate that learning these technologies will take about 3 hours and implementation will take about 12 hours

Estimated time: 15 hours

Owners: Murtuza (10 hours), Jenna (5 hours)

Acceptance Criteria

- Given that we figure out the technology for our CI/CD pipeline, we will learn the technology.

- Given that we select the technology, we will make changes to our Docker file accordingly.

- Given that we learn and understand how to use the technology, we will start implementing our CI/CD pipeline.

Sprint 1 Connection Stories

(Functionality for these stories have been implemented in both the front end and the back end, our group only needs to connect them such that they can communicate with each other)

User Story 4

As a user, I would like to delete my account and all of its associated data.

#	Description	Estimated Time	Owner
1	Front-End Connection	2 hours	Daniel
2	Back-End Connection	2 hours	Lucas

User Story 9

As a user, I would like to add, edit, and delete my personal events.

#	Description	Estimated Time	Owner
1	Front-End Connection	2 hours	Danielle
2	Back-End Connection	2 hours	Lucas

User Story 10

As a user, I would like to clear my schedule based on hour, day, week, or month.

#	Description	Estimated Time	Owner
1	Front-End Connection	2 hours	Danielle
2	Back-End Connection	2 hours	Lucas

User Story 13

As an RA, I would like to be able to indicate a preference for when to schedule certain shifts.

#	Description	Estimated Time	Owner
1	Front-End Connection	2 hours	Samson
2	Back-End Connection	2 hours	Lucas

User Story 18

As an REA or REC, I would like to edit RA schedules (for last minute shift drops, etc.).

#	Description	Estimated Time	Owner
1	Front-End Connection	2 hours	Samson
2	Back-End Connection	2 hours	Lucas

Sprint 1 Incomplete Stories

User Story 8

As a user, I would like to be able to submit my availability to the scheduler.

#	Description	Estimated Time	Owner
1	Create a submission button from within the users calendar page.	1 hour	Jenna
2	Create functionality for the submission button.	1 hour	Jenna
3	Prevent any race conditions when submitting a shift.	4 hours	Lucas
4	Unit Testing for valid submission and race conditions.	3 hours	Jenna

Acceptance Criteria

- Given that the UI is implemented correctly the user should be able to submit their availability from the calendar and have that data stored and used for other parts of the program.
- Given that an availability can no longer be selected due to time expiration or that it is claimed, when the user tries to view the event, then it should not be seen by any users and should not be available to claim.
- Given that an availability exists, when multiple users attempt to accept the available event, then only one user is given the event while an error appears for the other, indicating that the event requested is no longer available.

User Story 14

As an RA, I would like to be able to request to shift drops assigned to me in the face of any personal emergencies.

#	Description	Estimated Time	Owner
1	Create an option for requesting a shift drop when viewing the assigned shift.	2 hours	Samson
2	Implement sending requests to REA/REC's account, possibly via message notification or home screen notification.	3 hours	Jenna
3	Implement functionality to deny or approve a request, with or without a message.	1 hour	Jenna

4	Implement functionality for the RA who dropped a shift to select a shift of the person who picked up theirs (a duty switch rather than just a drop)	2 hours	Jenna
5	Debugging & Unit testing.	1 hour	Jenna

Acceptance Criteria

- Given that an RA views their assigned shift, they should be able to press a button to request an override from an REA/REC to drop/switch that shift.
- Given that an RA requests an override, notify the REA/REC.
- Given that an REA/REC receives the notification of a drop request, they should have the ability to deny or approve the request.
- Given that an RA has gotten their shift drop approved, they should select from the person who's picking up their shift's schedule so that they are trading duty and not one RA is taking more duty than another.

User Story 15

As an RA, I would like to be able to view shifts that are available due to late shift drops.

