Group 03

Memoir
<Iteration/ Master> Test Plan

Version 1.1

Revision History

Date	Version	Description	Author
16/07/2025	1.0	Add introduction part	Nguyễn Thị Trà My
17/07/2025	1.1	Add target test items, environmental needs, People and Roles	Nguyễn Thị Trà My

Table of Contents

<Iteration/ Master> Test Plan

1. Introduction

1.1 Purpose

- This document outlines the test plan for our project: Memoir_ a contact-based note management application.
- It provides a comprehensive guide to the testing objectives, strategy, scope, resources, schedule, and quality assurance activities. This test plan is essential for verifying that the application meets its functional and non-functional requirements and is ready for deployment.

1.2 Objectives

- Verify and validate the main features of the app, especially the integrity between notes and contacts.
- Ensure correct integration of extended functionalities such as calendar synchronization, map linking, graph view, and account-based data operations.
- Uncover defects related to UI navigation, note relationships, data persistence, and cloud syncing.
- Evaluate the overall quality of the software in terms of its functionality, performance efficiency, user experience, and security reliability.
- Minimize risks of data loss, navigation loops, broken links between notes, or calendar mismatches.
- Enhance assurance regarding the application's stability and readiness for production deployment.

1.3 Scope

- This test plan covers the following areas of the Contact-based Note Management Application:
    - **Functional testing**: Verify all core features including contact and note management, calendar integration, map linking, graph view navigation, and account-based data upload/download.
    - **Performance testing**: Evaluate responsiveness when handling multiple notes, loading graph views, or syncing data.
    - **Usability testing**: Evaluate the user interface for intuitiveness and ease of navigation across key components, including contacts, notes, and the graph, map, and calendar views.
    - **Security testing**: Test authentication mechanisms and restrict data access to authorized users only.

1.4 Target Audience

- This document is intended for:
    - Project Managers: To monitor the test plan progress and risk mitigation.
    - Developers: To align development with test requirements.
    - QA/Testers: To execute and track test cases, report bugs.
    - Supervisors: To evaluate testing completeness and planning.

1.5 Key features

- **Detailed test strategy**: Describes the overall approach to testing, including levels (unit, integration, system), types (functional, usability, performance, etc.), and environments.
- **Comprehensive test cases**: Specifies step-by-step procedures and expected results for each feature to ensure accurate validation.
- **Clearly defined roles and responsibilities**: Identifies team members responsible for test execution, review,

and issue resolution.

- **Well-structured test schedule**: Outlines timelines and milestones for all testing phases, including planning, execution, and reporting.
- **Risk assessment and mitigation**: Lists potential risks during testing and describes corresponding mitigation plans.
- **Defect tracking and reporting process**: Establishes a standardized method for reporting, tracking, and resolving defects found during testing.

2. Target Test Items

1. **Note Management Feature (Create, Read, Update, Delete Notes)**
   - **Functional Testing:** Verify that each CRUD operation behaves as expected.
   - **API Testing (via Postman):** Test all note-related REST endpoints using both valid and invalid inputs.
   - **Usability Testing:** Evaluate how easily users can interact with notes and receive system feedback.

2. **Contact Management Feature**
   - **Functional Testing:** Validate the ability to create, view, and manage multiple contacts.
   - **Data Relationship Testing:** Ensure that each contact can be associated with multiple notes correctly.

3. **Calendar & Reminder Integration**
   - Functional Testing: Confirm that notes with scheduled times appear correctly on the calendar.
   - Reminder Testing: Verify that reminders are triggered as expected.
   - Usability Testing: Assess clarity of calendar display and interaction.

4. **Map Integration for Notes with Address**
   - **Functional Testing**: Ensure that tapping an address in a note correctly opens the location in the map view.
   - **Device Testing (Android only)**: Confirm that the feature behaves correctly across a range of Android device types and screen sizes.
   - **Usability Testing**: Check that the map opens quickly and intuitively, and that navigation from the note to the map is seamless.

