

Software Requirements Specification

Study Calendar Application

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|-----------------------------------|----------|
| 1. Introduction | 2 |
| 1.1 Purpose | 2 |
| 1.2 Scope | 2 |
| 1.2.1 What we will do | 2 |
| 1.2.2 What we will not do: | 2 |
| 2. Requirements | 2 |
| 2.1 Functional Requirements | 2 |
| 2.1.1 Calendar | 2 |
| 2.1.2 General Tasks/Events | 3 |
| 2.1.3 Course Tasks | 3 |
| 2.1.4 Generate a Study Schedule | 3 |
| 2.1.5 Study Reports | 3 |
| 2.2 Non-Functional Requirements | 3 |
| 2.2.1 Usability | 3 |
| 2.2.2 Data Management | 3 |
| 2.2.3 Performance | 4 |
| 2.4 Constraints | 4 |
| 2.5 User Stories | 5 |
| 2.5.1 View Calendar | 5 |
| 2.5.2 View Report | 5 |
| 2.5.3 View Course | 5 |
| 2.5.4 View Task | 5 |
| 2.5.5 Close GUI | 5 |
| 2.5.6 Add Task/Event | 6 |
| 2.5.7 Assign Weight to Task/Event | 6 |
| 2.5.8 Update Task/Event | 6 |
| 2.5.9 Delete Task/Event | 6 |
| 2.5.10 Add Course | 7 |
| 2.5.11 Edit Course | 7 |
| 2.5.12 Delete Course | 7 |
| 2.5.17 Save Data | 8 |
| 2.5.18 Load Data | 9 |
| 2.5.19 Check Time | 9 |
| 2.5.20 Various Task Types | 9 |
| 2.5.21 Color Code Courses | 9 |
| 2.5.22 Personal Events | 9 |
| 2.5.23 Recurring Lectures | 9 |

1. Introduction

The purpose of this product is to suggest a study plan to a student and track their progress. The student will ideally use this product to input events (educational and non-educational) and assign them a certain priority.. The product will then use said information to generate a study plan in a calendar-like format. The product can further generate some simple reports based on the user's study habits and suggest study plans to help them gain an overall view of how well they implemented the study plan and potentially tweak the plan if needed.

1.1 Purpose

The purpose of the Software Requirements Specifications (SRS) is to document the main idea behind the product so that in the future if changes are made to the product, the person can refer to the SRS and ensure updates are consistent with the goals and purpose of the product.

1.2 Scope

1.2.1 What we will do

- Allow users to add events/tasks
- Allow users to update information on an event/tasks
- Allow users to delete events/tasks
- Allow users to fill in a form describing the events/tasks
- Allow users to influence the scheduler by inputting weights for courses/tasks
- Allow users to generate reports from a predefined set of report types

1.2.2 What we will not do:

- Make the calendar user-interactive beyond allowing users to delete the event/tasks by clicking it
- Make the program login based to allow multiple users
- Allow users to add new reports to generate
- Allow users to save/load multiple calendars

2. Requirements

2.1 Functional Requirements

2.1.1 Calendar

- User can view weekly tasks/events
- Calendar emphasizes current day
- User can add, edit and delete tasks/events within their schedule
- User can save their calendar

2.1.2 General Tasks/Events

- Users can add general events and tasks to specified time blocks in their schedule
- Users can specify if a task is recurring or not
- User can add a description to a task

2.1.3 Course Tasks

- Weights can be assigned to a course to determine study priority
- Weights can be assigned to course sub-tasks to influence generated study schedules
- Courses contain sub-events such as “Study”, “Assignment”, “Exam”, etc.

