System test plan of the Fuma Free App

1. References

A. IEEE 829 – Standard for Software Test Documentation
B. Product Requirements Document
C. UI Wireframes – App Screens
D. User Stories Document

2. Introduction

The purpose of this test plan is to define the strategy, scope, resources, and schedule for the system testing of the Fuma Free Application. The goal is to verify the app's ability to track progress, log habits, manage goals, and award achievements based on user behavior. This testing will focus on validating functionality, usability, and data integrity across all features. Scope of the plan covers the four screens of the application. Constraints are that testing must be completed within a two-week window, testing is only manual due to time and resource constraints. Our budget allows for two testers and two test devices or emulators.

3. Test Items

A. User interactions: logging, adding, deleting, and resetting data in all the following screens:
   - Progress Screen
   - Goals Screen
   - Diary Screen
   - Achievements Screen
B. Data persistence across sessions

4. Software Risk Issues

A. Data loss or corruption during reset or delete actions
B. Incorrect calculations (e.g., money saved, cigarettes avoided)
C. Improper unlocking or resetting of achievements
D. Crashes during logging or custom input
E. Performance issues

5. Features to be Tested

A. Progress Screen: Cigarettes avoided, money saved, life gained, time to longest streak
B. Goals Screen: Add/edit/delete goals, money tracking, completion confirmation
C. Diary Screen: Log habit entries, add custom activities, visualize entries on timeline
D. Achievements Screen: Time/health-based unlocks, reset on relapse, visual feedback

6. Features Not to be Tested

A. Backend API
B. Analytics/tracking systems
C. App store deployment process
D. Localization/multilingual support
E. All platform support except android

7. Approach

A. The current testing level is system testing. At least two full-time testers are needed. Testing will be conducted by the testers as well as by the developers.

B. No additional tools will be used for testing. Testing will be performed manually with exploratory and scenario-based methods.
Focus areas include:
- Functional Testing
- UI/UX Testing
- Negative Testing (e.g., empty inputs)
- Data Persistence Testing

C. Short meetings will be held every two days with developers and testers to communicate the progress.

D. The following metrics are collected during testing: time spent on a defect investigation, defect severity, defect origin (requirement, design or code).

8. Item Pass/Fail Criteria

Pass criteria:

A test case will be considered passed if the feature behaves as described in the user stories and functional specifications, the system displays accurate data, the app responds correctly to usre

inputs, no high or critical bugs are found during execution, data is correctly retrieved and maintained during sessions.

Fail criteria:

A test case will be considered failed if the expected output or behavior does not occur, the calculations are incorrect, the app crashes, critical bug prevents the user from completing a task.

9. Suspension Criteria and Resumption Requirements

Suspend: Testing will be paused if:
- Build is unstable or crashes frequently
- Critical defects block core user flows
Resume: Once blocking defects are resolved and verified in a new build

10. Test Deliverables

A. Test Plan Document
B. Test Case Suite
C. Bug Reports
D. Test Execution Reports
E. Final Test Summary Report

11. Remaining Test Tasks

A. Complete test case writing (QA Lead)
B. Set up test environments (QA Lead, QA testers)

12. Environmental Needs

A. Devices: Android 12+ emulators
B. Local database for testing data persistence

13. Staffing and Training Needs

A. Test Lead is needed for test planning and reporting
B. 2 QA Testers are needed for test execution
C. Training consists of: Familiarization with app, UI flow, and use cases

14. Responsibilities

QA Lead: Test planning, final report
QA Testers: Test execution, logging bugs
Dev Team: Fixing defects, assisting in root cause analysis
PM: Scheduling

15. Schedule

- Test Planning: May 15 – May 16
- Test Case Development: May 16 – May 18
- Test Execution: May 19 – May 21
- Bug Fixing & Re-test: May 22 – May 24
- Final Regression & Summary: May 25
- Test Closure: May 26

16. Planning Risks and Contingencies

A. Risk: Delayed builds from development team
   Contingency: Coordinate earlier cut-off dates for fixes

B. Risk: Incomplete feature implementation
   Contingency: Defer testing to next sprint or re-scope test set

C. Risk: Unavailable test devices
   Contingency: Use emulators

17. Approvals

Name	Role	Signature
QA Lead	Test Planner	
Product Owner	Business	
Project Manager	Schedule	

18. Glossary

QA: Quality Assurance
Test Case: A specific condition to validate a feature
Regression: Re-testing previously tested features after a change
Streak: Continuous period of non-smoking
Achievement: Reward for maintaining non-smoking behavior