

American International University-Bangladesh (AIUB)  
**Department of Computer Science  
Faculty of Science & Technology (FST)**

**GPS-Based Reminder**

A Software Quality and Testing Project Submitted

By

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| --- | --- | --- | --- | --- |
| **Semester: Fall\_23\_24** | | | **Section:** | **Group No:** |
| **SN** | **Student Name** | **Student ID** | Individual  Contribution (in %) | Total Marks: 50 |
| Earned Marks: |
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The project will be Evaluated for the following Course Outcomes

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| --- | --- | --- |
| **EVALUATION CRITERIA** | **Total Marks (50)** | |
|  | |
| Revision History, Test Plan Identifier, Reference Materials, Problem Background, Solutions | [10 Marks] |  |
| Requirements Specification (System feature, Quality Attributes, System Interface, Project Requirements) | [10 Marks] |  |
| Item Not to be tested, Testing approach (Testing levels, tools, meetings), Test cases | [10 Marks] |  |
| Item pass/fail criteria, Test deliverables, Staffing and Training, Responsibilities, Scheduling, Risk | [10 Marks] |  |
| Approval, Format, Submission, and Defense | [10 Marks] |  |

Software Test Plan

for

GPS-Based Reminder

Version 1.0 approved.

Prepared by Syed Foysal, Hamim Hossein, Md. Imran Khan, Tahajjod Bhuiya

American International University-Bangladesh

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# Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Revision** | **Date** | **Updated by** | **Update Comments** |
| 0.1 | 2023.11.12 | Syed Foysal | First Draft |
| 0.2 | 2023.12.24 | Hamim Hossein | Second Draft |
| 0.3 | 2023.13.01 | Md. Imran Khan | Third Draft |
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# TEST PLAN IDENTIFIER: AT-TP01.3

# REFERENCE MATERIALS

* IEEE Standards Association. RemindMe: An Enhanced Mobile Location-Based Reminder Application Available at

<https://ieeexplore.ieee.org/abstract/document/6984232>

* IEEE Standards Association. IEEE Recommended Practice for Software Requirements Specifications. (IEEE Std 830-1998). Available at

<https://ieeexplore.ieee.org/document/720574>

* IEEE Conference Publication | IEEE Xplore Location and time-based reminder system on Android mobile device

<https://ieeexplore.ieee.org/abstract/document/7852624>

* Guru99. What is Requirements Traceability Matrix (RTM) in Testing? Available at

<https://www.guru99.com/traceability-matrix.html>

# INTRODUCTION

## Background to the Problem

Task management and organization have to become more effective in today's fast-paced, connected world due to the growing demands of work, personal responsibilities, and social obligations. Keeping track of tasks and appointments has become increasingly difficult as people manage multiple responsibilities and move between distinct locations. The dynamic nature of modern lifestyles is often not sufficiently managed by traditional reminder systems that rely on manual input and time-based alerts. Due to this lack of task management, people who are attempting to keep up with their daily activities may miss appointments, forget to run errands, or experience higher levels of stress.

## Solution to the Problem

With the GPS-based reminder system, users may program reminders to go off depending on where they are at any given time. The user receives alerts when they enter or leave a designated geographic area, and the system employs GPS technology to establish the user's present location. The software program will work with most operating systems and be accessible on portable devices like tablets and smartphones.

Giving people a quick and easy way to organize their chores and reminders is the goal of the GPS-based reminder system. Users will be able to create reminders for a variety of chores, including appointments, meetings, and shopping lists, and they will be able to receive alerts when those tasks are about to be completed. Users will also be able to alter the reminder settings on the system.

# REQUEIREMNT SPECIFICATION

## System Features

### Registration

**Functional Requirement**

* 1. User Input: Provide a user interface for entering personal information and initiating registration.
  2. Google Account Option: Enable registration using a verified Google account.
  3. Email Verification: Generate and send a random verification code to the user's email.
  4. Code Validation: Validate users based on the correctness of the entered verification code.
  5. Username and Password Setup: Prompt users to set a unique username and a strong password.
  6. Uniqueness Check: Ensure username uniqueness; if not, prompt an alternative and repeat the process.
  7. If the registration is successful, the login page of the user account will be displayed.

