



ScheduSmart

Sprint 3 Planning Document

Team 30

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Sprint Overview

During this sprint, our goal is to complete all user stories, ensuring that ScheduSmart becomes a valuable product for our users. In addition, we wish to add some interesting and captivating features to appealing users.

Purpose

Reece Ausmus

Scrum Master

Reece Ausmus

Meeting Plan

We will meet weekly on Sunday at 5:00pm with our TA. We also will meet weekly on Wednesday at 7:00 pm and Saturday at 11:00am with just our team. Each meeting will be on Zoom.

Risks and Challenges

In this sprint, we are tasked with setting up an Nginx server for load balancing and reverse proxy, presenting a challenge as we have limited experience. Additionally, as this marks the final sprint,

all user stories must be completed with a visually appealing frontend, which is another challenge. Furthermore, we aim to incorporate unique and innovative features to set our application apart from similar products.

Current Sprint Detail

User Story #1

As a student, I would like to be able to prioritize my tasks.

#	Description	Estimated Time	Owner
1	Develop functionality that expands allows tasks to be marked with special tags.	3 hrs	Himanshu
2	Develop functionality that automatically sorts tasks based on priority.	1 hrs	Himanshu
3	Develop functionality that automatically prioritizes tasks of certain magnitudes.	1 hrs	Himanshu
4	Develop tests that ensure that tasks are correctly prioritized	1 hrs	Himanshu

Acceptance Criteria:

1. Given that the user does not mark any tasks, the system should still auto-prioritize tasks of a certain magnitude (due next day, workload > 8 hours, etc. etc.).
2. Given that the user does mark tasks, the system should not override their selected priorities with its own, giving the user more control over the prioritization system.
3. Given that the tasks are correctly prioritized, priority tasks should be displayed clearly in a visible appealing way. Upon sign-on, the task manager should briefly highlight tasks with priority markings.

User Story #2

As a user, I would like to be able to interact with an AI Chatbot that helps me prioritize and complete my tasks.

#	Description	Estimated Time	Owner
1	Set aside time to study the GPT API in order to	5 hrs	Himanshu

	be used in the task manager.		
2	Build a chat box that allows users to input text in a direct message-style conversation.	3 hrs	Himanshu
3	Integrate the GPT API into the chat-box, allowing users to converse with a helpful chat bot.	5 hrs	Himanshu
4	Develop tests that ensure the AI Chatbot produces valuable responses in reaction to assumed typical user input.	1 hrs	Himanshu

Acceptance Criteria:

1. Given that the user has used the chat box in the past, the user's chat history should be persevered between sign-ons, allowing users to view old chats.
2. Given that the user asks questions about the task manager, the GPT AI should be able to read task-manager data, and answer any pertinent questions relating to the task manager.
3. Given that the user asks questions not about the task manager, the GPT AI should reject those requests and direct the user to only asking questions about the task-manager to preserve program immersion.

User Story #3

As a team leader, I would like to email tasks to employees.

#	Description	Estimated Time	Owner
1	Develop functionality that allows users to select certain tasks to be emailed.	2 hrs	Himanshu
2	Develop functionality that formats selected tasks into a visually appealing email.	2 hrs	Himanshu
3	Develop functionality that allows users to send the tasks to multiple-emails, both BCC and CC	2 hrs	Himanshu
4	Develop functionality that allows users to write subject-lines, as well as a header for the email.	2 hrs	Himanshu

5	Develop tests that ensure that emails are sent to the correct address, and contain the correct information.	2 hrs	Himanshu
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Acceptance Criteria:

1. Given that the email-sender is implemented correctly, emails should be sent to the given emails in a visually appealing format, adhering to the selected BCC or CC options if multiple emails are provided.
2. Given that the email addresses presented are of the incorrect format, the system should reject the request and warn the user to provide valid email addresses.
3. Given that the subject-line and header are empty, the system should at least populate the subject line with a default, auto-generated subject line.

User Story #4

As a user, I would like to integrate my calendar with Zoom meetings.