5. **Note Linking & Graph View**
   - **Functional Testing:** Test the linking of notes and rendering of the note graph.
   - **Navigation Testing:** Validate that clicking the root node opens the note view and other nodes update the graph accordingly.
   - **Performance Testing:** Ensure graph rendering is responsive, even with many linked notes.

6. **Local Data Upload/Download**
   - **Functional Testing:** Confirm that only authenticated users can successfully upload data to and download data from the database.
   - **Security Testing:** Ensure that only authenticated users can access the upload/download feature by verifying their login status before granting access.
   - **Data Integrity Testing:** Ensure that no data is lost, altered, or corrupted during the upload/download process.

7. **Authentication**
   - **Security Testing:** Test registration, login, and access control to ensure only authenticated users can use restricted features.
   - **Usability Testing:** Evaluate the clarity and responsiveness of the authentication UI.

3.   Environmental Needs

3.1   Hardware Requirements

- Devices capable of running Android applications (smartphones or tablets with Android OS).
- Machines able to run Android Studio, Visual Studio Code, and Postman for development and testing purposes.

3.2   Software in the Test Environment

The following base software elements are required in the test environment for this *Test Plan*.

Software Name	Purpose	Version	Type and Other Notes
Android Studio	Run Android emulator	2025.1.1	Used for functional and UI testing
Postman	API testing tool	Latest	Used to test backend endpoints during testing
Android Emulator	Simulate Android devices	35.6.11.0	For testing app behavior on virtual devices

3.3   Productivity and Support Tools

The following tools will be employed to support the test process for this *Test Plan*.

Tool Category or Type	Tool Brand Name	Vendor or In-house	Version
Test Case Management	MS Excel (Web-based)	Microsoft	Microsoft 365
Defect Tracking	Trello	Atlassian	Web-based (latest)

4.   Responsibilities, Staffing, and Training Needs

4.1   People and Roles

This table shows the staffing assumptions for the test effort.

Human Resources		
Role	**Minimum Resources Recommended** **(number of full-time roles allocated)**	**Specific Responsibilities or Comments**
Test Manager	Nguyễn Thị Trà My	- Provides management oversight. - Responsibilities include: ● Define the overall test strategy and approach ● Plan and schedule testing activities ● Coordinate with project stakeholders to align testing with project goals ● Allocate and manage testing resources effectively ● Monitor testing progress and manage risks ● Prepare and present test status reports to stakeholders ● Ensure testing adheres to quality standards and project constraints ● Advocate for the testing process within the development team ● Review and evaluate the effectiveness of the test effort
Manual Tester	Nguyễn Gia Huy Phạm Nam Huyên	- Executes test cases manually to validate system behavior against requirements. - Responsibilities include: ● Derive test cases from requirements and UI/UX designs ● Design clear, traceable test cases and prepare test data ● Execute manual functional, UI, regression, usability, and exploratory tests ● Log bugs with detailed steps and supporting evidence ● Collaborate with the team to clarify issues and verify bug fixes

Human Resources		
Role	**Minimum Resources Recommended** **(number of full-time roles allocated)**	**Specific Responsibilities or Comments**
Automation tester	Huỳnh Tuấn Phong Bùi Hải Long Nguyễn Thị Trà My	- Implements and maintains automated tests to validate critical features with speed and consistency. - Responsibilities include: ● Analyze requirements and work with manual testers to identify automation needs ● Design, implement, and maintain automated unit,widget, automation tests ● Coordinate with developers to ensure test coverage of critical components ● Review and debug test scripts to ensure reliability and performance ● Report and communicate test results clearly to the team
Test System Administrator	Nguyễn Thị Trà My	Ensures the test environment and assets are managed and maintained. Responsibilities include: ● administer test management system ● install and support access to, and recovery of, test environment configurations and test labs