**Priority Level:** High

**Precondition:** The user has a valid google account.

**Cross Reference:** N/A

### Set Goals

**Functional Requirements**

* 1. The platform will gather information pertaining to user-set goals or tasks.
  2. The system will capture location data relevant to the specified goals.
  3. Users have the option to associate a timeframe, especially for tasks with offline possibilities.
  4. Users are empowered to skip a current task and reschedule it for a later time.
  5. Collaborators can be added to tasks by providing their email addresses, facilitating collaborative work.
  6. Accomplished tasks can be marked by users and visually displayed on the interface for easy tracking.

**Priority Level:** High

**Precondition:** The user must be logged into their registered account.

**Cross Reference: 3.4**

### Add Socially

**Functional Requirements**

* 1. Will show all users of this application from the contact database and social sites database or contacts (WhatsApp, Facebook, Contacts etc.)
  2. Users can add friends externally by getting an invitation link.
  3. Users can share specific moments of their choice
  4. . Users can see up-to-date rank by completed tasks.

**Priority Level:** Medium

**Precondition:** Successful login and must be enabled.

**Cross Reference: 2.5**

### Settings

**Functional Requirements**

**4.1** The software shall allow users to enable default time for goal if there is any offline possibility at a certain location.

**4.2** Users can change the display options.

**4.3** Users can be able to enable or disable add socially.

**4.4** Users can add collaborators (who want to work together) via email if they want.

**4.5** Users can choose ghost mode to hide activities.

**4.6** User can Edit profile.

**Priority Level:** Medium

**Precondition:** Successful login **Cross Reference: 2.3**

### Searching

**Functional Requirements**

* 1. The system shall allow users to search for previously added goals/tasks.
  2. The search feature shall enable the user to search based on the task name, location and collaborators.
  3. The system shall suggest related tasks based on previous activity or missed activity.
  4. The system shall use GPS to suggest tasks based on the user's current location and previous activity.
  5. The system shall allow users to view missed tasks and suggest a reminder to complete them.
  6. The system shall prioritize suggested tasks based on their proximity, urgency, and priority

level.

* 1. The system shall allow users to filter search results based on completed or incomplete tasks.
  2. The software shall allow users to sort search results based on date added and priority level.
  3. The system shall display the search results in a user-friendly manner with necessary details like task name, location, and collaborators.
  4. The software shall allow users to modify previously added tasks based on the search results.

**Priority Level:** Medium

**Precondition:** Successful login and previously added goal/tasks.

**Cross Reference: 3**

### Snooze

**Functional Requirements**

* 1. The system shall allow users to snooze a reminder for a certain amount of time.
  2. The snooze feature shall be available for incomplete tasks and upcoming reminders.
  3. The system shall provide preset time intervals for snooze, such as 5 minutes, 10 minutes, 15 minutes, 30 minutes, and 1 hour.
  4. The software shall allow users to customize the snooze time interval as per their preferences.
  5. The system shall remind the user after the snooze period is over if the task is still incomplete.

**Priority Level:** Medium

**Precondition:** Successful login and reminders to be snoozed.

**Cross Reference:**

### Reminder

**Functional Requirements**

* 1. The system shall suggest missed tasks periodically and location based.
  2. The periodic mode shall be customizable, based on the user's selected time interval, such as every hour or every day.
  3. The location-based mode shall suggest missed tasks when the user is near the task location.
  4. The system shall prioritize missed tasks based on their proximity, urgency, and priority level.
  5. The system shall allow users to mark missed tasks as complete or snooze them for a later reminder.

**Priority Level:** High

**Precondition:** Successful login and missed goal/tasks.

**Cross Reference:**

## System Quality Attributes:

**Usability:** A proficient user should be capable of establishing a single goal (task) during a single visit to the set-goals function within an average timeframe of two to three minutes.

**Priority Level:** High

**Precondition:** Minimum configuration IOS 14.0.1 & android 7.0

**Cross Reference: N/A**

**Reliability:** The data communication protocol must maintain the reliability and quality of data transmission. The memory system must be non-volatile.

**Priority Level:** High

**Precondition:** Must be logged in

**Cross Reference: N/A**

**Interoperability:** The GPS-Based Reminder System needs to have the capability to import valid location information from either Google Maps or some mapping tool.

**Priority Level:** High

**Precondition:** Must Verified Email

**Cross Reference: N/A**

**Integrity:** Only verified and existing email addresses will be authorized to send the verification code to the user's phone, ensuring the integrity of the verification process.

**Priority Level:** Medium

**Precondition:** Must be valid phone number

**Cross Reference: N/A**

**Reusability:** The Add Socially function should be designed for reusability at the object code level, allowing it to be integrated into other applications intended for connecting individuals through existing connections.

