1 Introduction

1.1 Aim of Document

The aim of this SRS document is to provide the project's target audience, hardware, and software requirements. It displays how the client, team, and audience see the product and its functionality while providing clarity of the parameters and goals.
overview of clarity, its parameters, and goals. This document describes the project's target audience, hardware, and software requirements. It defines how our client, team and audience see the product and its functionality as well as aiding in the development of the project.

1.2 Overview of Defined System

PASTA (Priority Assignment Saucy Tracking App) is a productivity application. The objective is to easily keep track of when and what classwork needs to be completed. Users will be able to include data about assignment/class weight, estimated time to complete, and priority. The objective of the application will help students with time-management, increase productivity, and one location to track when and what classwork needs to be completed.

1.3 Stakeholders

Stakeholders include: Customers / end users and implementers / testers (our team), Professor Falessi (an interested party).

1.4 Operational Settings

JAVAFX
SonarQube

1.5 Related Systems (At Least 2, Pros and Cons)

Asana

Pros: Task tracker built for teams programming and developing
Cons: Specific to programming and team development

Google Calendar:

Pros: Can enter any events you have for anything - very broad (also a con)
Cons: Google tracks you (your privacy is sacrificed)

2 User Stories

1. As a student, I want to add a new assignment with a name, instructions, class, due date and expected time to complete, so that I can keep a digitally stored list of my assignments with information about each.
2. As a student, I want to see a list of my assignments in order of their priority based on the due date and time expected to take, so that I know which I need to work on first to meet my deadlines.
3. As a student, I want to mark an assignment complete, so that I no longer see it in my list of uncompleted assignments.
4. As a student, I want to get notifications on upcoming due dates, so that I don't forget to do an assignment.
5. As a student, I want to view assignments that I've completed throughout the day, so that I able to review my own productivity at the end of the day and feel good about my work.
6. As a student, I want to be able to specify a break period from the current assignment, so that I can work on other assignments.
7. As a student, I want a timer to record how long an assignment takes to complete, so that I can compare it to how long I estimated the assignment to take.
8. As a student, I want to filter my assignments into categories of work, school, and home, so that I can personalize my workflow.
9. As a student, I want to modify the color scheme of the application, so that the application fits my personal taste.
10. As a student, I want to access the application from more than one device, so that I am able to work from other locations.
11. As a student, I want to modify an existing assignment, so that I can adapt to changing deadlines and requirements.
12. As a student, I want a tutorial for the application, so that I am able to get over the learning curve quickly.
13. As a student, I want to specify a large project with multiple assignments, so that I can complete the project incrementally.
14. As a student, I want to view a calendar populated with assignments, so that I can plan ahead.
15. As a student, I want to store notes separate from my assignments, so that I can organize information how I want.
16. As a student, I want to view only incomplete assignments, so that I can avoid clutter and unnecessary stress.

17. As a student, I want to update my class schedule, so that I can adapt my time management plan to each academic period.
18. As a student, I want to view all of my assignments for a specified class, so that I can focus my efforts into that class.