#	Description	Estimated Time	Owner
1	Learn how to access Zoom API and integrate it with the backend.	5 hr	Reece
2	Include frontend input for adding zoom links.	2 hr	Reece
3	Add zoom information on the event details page.	2 hr	Reece
4	Test zoom links within events.	1 hr	Reece

Acceptance Criteria:

1. Given the user is creating an event, they should be able to add a link to a zoom meeting to the event details.
2. Given a user has added a zoom link to an event, they should be able to join the meeting from clicking the event in the calendar.
3. Given the user has added a zoom link to an event, they should be able to filter their events by ones with and without zoom links.

4. Given a user is sharing an event, the zoom link should be included with the event after the invitee accepts the invitation.

User Story #5

As a user, I would like to have a data dashboard that shows me miscellaneous data about my calendar usage.

#	Description	Estimated Time	Owner
1	Create frontend page layout to host data dashboard.	1 hr	Reece
2	Develop backend algorithms to collect, cull, and sort data into interesting information.	5 hr	Reece
3	Develop frontend to show data in clean and informative visual formats.	5 hr	Reece
4	Develop tests for the data collection and algorithms.	2 hr	Reece

Acceptance Criteria:

1. Given the user accesses the data dashboard and selects a time period, they should be able to see data about their events in that time period.
2. Given the user accesses the data dashboard, they should see the data in visual formats to facilitate easier understanding.
3. Given the user has no data in the selected time period, the data dashboard should show a clear message explaining why the data visuals are empty.
4. Given the user accesses the data dashboard, they should be able to export their calendar data and statistics in a downloadable format.

User Story #6

As a user, I would like to be able to create, read, update, and delete (CRUD) events.

#	Description	Estimated Time	Owner
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1	Create a system of storing events and tasks server-side.	3 hr	Reece
2	Create a simple format in the frontend for users to see event details.	2 hr	Reece
3	Test each CRUD operation individually.	2 hr	Reece

Acceptance Criteria:

1. Given a user is logged in and on the calendar, they should be able to perform any CRUD operation on an event.
2. Given a user is updating an event, they should be able to see if they have changes that are not saved.
3. Given a user clicks on an event in the calendar, they should see the event details in a simple visual format.

User Story #7

As a user, I would like to change the whole displayed text as my native language.

#	Description	Estimated Time	Owner
1	Building backend system to retrieve language settings	2 hr	Stanley
2	Write language.json file that translate all word to different language	4 hr	Stanley
3	Update code for language setting in frontend	3 hr	Stanley
4	Test if the language can be changed and make sure all word is translated	1hr	Stanley

Acceptance Criteria:

1. Given the user changes the language in settings, the UI should change it's language to the corresponding language user picked.

2. Given the user changes the language and logs out (or refreshes the web-page), the web should record the last language the user is using, so when the user comes back, the language will be set as what he or she used for the last time.
3. Given the new user creates an account, by default, the language should be English.

User Story #8

As a user, I would like to see my event on the calendar

#	Description	Estimated Time	Owner
1	Fix the issue event has null repetition type set	2 hr	Stanley
2	Fix the issue that event repetition was not parse correctly	3hr	Stanley
2	Fix the issue that multiple same event was created during create other event	2 hr	Stanley
4	Optimize the edit event function to update backend	2 hr	Stanley
5	Test if the event is displayed on the calendar correctly	1 hr	Stanley

Acceptance Criteria:

1. Given the user creating a event, the repetition type of the event should be set to the repetition type user selected, so that null will not appear
2. Given that when any event is created, it will not change other events but itself only.
3. Given a event is set correctly, the calendar should parse the repetition type as expected into the calendar
4. Given the user update or delete event by click events on the calendar, it should also modify the backend without changing other event

User Story #9

As a user, I would like to add other account as my friends and able to manage my friend list

#	Description	Estimated Time	Owner
1	Build the chat box and friend list user interface	3hr	Gloria
2	Implement function of sending messages	5hr	Gloria
3	Help to import the AI chatbot to the chatbox	3hr	Gloria
4	Update and fix create account's function bug in creating empty account. Optimize display UI and it's path to backend	3 hr	Stanley
5	Adding create account limitation of same username	1 hr	Stanley
6	Adding add, stored, delete, and search friend function in backend	2 hr	Stanley
7	Adding friend request function in backend	1 hr	Stanley
8	Adding add and stored message chat room and parsing function in backend	2 hr	Stanley

Acceptance Criteria:

1. Given a user is creating an account with a username that is already being used, the system will reject the request and indicates user to change a user name
2. Given a user <the way user open the chat box>, he or she can view all his or her friend in the list
3. Given a user search an account, he or she can send a friend request to the account, the the account can decide to either accept or decline the request
4. Given a user declined a friend request from an account, the user will not receive a message (except friend request) from the account.