**Priority Level:** High

**Precondition:** Must be valid phone number

**Cross Reference: N/A**

**Availability:** The system should be up for the maximum time, downtime minimized.

**Priority Level:** Low

**Precondition:** N/A

**Cross Reference: N/A**

## System Interface

|  |  |
| --- | --- |
| A screenshot of a registration form  Description automatically generated  *Registration* | A screenshot of a computer  Description automatically generated    *Set Goal* |
| A screenshot of a computer  Description automatically generated  *Settings* | A screenshot of a social media account  Description automatically generated  *Add Socially* |

## Project Requirements

Let’s, assume our project is an organic project, where a= 2.1, b =1.02, c=2.3, d=0.28 according to the COCOMO model

The estimated size of the software product in Kilo Lines of Code is 10

Estimation of Development Effort, E= a × (KLOC)*b*

                                                               = 2.1 × (10)*1.02*

                                                             = 21.987 PM

                                                             = 4221.504 Person-Hours

Estimation of Development Time, D= c × (E)*d*

                                                              = 2.3 × (21.987)*0.28*

                                                              = 5.4 Months

Required number of people = Effort/Time

                                                 = 21.987/5.4 = 4.07

Let’s assume average salary of each employee in our company is TK 30,000 and they work 8 hours each day

Therefore, Rate of per hour = 30,000 ÷ (4.07 × 8)

                                                  = TK 921.37 per hour

Cost = Effort × Rate = 4221.504 Person-Hours × TK 921.37 per hour

                                  = 3889567.14 Taka

Suppose other necessary costs will be 40,000 Taka

Total cost = (3889567.14+ 40,000) taka

               = 3929567.14 taka.

# FEATURES NOT TO BE TESTED

In a GPS-based reminder system, certain features may be deemed less critical or irrelevant to the primary functionality of the application. Here are some features that might not be the primary focus of testing in a GPS-based reminder system:

**Non-GPS Features:**

Features unrelated to GPS functionality, such as certain cosmetic UI elements or non-GPS data storage functionalities, may not be the primary focus of testing if they do not impact the core GPS reminder system.

**Obsolete Reminder Types:**

If there are multiple types of reminders (e.g., location-based and time-based), and certain types are considered less critical or obsolete, they might not be extensively tested.

**Advanced User Analytics:**

Advanced analytics features focused on detailed user behavior analysis, which may not directly impact the core functionality of setting and receiving GPS-based reminders, might not be a top priority for testing.

**Social Sharing Features:**

Features related to extensive social sharing, especially if they are not integral to the core GPS reminder functionality, may be tested to a lesser extent.

**Integration with Uncommon Mapping Tools:**

If the application is designed primarily for use with a specific mapping tool (e.g., Google Maps), the extensive testing of integration with less common mapping tools might be a lower priority.

**Advanced Notification Customization:**

Advanced notification customization features, beyond the basics needed for the core functionality, might be lower in priority for testing.

**Advanced Collaboration Features:**

Advanced collaboration features, such as complex task-sharing mechanisms, might be tested to a lesser extent if they are not considered critical to the primary purpose of setting and receiving GPS-based reminders.

# TESTING APPROACH

## Testing Levels

* + 1. To determine the appropriate testing level of Selenium for our system, it is important to consider the scope and complexity of the system, as well as the level of quality and risk required for the system.
    2. At a minimum, functional testing should be performed using Selenium to ensure that the system meets the requirements and specifications provided by the stakeholders. This can include testing the user interface, data input and output, and various functions and features of the system.
    3. In addition to functional testing, other testing levels may be necessary depending on the complexity of the system and the level of risk associated with its use. These can include integration testing, performance testing, and security testing, among others.
    4. Overall, the testing level of Selenium for a system should be determined based on a thorough analysis of the system's requirements, risks, and quality standards, and should be tailored to ensure that the system meets the needs of its stakeholders and users.

## Test Tools

At the industry level, there are a number of different test tools that can be used to test a software application. Some of these tools include:

* + 1. Automated testing tools: These tools can be used to automate the testing process, allowing developers to test the software quickly and efficiently.
    2. Load testing tools: These tools can be used to simulate high levels of usage on the software, to ensure that it can handle large amounts of data and traffic without crashing or experiencing other issues.
    3. Security testing tools: These tools can be used to test the security of the software, to ensure that it is protected against potential threats and vulnerabilities.
    4. User experience testing tools: These tools can be used to test the user experience of the software, to ensure that it is intuitive and easy to use.

