Test Documentation

Project: FunFlip Game

Authors:

Ashish Ghaskata  
Krishna Raj Bhandari

Suraj Bhatta

Mohammad Adnan Khan

**Documentname:** AB-Funflip Game-Test Doc

**Creation date:** 20.06.2025

Table of Contents

[1. Introduction 2](#_Toc201627884)

[1.1 Purpose 2](#_Toc201627885)

[1.2 Scope 2](#_Toc201627886)

[2. Test Specification 2](#_Toc201627887)

[Test Cases 2](#_Toc201627888)

[3. Test Protocol 5](#_Toc201627889)

[Test Results Summary 5](#_Toc201627890)

[Defect Log 6](#_Toc201627891)

[Conclusion 6](#_Toc201627892)

[References 6](#_Toc201627893)

# 1. Introduction

## 1.1 Purpose

This document specifies the test plan and protocol for the FunFlip educational game, ensuring all functional and non-functional requirements are validated.

## 1.2 Scope

Covers all game functionalities including start screen, navigation, gameplay logic, UI feedback, and performance.

# 2. Test Specification

Each test case includes:

* Name
* Tested Requirement
* Precondition
* Postcondition
* Test Steps
* Expected Result
* Test Infrastructure

## Test Cases

**TC01: Start Screen Display**

* **Tested Requirement**: Start screen loads within 0.5s
* Precondition: App installed and launched
* Postcondition: Start screen visible
* Test Steps: Launch app
* Expected Result: Start screen appears within 0.5s
* Test Infrastructure: Mobile device, stopwatch

**TC02: Play Button Navigation**

* Tested Requirement: Play button leads to category selection
* Precondition: On start screen
* Postcondition: Category selection visible
* Test Steps: Tap Play button
* Expected Result: Category selection appears
* Test Infrastructure: Mobile device

**TC03: Quit Button Functionality**

* Tested Requirement: App exits on Quit button
* Precondition: On start screen
* Postcondition: App closes
* Test Steps: Tap Quit button
* Expected Result: App exits
* Test Infrastructure: Mobile device

**TC04: Category Selection**

* Tested Requirement: Category selection works
* Precondition: On category selection screen
* Postcondition: Level selection screen shown
* Test Steps: Tap category
* Expected Result: Level selection loads
* Test Infrastructure: Mobile device

**TC05: Level Selection**

* Tested Requirement: Level selection loads correct grid
* Precondition: On level selection screen
* Postcondition: Game board loads
* Test Steps: Tap level
* Expected Result: Game board displayed
* Test Infrastructure: Mobile device

**TC06: Card Match Success**

* Tested Requirement: Matching cards stay revealed
* Precondition: Game board loaded
* Postcondition: Matched cards remain visible
* Test Steps: Flip two matching cards
* Expected Result: Cards stay revealed, sound plays
* Test Infrastructure: Mobile device, Godot debugger

**TC07: Card Match Failure**

* Tested Requirement: Mismatched cards flip back
* Precondition: Game board loaded
* Postcondition: Cards flip back
* Test Steps: Flip two non-matching cards
* Expected Result: Cards flip back after delay
* Test Infrastructure: Mobile device, Godot debugger

**TC08: Audio Toggle**

* Tested Requirement: Audio can be muted/unmuted
* Precondition: Game running
* Postcondition: Audio state changes
* Test Steps: Mute audio in options
* Expected Result: Audio is muted
* Test Infrastructure: Mobile device

**TC09: Back Button Handling**

* Tested Requirement: Back button navigates or debounces
* Precondition: On any screen
* Postcondition: Previous screen or no effect on spam
* Test Steps: Tap back repeatedly
* Expected Result: One back action processed
* Test Infrastructure: Mobile device

**TC10: Response Time Validation**

* Tested Requirement: Action response within 0.5s
* Precondition: Game board loaded
* Postcondition: Action completed
* Test Steps: Flip card
* Expected Result: Card flips in ≤0.5s
* Test Infrastructure: Stopwatch, mobile device

# 3. Test Protocol

## Test Results Summary

|  |  |  |
| --- | --- | --- |
| **Test Case** | **Result** | **Notes** |
| TC01 | Pass | Start screen loaded fast |
| TC02 | Pass | Play button worked |
| TC03 | Pass | Quit button closed app |
| TC04 | Pass | Category selection worked |
| TC05 | Pass | Level loaded correctly |
| TC06 | Pass | Match logic correct |
| TC07 | Pass | Mismatch handled |
| TC08 | Pass | Audio toggle functional |
| TC09 | Pass | Back button debounced |
| TC10 | Pass | Flip response within time |

## Defect Log:

|  |  |  |
| --- | --- | --- |
| **Test Case** | **Defect Class** | **Description** |
| TC07 | 5 (Cosmetic) | Slight delay in card flip-back beyond ideal timing |
| TC04 | 4 (Small deviation) | Minor button alignment issue on category selection screen |

Conclusion:  
All mandatory functional and non-functional requirements were fulfilled. No critical defects (Class 1–3) were found. Minor cosmetic issues were documented and accepted as non-blocking for delivery.

## 4. References

* Requirements Documentation
* Architectural Documentation
* SWE\_SoSe2025\_DELIVERABLES.pdf
* tasks3\_document-check-list.pdf
* swe\_05\_test.pdf