**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 REQ-0001**

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

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

**3.2.2 Display User Interface Requirement**

* The system **shall** display the list of Unassigned Tasks on the right side of the application. **REQ-0002**
* The system **shall** display the list of Assigned Tasks to the left of the Unassigned Tasks. **REQ-0003**
* The system **shall** display the Calendar itself on the left side of the screen. **REQ-0004**

**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. **REQ-0005**

The system **shall** prompt the user to enter a Start Time and End Time for the new Free Time Block. **REQ-0006**

**3.3.2 Delete Free Time Block Requirement REQ-0007**

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

**3.3.3 Modify Start and End Times Requirement REQ-0008**

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

**3.3.4 Start and End Times Encapsulate Existing Free Time Block Requirement REQ-0009**

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 REQ-0010**

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 **REQ-0011**
* Start Time and End Time encapsulate a Task Block **REQ-0012**
* Start Time is later than the End Time **REQ-0013**
* Start Time is the exact same as the End Time **REQ-0014**

**3.4 Task Requirements**

**3.4.1 Assign Task to Calendar Requirement REQ-0015**

The system **shall** allow the user to assign Tasks to the Calendar from the Unassigned Tasks list when there are one or more Tasks 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) **REQ-0016**
* 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 **REQ-0017**

**3.4.3 Unassign Currently Assigned Task Requirement REQ-0018**  
 The system **shall** allow users to unassign an Assigned Task from the Calendar and are returned to the Unassigned Tasks list.

**3.4.4 Modify Name Requirement REQ-0019**

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

**3.4.5 Modify Description Requirement REQ-0020**

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

**3.4.6 Modify Task Due Date Requirement REQ-0021**

The system **shall** allow users to modify the Due Date field of any Unassigned Task.

**3.4.7 Modify Task Estimated Time to Completion Requirement REQ-0022**

The system **shall** allow users to modify the Estimated Time to Completion field of any Unassigned Task.

**3.4.8 Delete Currently Assigned Task Requirement REQ-0023**

The system **shall** allow users to delete a currently assigned Task. The Free Time that the Task occupied then becomes available.

**3.4.9 Delete Currently Unassigned Task Requirement REQ-0024**

The system **shall** allow users to delete an Unassigned Task.

**3.4.10 Remind User of Upcoming Task Due Date Requirement REQ-0025**

The system **shall** alert the user with a pop-up message when the Task’s Due Date is less than an hour away.

**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. **REQ-0026**

If the user clicks “Yes”, the system **shall** delete the Task. **REQ-0027**

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. **REQ-0028**