## Meetings

Software testing meeting is a meeting where individuals involved in the testing of a software application come together to discuss the progress of the testing, any issues that have been identified, and any necessary next steps. This may include discussing the results of the testing, identifying any defects or flaws in the software, and determining how to address these issues. The goal of the meeting is to ensure that the software is functioning properly and meets all of the necessary requirements before it is released to the public. During the software testing meeting, attendees may include the project manager, senior test engineer (test lead), junior test engineer, testing manager, and database analyst, among others. These individuals may provide updates on the testing process, discuss any issues that have been identified, and provide input on how to address these issues. The meeting may also involve reviewing and discussing test results, as well as discussing any necessary changes or modifications to the software. Overall, a software testing meeting is an important part of the software development process, as it allows individuals involved in the testing to come together and collaborate on ensuring the success of the project.

# TEST CASES/TEST ITEMS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Project Name: GPS-Based Reminder | | Test Designed by: Syed Foysal | | |
| Test Case ID: FR\_1 | | Test Designed Date: | | |
| Test Priority: High | | Test Executed by: Hamim Hossein | | |
| Module Name: User Registration | | Test Execution Date: | | |
| Test Title: User registration module test | |  | | |
| Description: Test registration by giving input to all the fields and must give unique username, email, and phone number | |  | | |
| Precondition: | | | | |
| Test Steps | Test Data | Expected Results | Actual Results | Status (Pass/Fail) |
| 1. Go to the registration page. 2. complete all the input fields. 3. Click submit | Username: Hamim [Email: hamim@gmail.com](mailto:Email:hamim@gmail.com)  Password: 123 | Registration successful and redirect to login page |  |  |
| Post Condition: User data will go to database and redirect to login page | | | | |

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| --- | --- | --- | --- | --- |
| Project Name: GPS-Based Reminder | | Test Designed by: | | |
| Test Case ID: FR\_2 | | Test Designed Date: | | |
| Test Priority: High | | Test Executed by: | | |
| Module Name: Set Goals | | Test Execution Date: | | |
| Test Title: Test set goals | |  | | |
| Description: Test set goals by giving input to all the fields | |  | | |
| Precondition: Successfully login | | | | |
| Test Steps | Test Data | Expected Results | Actual Results | Status (Pass/Fail) |
| 1. Go to set goals page. 2. complete all the input fields. 3. Click submit | Goal name: Class Time: 8am Location: DS0212, AIUB | Set goals successful and redirect to home page |  |  |
| Post Condition: User data will go to database and redirect to home page | | | | |

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| --- | --- | --- | --- | --- |
| Project Name: GPS-Based Reminder | | Test Designed by: Syed Foysal | | |
| Test Case ID: FR\_3 | | Test Designed Date: 06/08/2023 | | |
| Test Priority: High | | Test Executed by: | | |
| Module Name: Add Socially | | Test Execution Date: | | |
| Test Title: Verify add socially | |  | | |
| Description: Test add socially by giving input to all the fields | |  | | |
| Precondition: Successfully login | | | | |
| Test Steps | Test Data | Expected Results | Actual Results | Status (Pass/Fail) |
| 1. Go to add socially page. 2. complete all the input fields. 3. Click submit | Socially name: Facebook Socially ID: | Set goals successful and redirect to home page |  |  |
| Post Condition: User data will go to database and redirect to home page | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Project Name: GPS-Based Reminder | | Test Designed by: | | |
| Test Case ID: FR\_4 | | Test Designed Date: | | |
| Test Priority: High | | Test Executed by: | | |
| Module Name: Settings | | Test Execution Date: | | |
| Test Title: verify Settings option | |  | | |
| Description: Test settings option | |  | | |
| Precondition: Successfully login | | | | |
| Test Steps | Test Data | Expected Results | Actual Results | Status (Pass/Fail) |
| 1. Go to the settings option. 2. Make changes. 3. Click submit | Display mode: Dark | Setting changed successfully and redirect to home page |  |  |
| Post Condition: User data will go to database and redirect to home page | | | | |

