San Francisco State University

SW Engineering CSC 648 - 848

Milestone 1 Submission Form

Section 04 Team 7

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MyDay

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History Log

Revision ID	Revision Date	Revised By
1	10/03/2022	Nya Bautista
2	12/04/2022	Nya Bautista

1. Executive Summary:

Previous studies say that it takes 21 days to develop or change a habit. Recent studies show that developing a habit or routine could take up to 66 to 254 days. As college students, we understand the struggle of balancing the academic workload while also maintaining a work-life balance. Every college student has their own schedule in addition to their own goals that they would want to meet at the end of the semester or academic year, but sometimes it isn't easy to remember these goals if they are just trying to finish the semester. A college student's schedule is constantly changing. MyDay is the new innovative, multi-functional scheduler for busy students at San Francisco State University. Our team at MyDay strives to utilize the functionalities of a calendar while taking into consideration implementing these long-term goals that may be forgotten in the future. MyDay is the first step that will implement and cater to any schedule change that is happening.

Every individual college student is different, the first step the application will ask is for the user to plug in the recurring schedule they know is consistent. For example, their class schedule, workout schedule, etc. The application will implement the schedule that has been established and proceed with certain suggestions that may be applicable to the user's day. Our team at MyDay strives to create a schedule that works for every user and their goals, short-term or long-term. Let's say that a student at San Francisco State University isn't able to find a class. MyDay will recommend certain classes that fit certain criteria in the Gator Scheduler that won't interfere with the schedule the user already has. Additionally, as the semester kicks in and the workload increases, it is inevitable that school can become overwhelming and become an impediment to one's own well-being.

While creating a schedule that works for the user, we also want to help the user not forget simple tasks such as eating a good meal or taking some time for their own mental health. With MyDay, the application can recommend eateries within the university that work within the gaps of the user's schedule. We believe that MyDay will help students in a greater sense than being a personal calendar or scheduler. MyDay will help its users to not only maintain and sustain a good work and academic schedule but be able to achieve their goals. When setting up their schedule, MyDay will ask their users if there are any long-term or short-term goals they wish to accomplish. The application will then set a time within the gaps of the user's schedule to set a small amount of time for the user to gradually meet their goal without feeling overwhelmed. Work schedule creator, Gator Scheduler (Finding a class that can fit your schedule)

Although MyDay sounds like the usual calendar application, we strive to combine the utilization of calendars, online directories, and well-being applications to cater to our users' own personal lives. Our team at MyDay has experienced the struggles of work-life balance in college. We have observed our own colleagues around campus and noticed that maintaining a work-life balance is vital to creating a great college experience.

2. Personas and User stories:

1. **User Jessica Sims**

    Major psychology
    Year sophomore
    Full-time student
    Part-time employee
    Lives off-campus
    Works off-campus
    Comes to campus 3 days a week (MWF)

- Bio

    Jessica came to SFSU right after High School. She is finishing her second year at SFSU, however, due to the pandemic, it is her first semester on campus. She enjoys trying new foods and wants to meet her fellow gators as she does not know anyone at SFSU yet. Due to working part-time, she does not have a lot of spare money to spend.

- Wants & Needs

    -wants to try many of the different eateries at sfsu 4th
    -wants to get a chance to meet others on campus 2nd

- Frustrations

    -works and lives off-campus so has time constraints on what she can do 3rd
    -little free money to spend on food or activities. 1st

- Tech

    Internet ****
    Social Media *****
    Online Shopping ***
    Gadgets **
    Early adopter *

2. **User Jon Greene**

    Undeclared
    First Year
    Part-time student
    Full-time employee
    Lives off campus
    Works off campus

- Bio

  John is a first-year SFSU student who worked after high school but went to college for the first time, 30 years later. He has a well-paying career as a train operator but wants to experience college life and get a college degree. He is part-time at SFSU due to working full-time. He has enough cash to spare for adding events to his schedule. He is off from work two days a week and his days off are on the weekdays.