#	Description	Estimated Time	Owner
1	Implement a UI, like a board, that displays available shifts.	3 hours	Danielle, Lucas

Acceptance Criteria

- Given that the UI is implemented correctly, when the user clicks the dropped shifts tab, they will be shown all the newly available shifts.
- Given that the shift drop viewing functionality is implemented correctly, when the user is on the dropped shifts page, the total newly available shifts are updated in real time.
- Given that the UI is implemented correctly, when the user clicks a newly available shift, they should see more information on that shift.

User Story 17

As an REA or REC, I would like to approve of/confirm all RA schedules as well as accept or decline shift drops, depending on an RA's given reasoning.

#	Description	Estimated Time	Owner
1	UI for view of schedule requests and drops	4 hours	Samson, Lucas

Acceptance Criteria

- Given that an REA/REC accesses the system to manage RA schedules, they should be able read requests from the RA's for schedule changes or drops.
- Given that the REA/REC can read the request from the RA, they can choose to either approve the request or decline it.

- Given the approval or the denial, the RA is notified of the response from the REA/REC.

Remaining Backlog

Note: Current user stories are highlighted in this color

Note: User stories from Sprint 1 that need front end and back end connected, with both having functionality already implemented, are highlighted in this color

Note: Additional user stories to be implemented from Part 1

Functional Requirements

Account Management

As a user,

1. ~~I would like to be able to create my account~~
2. ~~I would like to login to my account.~~
3. ~~I would like to be able to reset my password.~~
4. ~~I would like to delete my account and all of its associated data.~~
5. ~~I want a dashboard where I can view relevant information, such as my display name, position, and work schedule.~~
6. ~~I would like to be able to edit my account details and set up more secure methods of authentication like logging in with social provider accounts (eg: Sign in with Google).~~
7. I would like to be able to specify my hall, such that I can search for other users in my hall.

As an REA or REC,

8. ~~I would like to be able to create accounts for RAs as needed and supply them with a temporary password to access it.~~
9. I would like to view at a glance the current status of RAs, e.g., active, inactive, unavailable.

As an REA,

10. I would like to be able to temporarily disable or delete accounts of the RAs.

As an REC,

11. I would like to be able to temporarily disable or delete accounts of the RAs and REAs.

Customization

As a user,

12. **I would like to be able to select from a variety of themes, allowing me to personalize my visual experience.**

13. **I want to be able to set notification preferences, allowing me to choose how and when I receive alerts about shifts, announcements, or other important updates.**

14. I would like to be able to reorient the layout of the widgets (e.g., calendar, tabs, taskbar, etc.) on my account.

15. I would like to be able to create a quick view of any key messages, shifts, or events I would like to see after I login.

As an REA or REC,

16. **I would like to have the option of creating a welcome page that outlines the rules of scheduling and a brief overview of the website, when I add an RA who is just starting their new job with us.**

Scheduling

As a user,

17. **I would like to be able to submit my availability to the scheduler.**

18. ~~I would like to add, edit, and delete my personal events.~~

19. ~~I would like to clear my schedule based on hour, day, week, or month.~~

20. **I would like to export my schedule for use on other calendar applications/websites such as Google Calendar.**

21. **I would like to be able to synchronize my schedule with an external calendar service such as Google Calendar or Outlook Calendar.**

22. **I would like to be able to download the schedule as a PDF.**

23. I would like to be able to schedule, change, and cancel meetings with other users.

24. **I would like to receive email notifications to be notified of schedule changes or upcoming events.**

25. **I would like to see whether or not an RA has clocked in for their shift.**

26. I would like to search for important events in my hall or other halls.

27. ~~I would like to customize the level of detail displayed on my calendar view, allowing me to toggle between daily, weekly, and monthly views based on my preference and workflow.~~

28. ~~I would like to be able to view future days, weeks, and months of the schedule.~~

As an RA,

29. ~~I would like to be able to indicate a preference for when to schedule certain shifts.~~

30. I would like to be able to select whether or not I can view and select conflicting shifts (i.e., I can access shifts which may overlap with my other events because I am unable to attend any other available ones).