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| --- | --- | --- | --- | --- |
| Project Name: GPS-Based Reminder | | Test Designed by: | | |
| Test Case ID: FR\_5 | | Test Designed Date: | | |
| Test Priority: High | | Test Executed by: | | |
| Module Name: Searching | | Test Execution Date: | | |
| Test Title: Verify Searching | |  | | |
| Description: Test Searching by giving input to all the fields | |  | | |
| Precondition: Successfully login and goal/task added previously | | | | |
| Test Steps | Test Data | Expected Results | Actual Results | Status (Pass/Fail) |
| 1. Go to add socially page. 2. complete all the input fields. 3. Click submit | Goal name: Class | Goal find successfully and shows the result in list format |  |  |
| Post Condition: User data will go to database | | | | |

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| --- | --- | --- | --- | --- |
| Project Name: GPS-Based Reminder | | Test Designed by: | | |
| Test Case ID: FR\_6 | | Test Designed Date: | | |
| Test Priority: Medium | | Test Executed by: | | |
| Module Name: Snooze | | Test Execution Date: | | |
| Test Title: Verify Snooze | |  | | |
| Description: Test Snooze by giving input to all the fields | |  | | |
| Precondition: Successfully login and goal/task added previously | | | | |
| Test Steps | Test Data | Expected Results | Actual Results | Status (Pass/Fail) |
| 1. Go to the Snooze page. 2. complete all the input fields. 3. Click submit | Goal name: Class Snooze time: for 1hr | Goal finds successfully and snoozed for 1hr |  |  |
| Post Condition: User data will go to database | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Project Name: GPS-Based Reminder | | Test Designed by: | | |
| Test Case ID: NFR\_7 | | Test Designed Date: | | |
| Test Priority: High | | Test Executed by: | | |
| Module Name: Re-reminder | | Test Execution Date: | | |
| Test Title: Verify Re-reminder | |  | | |
| Description: Test Re-reminder by giving input to all the fields | |  | | |
| Precondition: Successfully login and goal/task missed previously | | | | |
| Test Steps | Test Data | Expected Results | Actual Results | Status (Pass/Fail) |
| 1. Go to the Re-reminder page. 2. complete all the input fields. 3. Click submit | Reminder name: Class Reminder time: 8am | Goal find successfully and shows the result in list format |  |  |
| Post Condition: User data will go to database | | | | |

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| --- | --- | --- | --- | --- |
| Project Name: GPS-Based Reminder | | Test Designed by: | | |
| Test Case ID: NFR\_1 | | Test Designed Date: | | |
| Test Priority: High | | Test Executed by: | | |
| Module Name: Set Goal | | Test Execution Date: | | |
| Test Title: Reliability Test for GPS-Based Reminder Triggers | |  | | |
| Description: To verify the reliability of the GPS-based reminder application in triggering reminders accurately based on specified location parameters. | |  | | |
| Precondition:   1. The application is installed and functional. 2. GPS, location services, and network connectivity are enabled on the device. 3. Successfully login and goal/task missed previously | | | | |
| Test Steps | Test Data | Expected Results | Actual Results | Status (Pass/Fail) |
| 1. Create a new goal within the application. 2. Fill up the information. 3. Check that Goals are saved successfully without any error. | Reminder name: Class Reminder time: 8am | The reminders trigger accurately and promptly upon reaching the specified location. |  |  |
| Post Condition: User will be notify through notification. | | | | |

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| --- | --- | --- | --- | --- |
| Project Name: GPS-Based Reminder | | Test Designed by: | | |
| Test Case ID: NFR\_1 | | Test Designed Date: | | |
| Test Priority: High | | Test Executed by: | | |
| Module Name: Set Goal | | Test Execution Date: | | |
| Test Title: Integrity Test for GPS-Based Reminder Data | |  | | |
| Description: To verify the integrity of the data stored and retrieved by the GPS-based reminder application, ensuring consistency and accuracy in reminder information. | |  | | |
| Precondition:   1. The application is installed and functional. 2. GPS, location services, and network connectivity are enabled on the device. 3. Successfully login and goal/task missed previously | | | | |
| Test Steps | Test Data | Expected Results | Actual Results | Status (Pass/Fail) |
| 1. Create a new goal 2. Save it 3. Access the list of set goals with in the application 4. Verify the data | Goal name: Class  Set time:8 am  Date:27/12/2023 | All reminders created should be saved and displayed accurately within the application. |  |  |
| Post Condition: User can see the set data who have an account for the application. | | | | |