User Story #10

As a student, I would like to have a small notebook to record things I have done in the past as a reminder (finished assignments, meetings, etc.)

#	Description	Estimated Time	Owner
1	Create a button to redirect to the notebook page	1 hr	Cassie
2	Create a notebook to list all the completed thing in the past	3 hr	Cassie
3	Create a button allowing users to add things they have done in the past and things will be shown on the screen	3 hr	Cassie
4	Create a popup window allowing users to enter email address to send email to someone	2 hr	Cassie
5	Send these completed things as email to someone	2 hr	Cassie
6	Create unit tests to ensure that the notebook list all the finished	2 hr	Cassie

Acceptance Criteria:

1. Given users click on the notebook button, the page would be redirected to the notebook page.
2. Given the notebook designed correctly, when users see the notebook page, users can have a glimpse about what they have done.
3. Given users press the adding button, users can add things they have done, then the things will be listed with other completed things.
4. Given the user enters an email address in the popup window, all the completed things will be sent to someone.
5. Given that the unit tests are designed correctly, when we run unit tests, we can find that all the finished things will be listed on the notebook page .

User Story #11

As a student, I would like to find the closest available time (15-minute meeting, etc).

#	Description	Estimated Time	Owner
1	Create a UI pop-up that allow users to enter the amount of time they want	2 hr	Cassie
2	Create a button allowing users to add event at that time	1 hr	Cassie
3	Send email to users to notify them	3 hr	Cassie
4	Create a unit test to check if the firebase has the record of closest available time just added	1 hr	Cassie

Acceptance Criteria:

1. Given that users want to find the closest available time, then the time displayed in the windows should be the closest available time.
2. Given that the button in the UI pop-up is implemented correctly, when the users press the button, then an event can be added on the closest available time.
3. Given that users choose to add the closest available time, they will be notified by emails.

User Story #12

As a user, I would like interactive web tours to help me be familiar with the functions of ScheduSmart.

#	Description	Estimated Time	Owner
1	Create additional interactive web tours to introduce some important features of our application to new users and only people who log in first time will see the tours	2hr	Cassie
2	Create unit tests to check whether the tours work successfully.	2hr	Cassie

Acceptance Criteria:

1. Given that users log in to our application, the interactive web tours will automatically show up and guide users to be familiar with the important functions of our application.
2. Given that users see the tours, the instructions of each tour can be as detailed as possible so that users can fully understand what it means
3. Given that users who have already logged in log in again, they will not see the tours
4. Given the unit test is implemented correctly, jest will report the overall test results and it can be shown on Jenkins pipeline

User Story #13

As a user, I would like to color coordinate my schedule.

#	Description	Estimated Time	Owner
1	Set a select list in settings page that allows users to choose they preferred color of the system	4hr	Gloria
2	Set a button in event and task detail pop-up so that users can choose the color of display of events	4hr	Gloria
4	Create a unit test to check if the users can change the color smoothly	1hr	Gloria

Acceptance Criteria:

1. Given that users choose a color in the settings page, the system will be displayed in the chosen color.
2. Given that users click the color button in the event detail pop-up, the events will be shown in the chosen color on the calendar.
3. Given that unit test is implemented correctly. A alert window will appear to show the error message.s

User Story #14

As a user, I would like to set up reminders for my events and tasks.

#	Description	Estimated Time	Owner
1	Create a UI pop-up to display the information of events and task	3hr	Gloria
2	Create a button that allows users to turn off the reminder after being notified	1hr	Gloria
3	Implement email notification	5hr	Gloria
4	Create a unit test to check if the reminders are set properly as expected	1hr	Gloria

Acceptance Criteria:

1. Given that users set reminder methods and time properly, they will be notified in an expected time by email or window message.
2. Given that users click the button in the pop-up, the message window will no longer be displayed allowing them to proceed with their tasks without the message window blocking their view.
3. Given that users choose email notification, they will be reminded of the details of events and tasks by email.