- Needs & Wants
  - Wants to explore majors by getting some insight from other students
  - Explore locations around the area that other students are interested in
- Frustration
  - Has trouble deciding what events to add to his schedule.
  - Has difficulty keeping track of schedules outside of work
- Tech
  - Basic web browsing and navigating through web pages
  - Familiar with calling, texting, and using the weather app on the phone
  - Does not have social media

3. User Sofia Williams

Major Graphic Design
Year Senior
Full-time student
Lives off-campus

- Bio

  Sofia is a senior at SFSU and is a semester away from graduating. Her current classes have been very demanding and most involve group work. Most weekdays she has a 1-hour commute to campus stays for her classes and group meetings, then goes straight home to work on her assignments. Because of this, most of her free time is anytime she has finished her assignments and a couple of hours on the weekends.

- Wants & Needs

  -wants to have more free time during the weekdays
  -wants to not have to rush everywhere
  -needs to have a timetable/schedule to keep track of classes/assignments/group meetings

- Frustrations
    - not enough free time to relax/do hobbies
    -stressed because of constant deadlines

- Tech
    -Comfortable with the Internet + Social Media
    -Familiar with a smartphone
    -Can easily adapt to new tech

4. **User Hubert Dubert**
    Major Mathematics
    Year Senior
    Part-Time Student
    Part-Time Employee
    Lives off campus
    Works off campus

Bio

Hubert is a Senior at SFSU and is growing impatient to graduate. All of his classes are on only two days of the week, on both of those days, Hubert will be at SFSU for the majority of the day and has variously timed gaps between classes. Hubert works 3 days outside of class days, his work schedule can be hectic, and often comes home tired. Aside from work and school, he wants to have time with friends and time for himself.

Wants & Needs

- organized and consistent scheduling to be able to accomplish everything he needs to do during the week/month
- places to be between classes that aren't too far from where he needs to be next
- flexibility in his schedule to accommodate last minute changes and opportunities

Frustrations

- forgets certain tasks and deadlines when stressed
- doesn't have energy to plan socializing and studying

Tech

- has a smartphone and can use it
- no social media
- is willing to learn

5. **User Bella Jones**
    Major Art Education

Minor Gender Studies
Year Junior
Full-Time Student
Part-Time Employee
Lives off campus
Works off campus

- Bio
  Bella is a third-year student at SFSU. Due to the pandemic, she wasn't able to live on-campus her first year so she's making up for living the most out of her college experience this year. Additionally, while learning virtually she became behind in her degree progress so she is taking more classes this semester. While taking 18 units, she has also joined two student organizations, BSU and PACE, to broaden her network. Over the weekends, she works at a nearby boutique. Bella wants to be able to balance her work-life schedule while also still maintaining healthy eating habits and implementing a workout schedule.

- Wants & Needs
  - Organized schedule to remember her classes, club events, and work schedule
  - A healthy, balanced lifestyle
  - Recommendations of where to eat in between classes

- Frustrations
  - Overworked, unbalanced schedule
  - Outside of the school week, she tends to spend too much time on her phone
  - Poor sleep schedule

- Tech
  - Smartphone, Laptop at home
  - Frequently on Social Media
  - Loves new applications

3. Data Definitions:

Users
-sfsu id
-password
-name
-major

-class schedule(maybe a list of classes)
-work schedule
-other events
-daily cumulative schedule/or availability - bit array stored as an integer
-goals

The user is the person using the app because we want to let users have a personalized MyDay we need to keep track of different users. A password is set to stop other users from editing other's MyDay. Class schedule is used to guess where the user is on campus at a given time and where they will need to be; this will be used to create personalized suggestions for users. Other events are for times when the user has something to do at a time that is not class or work, for example, a doctor's appointment or club meeting. A cumulative schedule is a comprehensive schedule of a day to show when a user has free time. Goals are what a user wants to do but don't have a specific time or date they want to do them.