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| --- | --- | --- | --- | --- |
| Project Name: GPS-Based Reminder | | Test Designed by: | | |
| Test Case ID: NFR\_2 | | Test Designed Date: | | |
| Test Priority: High | | Test Executed by: | | |
| Module Name: Set Goal | | Test Execution Date: | | |
| Test Title: Interoperability Test for GPS-Based Reminder Data | |  | | |
| Description: To verify the interoperability of the GPS-based reminder application with external systems or services for seamless integration and data exchange. | |  | | |
| Precondition:   1. The application is installed and functional. 2. GPS, location services, and network connectivity are enabled on the device. 3. Successfully login and goal/task missed previously | | | | |
| Test Steps | Test Data | Expected Results | Actual Results | Status (Pass/Fail) |
| 1. Establish a connection or link between the application and the external system/component intended for integration. 2. Ensure the integration link is properly configured and active. 3. Set the application to send reminder data or location information to the external system. | Goal name: Class  Set time:8 am  Date:27/12/2023  Location: Latitude 40.7128, Longitude -74.0060 | Data transmission between the GPS-based reminder application and the external system occurs without errors or loss. |  |  |
| Post Condition: User can set the set data without any error. | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Project Name: GPS-Based Reminder | | Test Designed by: | | |
| Test Case ID: NFR\_3 | | Test Designed Date: | | |
| Test Priority: Medium | | Test Executed by: | | |
| Module Name: Add Socially | | Test Execution Date: | | |
| Test Title: Reusability Test for GPS-Based Reminder | |  | | |
| Description: To verify the reusability aspects of the GPS-based reminder application by creating, reusing, and managing reminders efficiently. | |  | | |
| Precondition: Successfully login. | | | | |
| Test Steps | Test Data | Expected Results | Actual Results | Status (Pass/Fail) |
| 1. Go to the add socially page 2. Shear your plan with others through the account link | Profile link:  http://asdf.gps\_based\_reminder | Target to copy the profile link |  |  |
| Post Condition: User will able to copy the profile link | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Project Name: GPS-Based Reminder | | Test Designed by: | | |
| Test Case ID: NFR\_4 | | Test Designed Date: | | |
| Test Priority: Medium | | Test Executed by: | | |
| Module Name: Set Goal, Registration, Add Socially  Settings | | Test Execution Date: | | |
| Test Title: Availability Test for GPS-Based Reminder | |  | | |
| Description: To verify the availability of the GPS-based reminder application under various scenarios to ensure its accessibility and functionality. | |  | | |
| Precondition: Valid username and password | | | | |
| Test Steps | Test Data | Expected Results | Actual Results | Status (Pass/Fail) |
| 1. First on the internet connection and location. 2. Launch the application. 3. Check all the functionality. 4. Then restore the internet connection and check is the application work properly . | User name:Hamim123  Password: 123aadwfef54 | The application should have an intuitive interface with straightforward navigation. |  |  |
| Post Condition: User will able to navigate easily. | | | | |

# ITEM PASS/FAIL CRITERIA

The feature test for the software system will be considered successfully completed under the following conditions:

The project manager verifies the accuracy of the data through appropriate validation processes, ensuring that the submitted data aligns with expected values and business rules. The submitted data should exhibit consistency and completeness, adhering to predefined data format and structure. Any discrepancies or errors identified during the verification process are documented

and appropriately resolved in collaboration with the concerned parties. All parallel processes involving data collection effectively stopped for the initial set of distributors upon successful verification of data accuracy. The project manager confirms their satisfaction with the accuracy, integrity, and completeness of the data, signifying their confidence in the system's functionality. Once all above criteria are met, the initial set of distributors will be transitioned from a test state to an active state within the system.

The feature test will be considered failed if any of the following conditions are met:

The initial set of distributors fails to submit reassigned sales data consistently for the designated one-month period. The project manager identifies significant inaccuracies in the submitted data, rendering it unsuitable for operational use. The submitted data consistently fails to adhere to the defined data format and structure, impeding successful integration. Critical discrepancies or errors identified during the verification process remain unresolved, indicating issues in error handling and data correction procedures. The project manager expresses dissatisfaction with the accuracy or reliability of the data, reflecting uncertainties about the system's readiness.

In case of a failed feature test, the necessary corrective actions, debugging, and retesting procedures will be initiated to address the identified issues and ensure the successful completion of the test process.

# TEST DELIVERABLES

The following are the test deliverables that will be produced as part of the testing process:

**Acceptance Test Plan:** A comprehensive document outlining the scope, objectives, approach, schedule, and criteria for the acceptance testing phase. This plan serves as a blueprint for conducting the tests that determine whether the software meets specified requirements.