User Story #15

As a user, I would like to set and track daily calorie consumption goals and track my progress.

#	Description	Estimated Time	Owner
1	Create new functionality to track goals on habits page.	4 hrs	Bradley
2	Create a new UI component to insert/delete new goals.	1 hrs	Bradley
3	Create a new visualization component that tracks goal progress as new food items are added.	3 hrs	Bradley

4	Add a new UI component that displays all previously completed or failed goals.	2 hrs	Bradley
5	Add extra data visualization options for the calorie tracker, such as Bar Graphing capabilities.	3 hrs	Bradley
6	Create a unit test to ensure that all graphing capabilities are updated correctly.	1 hrs	Bradley

Acceptance Criteria:

1. Given that a user inputs a goal onto the habits page, it will populate and remain present until the user decides to remove it.
2. Given that a user fails one of their goals, it will be placed into the “failed goals” section, and vice-versa if they succeed in completing their set goal.
3. Given that a user toggles Calories and Carbs on the habits page, the appropriate bars for each will populate in the graph section.

User Story #16

As a user, I would like to have the ability to access my profile and account settings through an icon in the dashboard UI.

#	Description	Estimated Time	Owner
1	Update Dashboard UI to have a profile icon button with dropdown menu.	2 hrs	Bradley
2	Move logout and account settings navigation buttons into the profile dropdown.	1 hrs	Bradley
3	Create a unit test to ensure that all navigational functions work as expected.	1 hrs	Bradley

Acceptance Criteria:

1. Given a user clicks on their account icon, a dropdown menu will open with the necessary fields.

2. Given a user chooses to click on any other navigable buttons, they will navigate to the required destination.
3. Given a user is unsure of the page that they are currently on, the dashboard will indicate this information clearly.

User Story #17

As a user, I would like to be able to keep a record of my daily exercise, and have this be accounted for in my daily health recommendations (calories). I would also like to be able to export my daily exercise as a CSV.

#	Description	Estimated Time	Owner
1	Create new functionality to track exercise on the Habits page.	4 hrs	Bradley
2	Create a new UI component to insert/delete new exercises.	2 hrs	Bradley
3	Include the exercise calories burned calculation value in the goals: Remaining: (Goal - Food + Exercise)	3 hrs	Bradley
4	Incorporate CSV exporting for any added exercises.	2 hrs	Bradley
5	Create a unit test to ensure that all graphing capabilities are updated correctly.	1 hrs	Bradley

Acceptance Criteria:

1. Given that a user inputs an exercise on the habits page, it will populate the table and remain present until the user decides to delete it.
2. Given that a user adds an exercise to their table, if they have any goals set already, or set goals in the future, their calculated calories burned will be taken into account for their calorie goals.
3. Given that a user chooses to click the “export as CSV” button, their daily exercises will be downloaded in CSV format.

Hours Summary

Reece Ausmus: 30 hr

Cassie Chang: 30 hr

Stanley Huang: 30 hr

Bradley Norris: 30 hr

Himanshu Sinha: 30 hr

Gloria Xu: 30 hr

Sprint 2 - Incomplete User Stories

User Story #6

As a user, I would like to be able to create, read, update, and delete (CRUD) events.

#	Description	Estimated Time	Owner
1	Create a system of storing events and tasks server-side.	3 hr	Reece
2	Create a simple format in the frontend for users to see event details.	2 hr	Reece
3	Test each CRUD operation individually.	2 hr	Reece

Acceptance Criteria:

4. Given a user is logged in and on the calendar, they should be able to perform any CRUD operation on an event.
5. Given a user is updating an event, they should be able to see if they have changes that are not saved.
6. Given a user clicks on an event in the calendar, they should see the event details in a simple visual format.

This user story had many bugs after Sprint 2. It needs to be mostly rewritten and cleaned up.