3 Functional Requirements

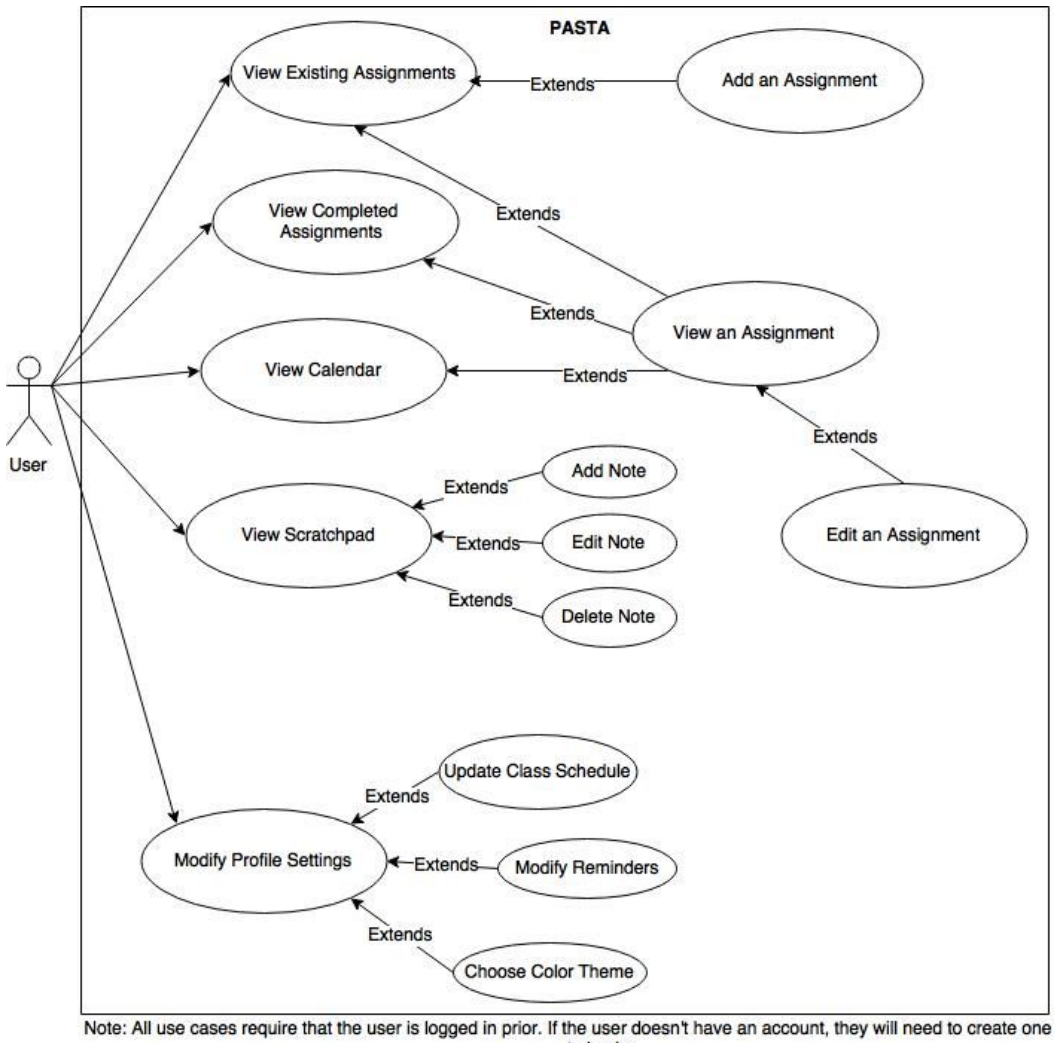
1. The system shall allow the user to add assignments to a list of tasks.
2. The system shall allow the user to specify assignment details: due date and time estimation for completion.
3. The system shall display the assignment list in order of most important** tasks.
4. The system shall allow the user to mark an assignment as completed.
5. The system shall allow the user to review the list of completed assignments.
6. The system shall record the amount of time worked on an assignment.
7. The system shall allow the user to log in.
8. The system shall allow the user to modify personal settings.
9. The system shall allow the user to decompose an assignment into smaller ones.
10. The system shall allow the user to filter assignments into user-specified categories.
11. The system shall display a calendar with the list of to-do assignments.
12. The system shall allow the user to add a note to the scratchpad.
13. The system shall allow the user to edit a note on the scratchpad.
14. The system shall allow the user to delete a note on the scratchpad.
15. The system shall allow the user to lock notes on the scratchpad.
16. The system shall allow the user to create a schedule.
17. The system shall allow the user to specify types* of events on the schedule.
18. The system shall fill in gaps in the schedule with recommended** assignments.
19. The system shall allow the user to enter the home page.
20. The system shall allow users to follow a tutorial.
21. The system shall allow the user to stop the timer on an assignment.
22. The system shall allow the user to pause and resume the timer on an assignment.
23. The system shall allow the user to order and prioritize notes on the scratchpad.
24. The system shall notify the user of all assignments due by midnight each night.
25. The system shall allow the user to delete assignments from the calendar.
26. The system shall allow the user to re-order to-do assignments regardless of the prioritization algorithm.
27. The system shall allow the user to restart an assignment’s timer.
28. The system shall allow the user to create an account.
29. The system shall allow the user to look ahead at assignments by month.
30. The system shall display the cumulative total time worked on assignments in a day.