31. I would like to be able to request to shift drops assigned to me in the face of any personal emergencies.

32. I would like to be able to view shifts that are available due to late shift drops.

33. I would like to be able to see which RA's are available on any given day (for duty switches, etc.).

As an REA or REC,

34. ~~I would like to set a minimum/required number of shifts each RA has to select.~~

35. I would like to approve of/confirm all RA schedules as well as accept or decline shift drops, depending on an RA's given reasoning.

36. I would like to create, edit, and delete events in bulk (blocking different shifts of certain intervals, e.g., 15, 30, 60 minutes, etc., within a certain time range) to make it easier to create events and shifts as they will be back to back.

37. I would like to assign time slots randomly to my RAs based on their priority such that the shifts can be distributed fairly while also accommodating for RAs with more time constraints.

38. I would like to be able to manually assign shifts to RAs.

39. I would like to be able to add special rules to shifts (e.g., certain halls, such as coeds, must have RAs of the opposite gender while performing certain duties).

40. I would like to view the number as well as the types of shifts completed by an RA.

41. ~~I would like to edit RA schedules (for last minute shift drops, etc.).~~

42. I would like the option to generate a daily, weekly, or monthly report detailing the shifts completed by RAs (e.g., hours worked, duties completed, absences, etc.).

Messaging

As a user,

43. I would like to chat with other users privately.

44. I would like to have access to a public chat of all users in the same residence hall.

45. I would like to be able to send hyperlinks or documents.

46. I would like my messages to be encrypted.

47. I would like to be able to see the most recent chat field at the top of the list.

48. I would like to be able to report inappropriate messages in the chat.

49. I would like the ability to delete individual messages from a conversation and to delete the message group itself.

50. I would like the ability to block other users from messaging in private or group conversation.

51. I would like to pin messages that I would like to save for future reference.

52. I would like to schedule messages to be sent in the future.

As an REA or REC,

53. I would like to set rules for spamming in group chats.

54. I would like to have an emergency response chat that will be visible on any page of the website when the emergency is active.

Non-Functional Requirements

Architecture

The website will be split into 2 layers: front-end and back-end. The front-end will be built using React, to give users a simple and easy to navigate interface. The back-end will be implemented with Java using the Spring Boot framework. We will be using SQL as our database to store information. We will be using REST APIs to connect our back-end with our front-end. For better performance, users should be able to store and access their data for at least a 6 month time period. Users will only be able to access messages from the past 7 days, unless older messages are pinned.

Security

We will be utilizing Auth0 to handle user authentication and authorization. This will provide a more secure and streamlined way for users to create and login to their accounts. We will also be using a framework (Spring Boot) that prevents SQL injections. To preventDoS/ DDoS we will be limiting the number of messages that a user can send in a conversation to 500 messages a day, the number of button clicks will be limited to 1 every 5 second during times of high traffic. We would also like to fix bugs within a 48-hour time period from when the bug was discovered, depending on the criticality of the bug.

Usability

To ensure usability, our front-end will adhere to essential design principles such as visual hierarchy, consistency, spacing and appropriate use of color. We will also make it more accessible to a wide range of users, with the website being able to operate 24/7 as well as being able to handle at least 1000 users at a time, to allow for high traffic. Furthermore, we will make sure the website is still user-friendly while using it from a mobile device. If time permits, there is a scalable option to expand to more universities. Additionally to increase accessibility, our

solution will include the option for high-contrast color schemes and accommodations for color-blind individuals.

Deployment/Hosting

We would like to host the website on AWS which will simplify our deployment and will mainly be hosting our front-end through the AWS service called amplify and we will be hosting the backend on the AWS service called Beanstalk. The database will be hosted using an AWS service called RDS. (We will try asking Purdue's hosting service to make things easier.) If time permits, we will be using Docker and Jenkins to build a CI/CD pipeline.