Time mapping of SFSU locations to other locations (i.e. business building to student center 5-minute walk)

All buildings to a time
This is used to track how long it takes to get from one place to another in order to make sure that suggestions to a user are reasonable and fit a user's schedule. For example, if a user has a half-hour break between classes a suggestion requires going to a building that is thirty minutes away from the first class and ten minutes away from the second class the student would be late for class following this suggestion.

Places of interest
-name
-location
-price
-type(food, club, event…)
-average time to complete(how long it takes to order…)
-open time
-close time
Things that may be suggestions for a user. Location and average time to complete is used to make sure a user has the time to visit a place of interest. Price to show how expensive it is to do this for tailoring suggestions. The type will help tailor suggestions to match a user's preferences. Open and close time so a user doesn't take go when it is not open.

Classes
-class name

-class id
-section #
-start time
-end time
-day(s)
-location
-preferences(i.e. before this class I want to have coffee or lunch)

As SFSU is a school one of the most important things a user will have taking up their time is classes. Class name and section number are used to identify the class. Start and end time show the time a class takes. Days are what day the class takes place. Location show where a class takes place. *Preferences help tailor suggestions to a user.*

Events

-Name of event
-start time
-end time
-duration
-start date
-end date
-location
-time to reach
-tags
-preferences

Events and work schedules may change so they need to be adjustable. Start time, end time, and date show the time slot work or an event takes up on that date. Location: an on-campus location or off-campus. Time to reach is for off-campus locations to make sure suggestions will fit a user's schedule. *Preferences help tailor suggestions to a user.*

Preferences

-ID
-when (before this, after this)
-what (coffee, pasta, gym, see event)
-repeat(never, always, once, on Mondays)

Preferences are a way to tailor suggestions to a user's preference. They are a part of classes or events or work schedules so a user can decide what they want to do relative to their schedule. When shown at what time relative to an event, what allows select types of places of interest you want to hear about. Repeat is how often you want to repeat a type of suggestion relative to a class.

Goals

-type
-priority
-event
-recurring
-status

Type is what kind of thing a user wants to do, like have coffee. Priority if it can only happen once a semester, like a school event like a homecoming, on the day it happens the priority goes up. Event allows it to be connected to specific events. Recurring is how often you want to do a goal. Status shows how often a goal has been accomplished.

4. Functional Requirements:

1. Scheduler: Users can input their class, work, and other events to be organized and displayed. Events can be singular or recurring and can be viewed and organized in a convenient fashion. Users will be able to filter out the criteria they would want to implement in their schedule. Users will be able to add or change events. – high priority
    a. Helpful for all user personas
    b. Reference - Jessica Sims
2. Accounts: Users can make their own account, be able to log in with their email id and password, and log out. -high priority
    a. Helpful to all personas
    b. Reference - Hubert Dubert
3. Map: Users can view a map of SFSU that shows where their classes are as well as locations for them to visit in between classes to rest/eat/study/socialize
    a. Sofia Williams could benefit from the map since she has to commute and is not too knowledgeable with the campus.
    b. John Greene would also benefit from the map because as a first year, this would help him familiarize himself with the campus.
4. Suggested Events: MyDay can suggest events or goals at a certain time if there is availability in the user's schedule – high priority
    a. Helpful to all user personas
    b. Bella Jones and Sofia Williams would benefit from this to help balance out their schedules for their different goals.
5. Display: Users will be able to view their schedules in daily, weekly, and monthly formats. – medium priority
    a. Helpful to all user personas
    b. Reference - John Greene

5. Non-Functional Requirements:

1) The application will be optimized for browsers such as Chrome, Safari, and Mozilla Firefox.
2) Data shall be stored in the team's chosen database technology on the team's deployment server, Google Cloud.
3) Application shall be easy to use and intuitive by taking users' input on their schedule.
4) The code in the master branch of the team's GitHub repo should be well maintained and guaranteed to work at any time.
5) Modern Software Engineering processes will be used as specified in class.
6) The best practices will be implemented for security purposes.
7) The language used for this application will be English.
8) The application will support mobile phone screens.
9) MyDay will not exceed the storage space available on Google Cloud.