Remaining Backlog

~~Strike Through~~—Complete user stories

Functional:

1. Introduction:
- ~~2. Login system:~~
 - ~~2.1. As a new user, I would like to create a new account~~
 - ~~2.2. As a user, I would like to login and logout into my account~~
3. Calendar system:
 - ~~3.1. As a user, I would like to add events to my calendar.~~
 - ~~3.2. As a student, I would like to add my homework deadline to the schedule.~~
 - ~~3.3. As a student, I would like to schedule time to study for tests with recurring events.~~
 - ~~3.4. As a student, I would like to find the closest available time (15-minute meeting, etc).~~
 - ~~3.5. As a student, I would like to see when I have no class (festival or break).~~
 - ~~3.6. As a student, I would like to manage time schedules before the start of a semester to smooth the course enrollment procedure, such as scheduling class times and breaks.~~
 - 3.7. As a student, I would like to have the calendar automatically schedule time to complete homework.
 - 3.8. As a student, I would like to type my schedule or tasks into a chat box and have AI schedule my day for me.
 - ~~3.9. As a student, I would like to be able to list times for exams.~~

- 3.10. As a student, I would like to receive suggestions for optimal study plans and breaks.
- 3.11. As a student, I would like to receive notifications about deadlines and exams.
- 3.12. As a user, I would like to add locations to my events using text or a map feature (i.e., Google Maps).
- ~~3.13. As a student, I would like to attach documents/files to my tasks.~~
- 3.14. As a student, I would like to see the weather and have it impact my AI-generated schedule.
- 3.15. As a user, I would like to add other account as my friends and able to manage my friend list
- 3.16. As a student, I would like to share my schedule with teammates to find an available time slot for meetings.
- ~~3.17. As a user, I would like to be able to add a repeatable event (sprints, meetings, etc. etc.)~~
- ~~3.18. As a worker, I would like to mark a period as “working time” for every week, including commutes, and “out-of-office” time.~~
- ~~3.19. As a user, I would like to visualize my calendar in different formats (day, week, month, etc.)~~
- 3.20. As a user, I would like the calendar home page to be simple and not overwhelming while including pertinent information, such as the date and time.
- ~~3.21. As a user, I would like to create different calendars that I can turn on and off individually.~~
- 3.22. As a user, I would like to drag and drop events in my schedule.

- ~~3.23. As a user, I would like to change my time zone.~~
- ~~3.24. As a user, I would like to be able to navigate the schedule with keyboard shortcuts without using the mouse.~~
- 3.25. As a user, I would like to adjust what time my schedule starts and ends, essentially scheduling when I am sleeping.
- 3.26. As a user, I would like to see what time of day it is in relation to my events.
- 3.27. As a user, I would like to see a quick view of my calendar without being overwhelmed with all features.
- 3.28. As a team manager, I would like to have a meeting with all the team members when all of them are free.
- 3.29. As a nurse, I would like to have all patients' dosing time (with constant intervals)
- 4. Assignment tracker:
 - ~~4.1. As a student, I would like to have an assignment tracker.~~
 - ~~4.2. As a user, I would like to view my calendar and assignment tracker.~~
 - 4.3. As a student, I would like to be able to prioritize my tasks.
 - ~~4.4. As a student, I would like to add assignments to the assignment tracker.~~
 - ~~4.5. As a student, I would like to track progress on my assignments and see how much time I have planned to work on them.~~
 - ~~4.6. As a student, I would like to sort my assignments based on due date, creation date, class, type, etc.~~
 - 4.7. As a user, I would like to set and track long term goals.
 - 4.8. As a user, I would like my to-do list tasks to synchronize with calendar events if toggled.

~~4.9. As a user, I would like to mark work done as completed.~~

4.10. As a user, I would like to see the statistics of tasks at certain times.

4.11. As a team leader, I would like to email tasks to employees.

4.12. As a user, I would like to be able to interact with an AI Chatbot that helps me prioritize and complete my tasks.

5. Settings:

5.1. As a bodybuilder, I would like to add the daily calories I have.

5.2. As a student, I would like to see statistics on my productivity at certain times.

5.3. As a bodybuilder, I would like a summary of how I work on it (total and average per month).

5.4. As a user, I would like to have a modular, customizable home screen.

5.5. As a user, I would like to set up reminders for my events and tasks.

5.6. As a user, I would like to invite other users to my events and see events I am invited to.

~~5.7. As a user, I would like to have access to a complete settings page and a create-account page with the same style.~~

