MUWFS LAGORN BUGS, INC.

System Test Plan for GolfScore

Revision 1.0.1

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Contents

1.0 Introduction

1.1. Objective

This document explains the test plan for GolfScore version 1.0.1
Contains information on what to test, how to test, and what not to test.
This document also includes description of the test plan, the test to be performed, the test dependencies, the requires resources, the test tools, and the matrices.

The focus of the test is to verify the software requirements Requirements Specification (SRS) for the GolfScore program, as included in Appendix A.

> *The Test Plan is an aggregation of information, which describes the entire test activity for this project. It covers the entire testing effort (unit, development test, system verification test, and Beta). It identifies the product requirements, schedules, resource requirements (people, effort and equipment), quality, assumptions, exclusions, and risks.*
>
> *A preliminary Test Plan is prepared for the Project Team during the System Phase of PEAQ Process. This Test Plan will be updated in the earliest possible time of the Implementation Phase, so that progress can be tracked during implementation.*

1.2. Test Description

Golfscore is a program used to generate tournament results for golfers on each course.
This program takes one input file and produces three output text files.
The GolfScore program does not require external dependencies.
The test is carried out in the following phases.

1. Input test To verify if the program can run correctly and handle input parameter errors as specified in the SRS.
2. Main test To verify the correctness of the execution of the program, to verify if the program correctly processes the input data as specified and generates the required output.
3. Output test To verify that the program produced the required output and saved it in the correct format and in the correct location.
4. Regression Testing After the error needs to be identified and processed during testing, all tests are run again to ensure proper behavior.
5. The following references were used in the preparation of this document.
6. GolfScore Software Requirements Specification, Revision 1.
7. System Verification Test Plan for Advanced Color Module, Revision 2.

2.0 Dependencies

The development team is supposed to run your code during software unit test development and also run integration tests. Customer validation tests are supposed to be performed by field representatives in conjunction with customers.

The development team must make the program available before October 1, 2021 to be consistent with the established schedule.

> *[All assumptions for carrying out this test effort successfully are listed here. Some requirements assumptions might be necessary in order to scope the test activities. Also, assumption of responsibility to conduct unit, integration, SVT, regression, and beta tests.*

Also listed here are the external dependencies, such as code completion by a certain date in order to meet the test schedule. Other dependencies might include prototype available and functional by a certain date.]

3.0 Test Requirements

Entrance Tests :

- The program is Written in C or C++.
- The program runs on a PC running on Windows 2000 or later versions.
- The program can be run from command line prompt.
- The program should run with valid parameters.

Main Tests :

- The number of golf courses specified for the tournament must be from 1 to 5.
- Each golfer is expected to play each course once.
- The number of golfers entered in each tournament can be from 2 to 12.
- Par for holes on each course must be either 3, 4 or 5.
- Score earned by a golfer for each hole played is between 0 and 6.
- There is a delimiter record that signal end of course records.
- There is delimiter record that signal ends of the input file.

Exit Tests :

- The program should produce number of reports corresponding to specified options.
- The generated reports should be saved as text file in the specified output directory with the extension .rep
- If requested the tournament ranking report should contain a list of all golfers in the specified format.
- If requested the course report should contain a section for each Golf Course listed in the input Course Records in the specified format.

[Itemize a list of system test requirements as extracted from Software Requirements Spec, Product Definition Document, and possibly Software Design Document. Every requirement should be listed as an item. This list will be used to trace test cases and procedures that verify/validate the requirements.

4.0 Test Tools

To aid Testing process the following testing tools are required.

- Defect reporting and tracking software.
- Installation media for multiple Windows version above 2000.

[Itemize a list of test tools needed to conduct the test activities. Identify existing tools as well as any to-be-developed or purchased tools. If some software tools need to be developed, describe the process to be used. The schedule and resource requirements must be identified and included in the sections that follow.]

5.0 Resource Requirements

The following resource required

- GolfScore program version 1.1
- Three PC capable of hosting virtual machines.
- A virtualization software .
- Four Test Group personnel.

[Based upon the test requirements identified in Section 3.0 and the tools development identified in Section 4.0, an estimate of resource required to accomplish the tests are performed. See Appendix A for details.]

6.0 Test Schedule

No.	Tests	Start	Finish
1	Test Development	01-29-2024	02-29-2024
2	Program Availability	03-29-2024	--
3	Entrance Test	03-29-2024	04-29-2024
4	Main Test	04-4-2024	04-14-2024
5	Exit Test	04-25-2024	04-28-2024
6	Regression Testing	04-29-2024	07.29.2021

[Based upon the resource requirements identified in Section 5.0, a test schedule can be planned. The test schedule must be compatible with the project overall schedule. Coordination with the Project Manager and Development Lead Engineers is essential in planning a realistic and workable schedule. See Appendix B for details.]