**System/Integration Test Plan:** A detailed document specifying the procedures, test cases, data, and resources required for the system and integration testing phases. This plan ensures that the software components work together seamlessly and that potential integration issues are identified and addressed.

**Unit Test Plans/Turnover Documentation:** Individual plans for testing each software unit or component, outlining the specific tests to be executed and the expected outcomes. Turnover documentation includes information needed for transferring control from development to testing teams.

**Screen Prototypes:** Visual representations of the user interface screens or layouts, providing a visual reference for designers, developers, and testers. These prototypes help ensure the user interface aligns with requirements and expectations.

# STAFFING AND TRAINING NEEDS

For the successful execution of the project's testing phases and to ensure comprehensive training for involved personnel, the following staffing and training needs have been identified:

### Staffing:

**Tester Assignment:** At least one (1) full-time tester should be assigned to the project for the system/integration and acceptance testing phases. This tester will play a crucial role in ensuring the quality and functionality of the software.

**Part-Time Participation:** Initially, a person will be assigned part-time to participate in project reviews and other relevant activities. This early involvement will facilitate better understanding of the project's scope and requirements.

**Full-Time Assignment:** Approximately four months into the project, the part-time participant will transition to a full-time role as the primary tester. This dedicated commitment is essential for conducting thorough testing activities.

**Contingency Role:** In the event that a separate test person is not available, the project manager or test manager will assume the testing role. This ensures that testing responsibilities are fulfilled even if dedicated testers are unavailable.

### Training:

**Interface Training:** Developers and testers need to be trained on the basic operations of the interface. This training will enable them to understand the processes, data exchange mechanisms, and potential challenges.

**Operations Staff Training:** The operations staff, responsible for managing communications in the production environment, requires complete training on the communications process. This training ensures they can effectively handle real-world data exchanges and resolve any operational issues.

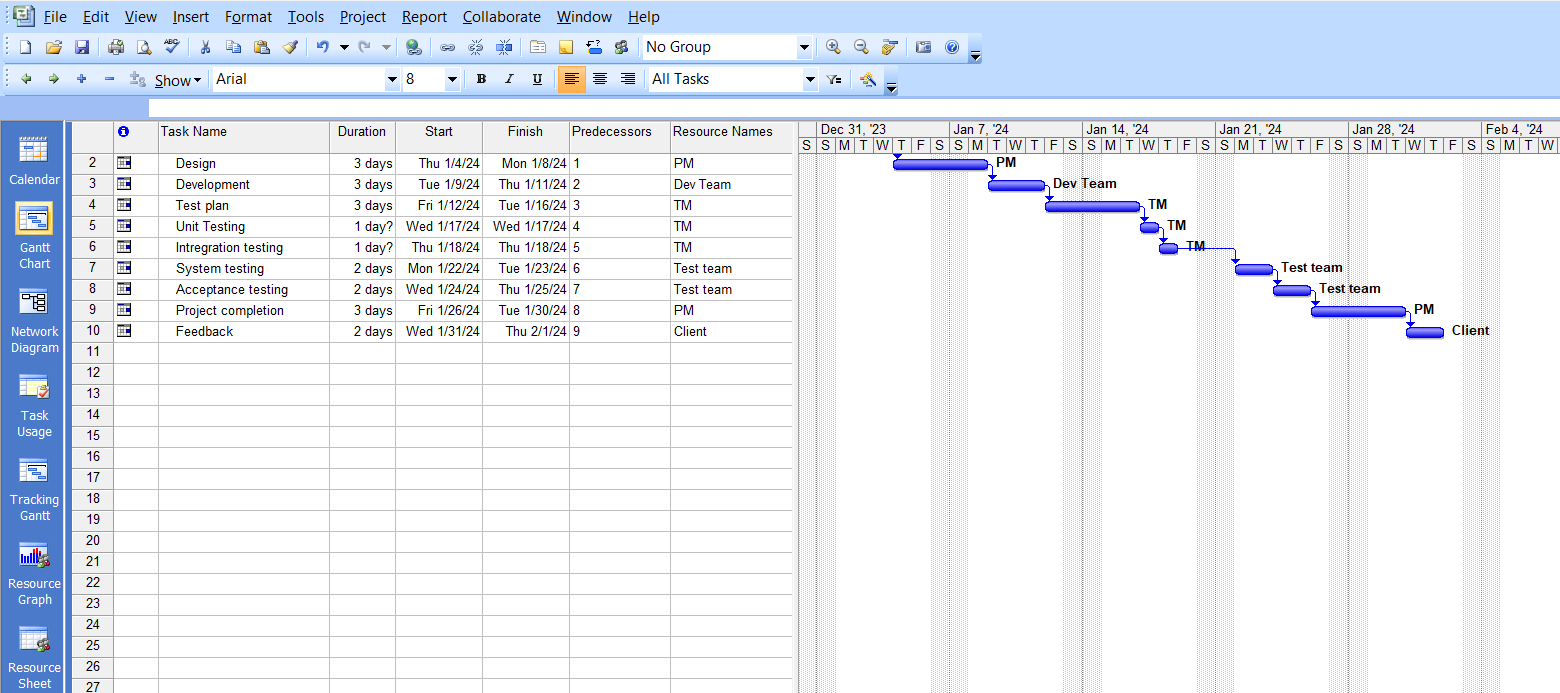
By addressing these staffing and training needs, the project aims to ensure that all involved personnel are equipped with the necessary skills and knowledge to effectively contribute to the testing process and to operate the software in their respective roles. This approach promotes a smooth transition from development to testing and eventual production use, while maintaining a high standard of quality and usability.

