**Dream Team**

**Smart Calendar**

**Written Requirements**

***Revision History***

|  |  |  |  |  |
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# 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. |
| Free time | The time where the user is available to schedule Tasks. By default, Free Time is not scheduled. When the user is sleeping, eating, or engaged in other activites, the time should not be designated as free. |
| Task | A voluntary activity the user must complete. |
| Ripping the bandaid | Algorithm type; assigns Tasks in large, segments. |
| Slow and steady | Algorithm type; assigns Tasks in small, frequent segments. |

# Smart Calendar

## Overview

The Smart Calendar allows a user to plan their schedule with a graphical interface.

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**

The system **shall** allow creation of new Tasks.

* Mandatory fields: Name, Due Date, Estimated Time to Completion
* Optional fields: Description

**3.2.2 View Unassigned Tasks Requirement**

The system **shall** allow the user todisplay a list of unassigned Tasks.

The system **shall** allow a displayed Task within the list to be viewed and modified independently.

**3.2.3 Edit Tasks and Free Time Requirement**

The system **shall** allow the user to modify their Tasks and Free Time Blocks through the Calendar UI, if at least one block of free time and/or task is allotted.

**3.3 Free Time Requirements**

**3.3.1 Create Free Time Block Requirement**

The system **shall** allow the user to create new Free Time Blocks.

The system **shall** prompt the user to enter a Start Time and End Time for the new Free Time Block.

**3.3.2 Delete Free Time Block Requirement**

The system **shall** allow the user todelete a selected Free Time Block.

**3.3.3 Modify Start and End Times Requirement**

The system **shall** allow the user to modify the Start and End Times of a selected Free Time Block. See 3.3.6 for error cases.

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

When the Start and End Times of a new Free Time Block are the same or are encapsulated by an already existing Free Time Block, the system **shall** delete the newer Free Time Block, and keep the older Free Time Block to reduce redundancy.

**3.3.5 Free Time Block Extension Requirement**

When the Start and End Times of a created or modified Free Time Block overlap another existing Free Time Block, the system **shall** merge/extend the existing Free Time Block with the new Free Time Block.

**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 is later than the End Time
* Start Time is the exact same as the End Time

**3.4 Task Requirements**

**3.4.1 Assign Task to Calendar Requirement**

The system **shall** allow the user to assign Tasks to the Calendar from the “Unassigned Tasks” list when there are one or more task(s) in the queue.

**3.4.2 Invalid Assign Request Requirement**

The system **shall** prevent the user from assigning a Task to the Calendar if one of the following conditions are met:

* The Task is missing one or more mandatory parameters (Name, Due Date, Estimated Time to Completion)
* The amount of free time between the time of the assign request and the Due Date is less than the Task’s Estimated Time to Completion

**3.4.3 Unassign Currently Assigned Task Requirement**  
 The system **shall** allow users to unassign currently assigned Tasks from the Calendar and are returned to the unassigned task list.

**3.4.4 Modify Name Requirement**

The system **shall** allow users to modify the Name field of any individually viewed Task.

**3.4.5 Modify Description Requirement**

The system **shall** allow users to modify the Description field of any individually viewed Task.

**3.4.6 Modify Task Due Date Requirement**

The system **shall** allow users to modify the Due Date field of individually viewed Tasks from the “Unassigned Tasks” list.

**3.4.7 Modify Task Estimated Time to Completion Requirement**

The system **shall** allow users to modify the Estimated Time to Completion field of individually viewed Tasks from the “Unassigned Tasks” list.

**3.4.8 Delete Currently Unassigned Task Requirement**

The system **shall** allow users to delete Tasks from the “Unassigned Tasks” list.

**3.4.9 Delete Currently Assigned Task Requirement**

The system **shall** allow users to delete Tasks that are assigned to the Calendar. The Free Time the task occupied then becomes available.

**3.4.10 Remind User of Upcoming Task Due Date Requirement**

The system **shall** alert the user with a pop-up message when the task falls within a user defined interval of when they wish to be alerted, and the task has not been completed by the user.

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

Upon reaching the end of the last Task Block for a given Task, the system **shall** ask the user if they are done or close to being done with the Task.

If the user clicks “Yes”, the system **shall** delete the Task.

If the user clicks “No”, the system **shall** place the Task into the “Unassigned Tasks” list, and request the user to modify the Due Date and Estimated Time to Completion values for rescheduling.