

SDP: 402 Senior Project - USchedule

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NOTE: Parts of this document have not changed, and are taken from 401 (SDP) Software Development Document

4.1 Plan Introduction

This Software Development Plan provides the details of the planned development for the USchedule Web Application which provides an application to generate work schedules for employees in an organization. We are specifically focusing on the LAC+USC Psychiatry Residency program as our organization and are working with Chief resident Dr. Kelly Jones.

The application will take the residents' preferences and then generate a call schedule by the constraints given to us by the administrator, Dr. Jones. The purpose is to make scheduling efficient and simple.

As part of development, we will continue to work on making an optimal algorithm that satisfies all of Dr. Jones' constraints. We will design more mockups to make a visually pleasing graphical user interface, and then implement these on the front end. We will continue to add to the database and work on connecting it with the front end. We will determine how we would like to launch our final product and deliver it to Dr. Jones.

4.1.1 Project Deliverables

- D #01: Project Proposal Document and presentation (Week 3)
 - Includes description, which provides a high-level overview of the project, compares it to any software programs already in existence, lists its most important features, and discusses the hardware and software it requires, and justification which explains the reason for the project and why it is appropriate for this class.
- D #01: Requirements specification Document (Week 5)
 - Captures the low-level requirements for the project and elaborates on the details of the contract between the instructor and the students.
- D #02: Initial Development Schedule (Week 5)
 - Includes all of the tasks which will occur during development
- D #03: Written Status Report in SDF (Week 7)
 - Gives an update on what we have accomplished with our project and what we are planning to accomplish in the coming weeks
- D #04: Oral Status Report (Week 8)

- In class update on where we are in our project development and any road blocks we would like assistance with
- D #05: Software Development Plan OR Software/Database Design Description Document OR Software Test Plan/Test Procedure Document (Week 8)
 - Describes the process that will be used to produce all required documents and software
 - Includes the Initial Project Schedule
- D #06: Software Development Plan Document (Updated) OR Software/Database Design Description Document (Updated) OR Configuration Management Plan Document (Week 11)
 - Updates on the description of the process that will be used to produce all required documents and software
 - Details all of the different parts of the software, hardware, and organization for the project
- D #07: Software Development Plan or Software Design Description (Re-submitted) (Week 12)
 - Updates to these documents and changes suggested by the professor
- D #08: Requirements Specification Document (Re-submitted) (Week 13)
 - Updates to the requirements of the project and details of the contract between the instructor and students
- D #09: Preliminary Demonstration Presentation (Week 13-15)
 - Demonstration of our project and work
- D #10: Written Status Report in SDF (Week 13)
 - Status report discussing where we are at with our project and any final tasks needed to be completed before the final presentation
- D #11: Preliminary Version of the Poster (Week 14)
 - First draft of the poster submitted for feedback from the professor
- D #12: Written Status Report in SDF (Week 15)
 - Status report discussing where we are at with our project and any final tasks needed to be completed before the final presentation
- D #13: Final Product Delivery and Final Project Presentations (Week 16)
 - Final Demonstration of the project and the work accomplished throughout the semester.

4.2 Project Resources

4.2.1 Hardware Resources

- Machines
 - Computer with following capabilities:
 - Pentium processor at 90 MHz or higher
 - Minimum 10mb hard drive space
 - Minimum 16mb of RAM

- 800x600 256 Colors Display

4.2.2 Software Resources

- Text Editors
 - VS Code v1.38 and up
- Compilers
 - Terminal
- Third party software
 - LMU Build
 - MySQL
 - Trello
 - Google Drive
 - Sketch
- Operating systems
 - MacOS Mojave 10.14 and up

4.3 Project Organization

Since we are still working in a group, this will be how we will continue to divide up the roles and responsibilities.

Backend, databases

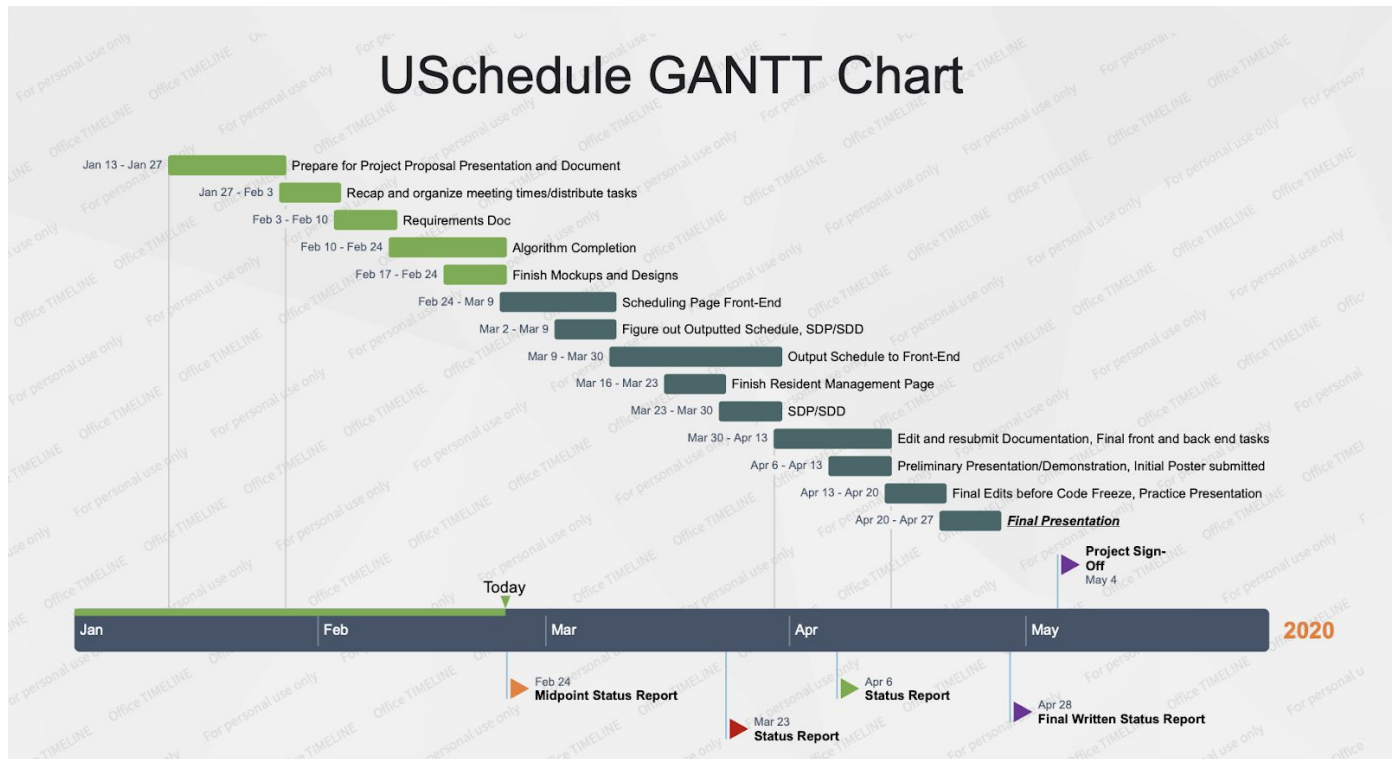
- Scheduling algorithm, database, classes
 - Amelia Jay
 - Liam Namba
 - Sophia Prochnow
- Design, UX, Front-End Development
 - Annie Flora
 - Cristalina Nguyen
 - Christian Santander

4.4 Project Schedule

This section provides schedule information for the USchedule project. Full details will be broken down into the following sections, which are described below.

4.4.1 PERT / GANTT Chart

USchedule GANTT Chart



*Subject to a few changes due to coronavirus

4.4.2 Task / Resource Table

Task	Hardware	Software	Assigned To
GUI - Scheduling Page	MacBook Running OSX	Sketch/VSCode React.js Node.js	Lina/Chris/Annie
GUI - Finish Resident Management Page	MacBook Running OSX	Sketch/VSCode React.js Node.js	Lina/Chris/Annie
GUI - Login Page (possibility to be removed)	MacBook Running OSX	Sketch/VSCode React.js Node.js	Lina/Chris/Annie
Get data from and to the database using API calls (Finish for all front end pages)	MacBook Running OSX	VSCode API Gateway Python/Flask/Zappa	Liam/Sophia

Finish satisfying all constraints in algorithm	MacBook Running OSX	VSCode Python/Flask/Zappa	Amelia
Schedule changes algorithm checking on the constraints	MacBook Running OSX	VSCode Python/Flask/Zappa	Liam/Sophia/Amelia
Comprehensive unit tests that checks on the algorithm's optimal function	MacBook Running OSX	VSCode Python/Flask/Zappa	Liam/Sophia/Amelia