6. Competitive Analysis:

Find 3-4 competitive features against existing solutions which are available in the market. Present competitors' features vs. your planned ones. First, create a table with key features of competitors vs. yours planned, at only a very high level, 5-6 entries max. After the table, you must summarize in one paragraph what are the advantages of your planned product to what is already available.

	SFSU Student Center	Google Calendar	Notion	Productive	MyDay
User Input	+	++	++	++	++
Schedule Recommendations	+	-	-	+	++
Goal Tracker	-	-	+	++	++
Relative Distances	-	-	-	-	++
Login Function	++	++	++	++	++

MyDay will take the advantages of regular calendar applications and combine it with the goals the user wants to accomplish. As opposed to other applications that are commonly used for college students, MyDay will act on the recurring to-do lists that add up throughout the day. MyDay will combine the simpleness of Google Calendar, the usability of Notion, and the

consistency of Productive.io to create a “one-stop shop” for college students trying to get their lives in order. Our team understands the struggles of multiple schedules and tasks piling up, but MyDay will give constant recommendations to help them set their schedule and set times for other activities such as homework, events, and social balance. MyDay will combine the already available accommodations into one application that will be simple and easy to use and learn.

7. High-Level System Requirements:

Server Host: Google Compute Engine 1vCPU 2 GB RAM
Operating System: Debian 5.10/136-1
Database: MongoDB 6.0
Web Server: Caddy v2.5.2
Server-Side Language: Javascript
Web Application Framework: Express
Additional Technologies: React, Freenom, Github, SSH, NPM Modules
IDE: VS Code
Prototyping: Figma

8. Team/Study Plan:

Nya Avelina Bautista – Team Lead
Paula Abigail Tam – Front End Lead
Christine J’Ursey – Back End Lead
Henry Cai – Github Master
Francis Ranallo – Scrum Master

Study Plan: Christine & Paula

- In our discord server, we have set separate channels for our study plans that will take place throughout the semester. These channels are for certain technologies we may not have much experience with. The front-end lead and back-end lead will utilize these channels to leave resources that would be helpful for the team to use in our application. The team will then look at these resources before the next meeting and we will discuss any questions or ideas that have come up while looking at these resources.
- In our Monday meetings, we will discuss our progress and ideas that should be implemented into our project. From that discussion, the front-end lead and back-end lead will use these ideas to look for resources that would be helpful for us to learn from. Throughout the week, the team will send out resources for us to look at and study. When we meet on Fridays, we discuss our findings and the questions we may have about the resources sent.

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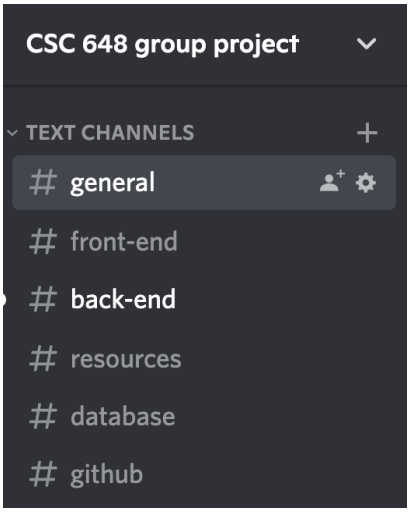

9. Checklist:

- Team found a time slot to meet outside of the class - DONE
- Scrum Master shares meeting minutes with everyone after each meeting. - DONE
- Github master chosen - DONE
- Everyone sets up their local development environment from the team's git repo. - DONE
- Team decided and agreed together on using the listed SW tools and deployment server - DONE
- Team ready and able to use the chosen back/front-end frameworks. - DONE
- For each technology (front/back-end/DB/cloud), the team decides who will lead the study of each technology and what will be the output of the (feasibility) study within one month. - DONE
- If you list a detailed study plan for this, earn an extra point! - DONE
- Team lead ensured that all team members read the final M1 and agree/understand it before submission - DONE