# RESPONSIBILITIES

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | TM | PM | Dev Team | Test Team | Client |
| Acceptance test documentation & Execution | X | X |  | X | X |
| System/Integration test documentation & Execution | X |  | X | X |  |
| Unit test documentation & Execution | X |  | X | X |  |
| System design reviews | X | X | X | X | X |
| Detail design reviews | X | X | X | X |  |
| Test procedures and rules | X | X | X | X |  |
| Screen and report prototype reviews |  |  | X | X | X |
| Change control and regression testing | X | X | X | X | X |

# TESTING SCHEDULE

Time has been allocated within the project plan for the following testing activities. The specific dates and times for each activity are defined in the project plan timeline. The persons required for each process are detailed in the project timeline and plan as well. Coordination of the personnel required for each task, test team, development team, management and customer will be handled by the project manager in conjunction with the development and test team leaders. Schedule must be done using any Microsoft Project Management tool.



# PLANNING RISKS AND CONTINGENCIES

Risks can have a big impact on a software development project's success. For instance, risks connected to the timetable can result in delays, which can increase project costs and even generate client displeasure. Inaccurate cost estimates can also result in cost-related hazards, which can have an adverse effect on the project's overall success and cause financial problems.

If assigned staff availability becomes an issue, prioritize and allocate available staff to critical tasks, such as document reviews and acceptance testing. This shortage may result in delays in document reviews and participation in the Acceptance testing process. Delays in reviews and testing could lead to schedule slippages, potentially affecting the overall project timeline.

Be prepared to adjust the review and testing schedules according to the availability of assigned staff. Communicate the revised schedules clearly to all stakeholders. Explore the possibility of temporary staffing to assist with document reviews and testing. Temporary staff could help alleviate the resource shortage and ensure timely completion of tasks.

Identify individuals within the team who can temporarily assist with reviewing documents and participating in testing, even if it's not their primary role. Cross-training can help distribute workload and prevent bottlenecks. Where possible, identify tasks that can be worked on in parallel to compensate for potential delays in reviews and testing. This approach can help keep the project moving forward despite resource limitations.

By proactively addressing the risk of limited assigned staff and implementing these contingency measures, the project can mitigate the potential negative impacts on the schedule and ensure that the review and testing processes are executed effectively and without compromising quality.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S/N** | **Risk Description** | **Probability** | **Impact** | **Mitigation Plan** |
| 1 | Imperfect time estimate | 60% | Delay on project delivery. | Use multiple time estimation. |
| 2. | Inaccurate cost estimation | 30% | Negatively effect on project success. | Utilize historical project data and industry benchmarks |
| 3 | Delays in reviews and testing | 10% | Delay on project delivery. | Adjust the review and testing schedules. |
| 4 | Insufficient resource | 20% | Delay on testing | Check the required resource available before start the testing. |

# APROVALS

|  |  |
| --- | --- |
| Project Manager | Syed Foysal |
| Developer | Hamim Hossein |
| Test Lead | Imran Khan |
| Test Planner | Tahajjod Bhuiyan |
| Tester | Syed Foysal |
| End User | Foysal  Hamim  Imran  Tahajjod |