7.0 Risks/Mitigation

Without having a program that enforces compliance in the structure of input data there is a high probability of input data errors.

[List all potential risks in this section. There still might be risks even in a good plan. These should be identified and a mitigation plan developed.]

8.0 Metrics

The following metrics data will be collected. Some will be collected prior to and some after product shipment.

Prior to Shipment

Effort expended during DVT, SVT and Regression each defect is attribute to

Test Tracking PTR S-Curve.

After Shipment

Defects uncovered and development phase each defect is attribute to Size of software.

The following metrics data will be collected. Some will be collected prior to, and some after product shipment.

Prior to shipment:

Effort expended during DVT, SVT and Regression

# of defects uncovered during DVT, SVT and Regression, and development phase each defect is attributable to

Test tracking S-Curve

PTR S-Curve

After shipment:

# of defects uncovered and development phase each defect is attributable to

Size of software

Appendix A – Detailed Resource Requirements

No.	Tests	No.of Personnel	No.of Hours
1	Test Development	4	48
2	Entrance Testing	4	48
3	Main Testing	4	80
4	Exit Testing	4	56
5	Regression Testing	3	72

- PC that are capable of hosting virtual machines are required such that the program can be tested on multiple version of windows.
- A virtualization software is required such that multiple windows version can be installed to test the program.

[To estimate the resource, all test activities must be identified and resources needed to accomplish the activities estimated. Detailed estimates will be shown here. This consists of identifying all project test activities by the Test Group and the number of hours estimated to accomplish these activities. Be specific. Show specific responsible test engineer's names, if possible. A grand total of the effort must be shown here, as well as in Section 5.0.]

Appendix B – Detailed Test Schedule

No.	Tests	Start	Finish
1	Test Development	01-29-2024	02-29-2024
2	Program Availability	03-29-2024	--
3	Entrance Test	03-29-2024	04-29-2024
4	Main Test	04-4-2024	04-14-2024
5	Exit Test	04-25-2024	04-28-2024
6	Regression Testing	04-29-2024	07.29.2021

No.	Tests	Dependencies
1	Test Development	4 PCs 4 Personnel
2	Program Availability	GolfScore program
3	Entrance Test	4 PCs 4 Personnel Virtualization software
4	Main Test	4 PCs 4 Personnel Virtualization software
5	Exit Test	4 PCs 4 Personnel Virtualization software
6	Regression Testing	3 PCs 3 Personnel Virtualization software

[Attach two charts, viz. Gantt and PERT. In Gantt, main activities are shown as a list on the Y-column with bars parallel to the X-axis, showing the timeframe to perform activities. In PERT, dependencies of each activity must be identified.]

Appendix C – Detailed Test Cases

No.	Test Case	Test Type
1	The program shall be Written in C or C++.	Non-functional
2	The program shall run on a PC running windows 2000	Non-functional
3	The program shall run on PC running windows XP	Non-functional
4	The program shall run on PC running windows VISTA	Non-functional
5	The program shall run on PC running windows 7	Non-functional
6	The program shall run on PC running windows 8	Non-functional
7	The program shall run on PC running windows 10	Non-functional
8	The program shall run as a stand-alone executable	Non-functional
9	Command line options -ctg shall be accepted	Functional
10	Command line options –c shall be accepted	Functional
11	Command line options –t shall be accepted	Functional
12	Command line options –g shall be accepted	Functional
13	The number of golf course 1 shall be accepted	Functional
14	The number of golf course 5 shall be accepted	Functional
15	The number of golf course -5 shall be accepted	Functional
16	The number of golf course 6 shall be accepted	Functional
17	The number of golf course 0 shall return an error	Functional
18	The number of golfers 1 shall return an error	Functional
19	The number of golfers 2 shall be accepted	Functional
20	The number of golfers 12 shall be accepted	Functional
21	The number of golfers 13 shall return an error	Functional
22	Par for hole 2 shall return error	Functional
23	Par for hole 6 shall return error	Functional
24	Par for hole 3 shall be accepted	Functional
25	Par for hole 4 shall be accepted	Functional
26	Par for hole 5 shall be accepted	Functional
27	Calling the program with command line option –ctg shall generate 3 output file trank.rep, golfer.rep, course.rep. If any of the file already exit the user shall prompted with a message that say file already exits and asking it to overwrite it or not.	Functional
28	Calling the program with command line option –c shall generate output file course.rep. If file already exit the user shall prompted with a message that say file already exits and asking it to overwrite it or not.	Functional
29	Calling the program with command line option –t shall generate output file trank.rep. If file already exit the user shall prompted with a message that say file already exits and asking it to overwrite it or not.	Functional
30	Calling the program with command line option –g shall generate output file golfer.rep. If file already exit the user shall prompted with a message that say file already exits and asking it to overwrite it or not.	Functional
31	If output cannot be saved due to insufficient permission the program shall display error.	Functional