**Dream Team**

**Smart Calendar**

**Written Requirements**

***Revision History***

|  |  |  |  |  |
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**Table of Contents**

[**1 Team Description 5**](#_gjdgxs)

[**2 Terminology 6**](#_30j0zll)

[**3**](#_1fob9te) **Smart Calendar 7**

[**3.1 Overview**](#_3znysh7) **7**

**3.2 Calendar Requirements 7**

**3.2.1 Create Task Requirement 7**

**3.2.2 View Unassigned Tasks Requirement 7**

**3.2.3 Create Free Time Block Requirement 7**

**3.2.4 Edit Tasks and Free Time Requirement 7**

**3.3 Free Time Requirements 8**

**3.3.1 Create Free Time Block Requirement 8**

**3.3.2 Delete Free Time Block Requirement 8**

**3.3.4 Invalid Modification of Start and End Times Requirement 8**

**3.4 Task Requirements 8**

**3.4.1 Set Name Requirement 8**

**3.4.2 Invalid Shift Operation Requirement 8**

**3.4.3 Delete Currently Assigned Task Requirement 8**

**3.4.4 Modify Task Due Date Requirement 8**

**3.4.5 Remind User of Task Due Date Requirement 9**

**3.5 AND Requirements 10**

**3.6 OR Requirements 12**

# Team Description

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# Terminology

The following table defined terms used within this document.

|  |  |
| --- | --- |
| **Term** | **Definition** |
| User | Person using the application. |
| Block | Segment of time represented on the calendar. |
| Task | A voluntary activity the user must complete. |
| ETA | The estimated amount of time the user enters in for how long they think they need on a task. |
| Ripping the bandaid | Algorithm type; assigns tasks in large, segments. |
| Slow and steady | Algorithm type; assigns tasks in small, frequent segments. |
| Free time | The time where the user is available to schedule tasks. |

# Smart Calendar

## Overview

This application will:

* Allow the user to enter their free time on a weekly basis
* Allow the user to schedule tasks to complete during their free time
* Sort the user’s tasks based on an algorithm of their choice
* Remind the user of their upcoming tasks’ deadlines

**3.2 Calendar Requirements**

**3.2.1 Create Task Requirement**

When the user clicks on a button, the system **shall** create a new empty task.

**3.2.2 View Unassigned Tasks Requirement**

When the user clicks on a button, the system **shall** display a list of unassigned tasks. The system **shall** allow a displayed task within the list to be viewed and modified independently when clicked by the user.

**3.2.3 Create Free Time Block Requirement**

When the user clicks on the “Create Free Time Block” button, the system **shall** prompt the user to enter the Start Time and End Time for the new Free Time Block. The Start Time and End Time values **will** be drop-down boxes that allow the user to pick an hour between 1 and 12, as well as a minute between 0 and 59.

**3.2.4 Edit Tasks and Free Time Requirement**

The user **shall** be able to modify their Tasks and free time through the Calendar UI. The user **shall** be able to access Tasks through the Calendar.

**3.3 Free Time Requirements**

**3.3.1 Create Free Time Block Requirement**

Upon clicking a button to create a new block of free time, the system **shall** prompt the user to enter a start time and an end time for the block.

**3.3.2 Delete Free Time Block Requirement**

When an “X” located at the top right of each block is clicked, the system **shall** delete the block of free time.

**3.3.3 Modify Start and End Times Requirement**

When a free time block on the calendar is clicked, the system **shall** allow the user to modify its start and end times.

**3.3.4 Start and End Times Encapsulate Existing Free Time Block Requirement**

If the user creates or modifies the Start and End Times of a Free Time Block such that it encapsulates an already existing Free Time Block, the latter Free Time Block is deleted, and the former Free Time Block is added.

**3.3.5 Free Time Block Extension Requirement**

If the Start Time of a created or modified Free Time Block exists within another Free Time Block and the End Time exists outside of it (or vice versa), the system will merge the former Free Time Block with the latter.