5.8. As a user, I would like to color coordinate my schedule.

5.9. As a user, I would like to change the whole displayed text as my native language.

6. Misc:

~~6.1. As a student, I would like to be able to take notes.~~

6.2. As a student, I would like to be able to put a to do list aside for convenience.

6.3. *As a student, I would like to have a small notebook to record things I have done in the past as a reminder (finished assignments, meetings, etc.)*

- 6.4. As a student, I would like to be able to import assignments from Brightspace, Canvas, or Blackboard.
- 6.5. As a user, I would like to be able to connect Google Calendar to this calendar.
- 6.6. As a user, I would like to export my schedule to a printable format.
- 6.7. As a user, I would like to track daily habits that I set up, e.g. 5 mins of reading, 10 mins stretching, and cook 3 meals.
- ~~6.8. As a user, I would like to see the weather.~~
- 6.9. As a boss, I would like to have all workers see the schedule but unable to change it.
- 6.10. As a team manager, I would like to have my team members drop down what they have done for the project in the past.
- 6.11. As a team manager, I would like to have a chart (summary) on how each team member processes their job.
- 6.12. As a team leader, I would like to receive automated progress reports from the team.
- 6.13. As an employer, I would like to see when my employees will be out of the office.
- 6.14. As an employer, I would like to have the ability to accept or deny time-off requests that employees submit.
- ~~6.15. As an employee, I would like to schedule when I will be out of the office.~~
- 6.16. As an employee, I would like to quickly send meeting invites to coworkers.
- ~~6.17. As an employee, I would like to integrate my calendar with Zoom meetings, such as creating a meeting from the calendar, joining a meeting from the calendar, and getting notifications from the calendar about my meetings.~~

- 6.18. As a dietician, I would like to track my daily calories and water intake.
- 6.19. As a software engineer, I would like to add a scrum framework to my schedule
- 6.20. As a software engineer, I would like to upload design pdfs to the notebook section
- 6.21. As a software engineer, I would like to integrate my notebook with Github, including adding milestones to my calendar and receiving notifications from the calendar when someone pushes to a repository.
- 6.22. As a writer, I would like to keep my drafts organized with a simple file management system and events on the calendar when I update a draft.
- 6.23. As a writer, I would like to keep different notebook entries organized with folders/tags

Non-Functional:

Performance

To ensure our users have a positive experience using our website, our server response time must be within 600 ms.

Scalability

Because we have great ambition to make our product available to many people, we employ Nginx, known for its ability to handle large numbers of concurrent connections, and expect that it can handle up to 500 simultaneous requests. What's better, we will also try to enable short-term caching by setting up the Nginx configuration to allow more concurrent requests per second. If time allows, we may try to apply Proxmox to realize horizontal scaling by creating more than one server to support our service.

Security

For ScheduSmart, we place emphasis on customer privacy, thus designing several mechanisms to protect precious information. First of all, we will prevent SQL injection by using parameterized statements, escaping special characters, etc. Also, users' passwords will be encrypted through password encryption functions provided by the database, such as scram with sha256 so that we can shield our consumers from man-in-the-middle attacks for our users. Moreover, even on our server side, we cannot know the passwords since they are stored as ciphertext. Besides, we also need to deal with cross-site scripting when working on our front-end and back-end pages. To achieve this, we would be careful with HTML tags and configure CSP properly for our Nginx web server. What's more, we will also let the Nginx server manage a reverse proxy to protect our server. If time allows, to thoroughly ensure our web security, we will take advantage of OWASP ZAP to do penetration testing.

Usability

To make it easier for our users to get started with ScheduSmart, we have figured out several requirements for the development team to help our consumers. On the one hand, we should design interactive web tours so that users can be more familiar with our functions and know how to use them by the step-by-step instructions. On the other hand, we will design a user-friendly interface and find more than 6 participants to use our applications and share their user experience with us to help us improve our products. If time allows, we can write a step-by-step user guide on Medium to make sure that our users know how to use this application.

Maintainability

~~As for maintainability, developers have to use Jenkins and Git to do version control and CI/CD allowing us to efficiently maintain our web.~~ Besides, we should pay attention to error handling

so that the developer who is responsible for maintaining this application can easily know which part causes errors from the clear and concise error messages at once.