* Recurring event types such as work, class, personal, extracurricular

** Based on the priority algorithm

4 Use Cases

4.1 Overview Diagram



Note: All use cases require that the user is logged in prior. If the user doesn't have an account, they will need to create one in order to log in.

4.2 Internal Steps Descriptions

Name: Add assignment

1. The student requests to view existing assignments.
2. The system displays incomplete assignments.
3. The student requests to add an assignment.
4. The system prepares a blank assignment form.

5. The student fills in appropriate information about their assignment.
6. When the student indicates the information is complete, the system verifies all fields are filled and names are unique.
7. The system adds the assignment to the list of outstanding assignments, marking it as “incomplete”.

Extensions:
3a. *Too many assignments exist*: The system notifies the Student and terminates the use case.
6a. *Not all fields are filled*: The system notifies the Student and doesn’t proceed.
6b. *An assignment already exists with that name*: The system notifies the Student and doesn’t proceed.

Name: Edit an assignment

1. The student requests to view an assignment.
2. The system displays the assignment details.
3. The student requests to edit the assignment.
4. The system prepares an assignment details form.
5. For each field the student edits, the system verifies that each field is complete.
6. When the student indicates the assignment details are correct, the system saves or updates the assignment.
7. The system checks the timer and prompts to complete assignment if the timer value equals the amount of time to complete.

Extensions:
1a. *Student is editing a complete assignment:* System notifies the student and requests user to continue saving assignment details.
6a. *Student has an existing assignment with the same details*: System notifies student that assignment exists in assignment log and requests to duplicate, replace, or edit assignment details.

Name: Modify account settings / notification settings / color settings

1. The student requests to modify account settings.
2. The system presents the settings page, containing all account information.
3. The student edits any field they desire.
4. The student clicks the “Save changes” button.
5. The system saves the changes and closes the settings page.

Extensions:
5a. *Input is invalid*: System displays an error message asking the user to fix the inputs that were invalid.

Name: View Calendar

1. The student clicks on view calendar.
2. The system displays a calendar for the current month.
3. The system retrieves the student's stored classes and assignments.
4. The system displays the loaded information.

Extensions:
2a. *System cannot identify current month:* The system displays the month it last recognized as current and allows the student to switch month views.
3a. *System fails to load all stored assignments:* The system displays an error message and prompts the user to refresh and retry.

Name: Work On Assignment

1. The student views an assignment and requests to record work time.
2. The system starts a new stopwatch.
3. The system displays the time elapsed.
4. The student requests to pause the timer.
5. The system stops the stopwatch and saves the elapsed time.

Extensions:
1a. *The student attempts to work on an assignment that has already been due:* The system notifies the user of the past due date and requests an updated due date.
2a. *An assignment already has time recorded:* The system retrieves previous time elapsed and starts the stopwatch from the saved point.

Name: View Scratchpad

1. The student requests to view scratchpad.
2. The system prepares a blank scratchpad form.
3. The system requests course schedule from Profile Settings.
4. The student chooses to edit notes for a class or in the general notes section.
5. The student types on the scratchpad, changing font color and font size if necessary.
6. The student chooses to lock or not lock a note, which prevents deletion by password protection.
7. When the student indicates the note is complete, the system saves the note.

Extensions:
1a. *Student already has existing notes:* System brings up a list of existing notes with the option to add, edit or delete instead of creating a new one.
2a. *Student accidently deletes note:* System lets student look at recently deleted notes section, where the student can choose to revive a note.

5 Design

5.1 Storyboard

View the storyboard screens here.

5.2 Activity Diagrams

View the activity diagrams here.

5.3 State Diagrams

View the state diagrams here.

5.4 Class Diagram

View the class diagram here.

6 Software Analytics

6.1 Statistical Process Control Chart