**3.3.6 Invalid Start and End Times Requirement**

The system **shall** prevent the user from creating or modifying a Free Time Block’s Start and End Time values such that any of the following becomes true:

* Start Time or End Time occupies the same space as an existing Task Block
* Start Time and End Time encapsulate a Task Block
* Start Time and End Time are encapsulated by an existing Free Time Block

If the entered values bring about one of those situations, the system **will** display an error message, and request the user to try again.

**3.4 Task Requirements**

**3.4.1 Assign Task to Calendar Requirement**

The user **shall** be able to click the “Assign Task” button when individually viewing a Task from the “Unassigned Tasks” list. The system **will** then assign that Task to the Calendar, depending on the Scheduling Algorithm selected for that Task.

**3.4.2 Unassign Currently Assigned Task Requirement**  
 The user **shall** be able to click the “Unassign Task” button when individually viewing a Task on the Calendar. The system **will** then remove that Task from the Calendar and place it into the “Unassigned Tasks” list.

**3.4.3 Modify Name Requirement**

The user **shall** be able to click on the “Name” text field of an independently viewed Task to modify its name.

**3.4.4 Modify Description Requirement**

The user **shall** be able to click on the “Description” text field of an independently viewed Task to modify its description.

**3.4.5 Modify Task Due Date Requirement**

The user **shall** be able to change the parameters of the “Due Date” field, if the Task is currently not assigned to the Calendar.

**3.4.6 Modify Task ETA Requirement**

The user **shall** be able to change the “ETA” parameter, if the Task is currently not assigned to the Calendar.

**3.4.7 Delete Currently Unassigned Task Requirement**

The user **shall** be able to click the “Delete Task” button when viewing an individual task from the “Unassigned Tasks” list.

**3.4.8 Delete Currently Assigned Task Requirement**

The system **shall** delete a selected task from a calendar upon the user clicking the “Delete Task” button.

**3.4.9 Remind User of Upcoming Task Block Requirement**

The system **shall** alert the user with a pop-up message an hour before the start of a Task Block on the Calendar. Users **will** be able to dismiss this message by pressing the “OK” button on it.

**3.4.10 Alert User when the End of the Last Task Block is Reached Requirement**

Upon reaching the end of the last Task Block, the system **shall** ask the user if they are done or close to being done. If the user clicks “Yes”, the system **will** delete the Task. If the user clicks “No”, the system **will** place the Task into the “Unassigned Tasks” list, and request the user to modify the Due Date and ETA values for rescheduling.

**3.5 AND Requirements**

The action of inputting a primary weekly schedule **shall** be taken when **all of** the following conditions are met:

* Schedule has not yet been input

The action of creating a task **shall** be taken when **all of** the following conditions are met:

* User allots blocks of free time to the schedule
* User inputs “due date”, “time”, “algorithm type” and “label” into the prompt

The action of editing the user’s schedule **shall** be taken when **all of** the following conditions are met:

* At least one (1) block of free time is allotted

The action of assigning a task to calendar **shall** be taken when **all of** the following conditions are met:

* The user has one (1) or more task in their queue

The action of adding time to the task timer **shall** be taken when **all of** the following conditions are met:

* A task is selected
* The time of the task does not conflict with other tasks

The action of subtracting time to the task timer **shall** be taken when **all of** the following conditions are met:

* A task is selected
* The amount of time being subtracted does not make the timer count less than 0

The action of reminding the user of an upcoming task **shall** be taken when **all of** the following conditions are met:

* The task falls within a user defined interval of when they wish to be reminded

The action of alerting the user when a due date is reached **shall** be taken when **all of** the following conditions are met:

* The task has not been completed by the user
* The current system time matches or is later than that of the task due date

XYZ action **shall** be taken when **all of** the following conditions are met:

**3.6 OR Requirements**

The action of unassigning a task **shall** be taken when **any of** the following conditions are met:

* The user manually deletes the task
* The system timer finishes its countdown and deletes the task

The action of starting the task timer **shall** be taken when **any of** the following conditions are met:

* The task scheduled is at the current time and the calendar executes the timer
* The user manually executes the task timer

The action of stopping the task timer **shall** be taken when **any of** the following conditions are met:

* The task scheduled ends at the current time and the calendar finishes executing the timer
* The user manually stops the task timer

XYZ action **shall** be taken when **any of** the following conditions are met: