

TEST PLAN – Golf Software Project

1. Introduction

This test plan defines the strategy, scope, resources, schedule, and test cases for validating the Golf Software System described in the SRS document *golfsrsrev.pdf*. The purpose of testing is to ensure that the system meets functional and non-functional requirements and behaves as expected under normal and abnormal conditions.

The test plan also includes assumptions, constraints, and justification for the selected testing approach.

2. Test Items

The following components will be tested:

- Input validation for golf course selection
- System response to valid and invalid course numbers
- Functional behavior defined in the SRS
- Error-handling mechanisms
- User interface behavior (if applicable)
- Data processing and output formatting

Items **not** tested:

- Performance testing (not required by SRS)
- Security testing (not specified in SRS)
- Integration with external systems (none defined)

3. Scope of Testing

In Scope

- Functional testing of all requirements in the SRS
- Boundary value testing for course numbers
- Error message validation
- System behavior under valid and invalid inputs
- Verification of expected outputs

Out of Scope

- Stress testing
- Load testing
- Usability studies
- Hardware compatibility testing

Justification: These areas are not mentioned in the SRS and exceed the project's academic scope.

4. Test Approach

A **black-box functional testing** approach will be used. Testers will not examine internal code; instead, they will verify system behavior based on inputs and expected outputs.

Testing techniques used:

- **Equivalence Partitioning**
- **Boundary Value Analysis**
- **Positive and Negative Testing**

All tests will be executed manually.

5. Test Environment

- Windows or macOS system
- Latest stable version of the Golf Software executable
- Standard keyboard and console interface
- No special hardware required

Resources:

- 1–2 student testers
- 1 developer (for defect resolution)

6. Entry and Exit Criteria

Entry Criteria

- SRS is complete
- Software build is available

- Test plan approved
- Test environment prepared

Exit Criteria

- All planned test cases executed
- All critical and major defects resolved
- Minor defects documented
- Test summary report completed

7. Test Deliverables

- Test Plan (this document)
- Test Cases Appendix
- Defect Reports
- Test Summary Report

8. Schedule

Assuming a 1-week testing window:

Activity	Duration	Notes
Review SRS	0.5 day	Required for understanding
Prepare test cases	1 day	Based on SRS
Execute tests	3 days	Manual testing
Retesting & regression	1 day	After fixes
Final reporting	0.5 day	Summary

Assumptions:

- Developer turnaround time for fixes is 24 hours.
- No major redesigns required.

9. Risk Analysis

Risks

- SRS may contain ambiguities
- Limited time for retesting
- Developer availability constraints

Mitigation

- Clarify requirements early
- Prioritize critical test cases
- Communicate defects promptly

APPENDIX A – TEST CASES

Below are the test cases required for submission.

Test Case 1

ID: TC-01 **Requirement:** System shall accept golf course number 1 **Input:** 1 **Expected Output:** "Course 1 selected successfully." **Type:** Functional **Pass/Fail Criteria:** Output matches expected message

Test Case 2

ID: TC-02 **Requirement:** System shall accept golf course number 5 **Input:** 5 **Expected Output:** "Course 5 selected successfully." **Type:** Functional

Test Case 3

ID: TC-03 **Requirement:** System shall reject golf course number 6 **Input:** 6 **Expected Output:** "Error: Invalid course number." **Type:** Functional (Negative)

Test Case 4

ID: TC-04 **Requirement:** System shall reject golf course number 0 **Input:** 0 **Expected Output:** "Error: Invalid course number." **Type:** Functional (Negative)

Additional Recommended Test Cases

Test Case 5

ID: TC-05 **Requirement:** System shall reject non-numeric input **Input:** "abc" **Expected Output:** "Error: Input must be a number."

Test Case 6

ID: TC-06 **Requirement:** System shall reject negative numbers **Input:** -3 **Expected Output:**
"Error: Invalid course number."

Test Case 7

ID: TC-07 **Requirement:** System shall handle whitespace input **Input:** " " **Expected Output:**
"Error: No input detected."