2.1.4 Generate a Study Schedule

- Study schedules can be generated as tasks/events are added to the calendar
- Study schedules are generated based on weights assigned to the course itself, and sub-tasks such as assignments and exams
- The user can specify study-free times

2.1.5 Study Reports

- Users can generate study reports detailing time spent for each course in a given time period

2.2 Non-Functional Requirements

2.2.1 Usability

- GUIs must be legible and meaningful to the user
- GUIs must accurately represent data
- GUIs must be intuitive
- Schedules generated must be practical and reliant on a users priorities

2.2.2 Data Management

- Data will be stored locally
- Data location will be specified by user
- Calendar data will be serialized to avoid unwanted file editing

- Reports will be stored in plain text for viewing outside of the program

2.2.3 Performance

- Program must operate on low-performing systems
- Program must generate schedules in a reasonable time relative to user's hardware
- Loading and saving data must be fast relative to user's hardware

2.4 Constraints

- Software will only be Desktop friendly (not mobile)
- Main GUI will have a fixed size
- User's system must have a Java Runtime Environment installed
- User's system must have enough local storage space for the calendar and reports

2.5 User Stories

2.5.1 View Calendar

As a:

User

I want to:

View the calendar

So I can:

See what I need to do for the week

2.5.2 View Report

As a:

User

I want to:

View the report

So I can:

See how much time I should have spent on each course

2.5.3 View Course

As a:

User

I want to:

View my courses

So I can:

Easily see what Courses I am currently tracking and see information about that Course

2.5.4 View Task

As a:

User

I want to:

View my tasks

So I can:

Easily see what tasks I have due and see more information about them

2.5.5 Close GUI

As a:

User

I want to:

Close the GUI

So I can:

Do other things without accidentally losing the information I inputted

2.5.6 Add Task/Event

As a:

User

I want to:

Add an event/task to the calendar

So I can:

Get an estimate on how long to study for a given task

2.5.7 Assign Weight to Task/Event

As a:

User

I want to:

Assign a weight to an event/task

So I can:

Prioritize certain tasks over others

2.5.8 Update Task/Event

As a:

User

I want to:

Change an event/task

So I can:

Change the calendar event/tasks if I made a mistake or something has changed

2.5.9 Delete Task/Event

As a:

User

I want to:

Delete an event/task

So I can:

Remove things I don't need anymore or accidentally added

2.5.10 Add Course

As a:

User

I want to:

Add a new course to the calendar

So I can:

Keep track of the course using the Calendar

2.5.11 Edit Course

As a:

User

I want to:

Edit a course

So I can:

Change it as needed or if I made a mistake

2.5.12 Delete Course

As a:

User

I want to:

Delete a course

So I can:

Stop keeping track of it if I don't need it anymore

WEEK VIEWED MENU

2.5.13 View Next Week

As a:

User

I want to:

View next week

So I can:

See what I need to do next week

2.5.14 View Previous Week

As a:

User

I want to:

View previous week

So I can:

See what happened last week

2.5.15 Generate Study Schedule

As a:

User

I want to:

Generate a study schedule

So I can:

See when I need to study and for how long

2.5.16 Clear Study Schedule

As a:

User

I want to:

Clear my study schedule

So I can:

Reassign the priorities the events/tasks I added to better fit my needs, and get a new study schedule

FILE MENU

2.5.17 Save Data

As a:

User

I want to:

Save my data

So I can:

Load it later without having to re-input all my information again

2.5.18 Load Data

As a:

User

I want to:

Load my data

So I can:

Get all the information that I had from before without re-inputting it

2.5.19 Check Time

As a:

User

I want to:

View what time it is on the calendar

So I can:

Easily figure out how busy my schedule is and decide if I want to add an event/task

2.5.20 Various Task Types

As a:

User

I want to:

Easily select a variety of task types

So I can:

Organize the calendar the way I want

2.5.21 Color code courses

As a:

User

I want to:

Color code my courses

So I can:

Make it easier to visually organize my tasks/courses

2.5.22 Personal Events

As a:

User

I want to:

Add personal events/tasks to the Calendar

So I can:

Schedule them before I generate a schedule and have personal time for what I want to do.

2.5.23 Recurring Lectures

As a:

User

I want to:

Have recurring lectures

So I can:

Avoid having to input information for the Lecture times every week