MSSE SOFTWARE, INC.

Test Plan for
GolfScore

Revision 1.1

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Contents

1.0 Introduction

1.1. Objective

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. Project Description

GolfScore is a software application designed to generate reports summarizing the performance of golfers in a tournament The program accepts input from a file that contains two types of records and produce output in the form of up to 3 reports. Forms of input and output are described in Software Requirements Specification Document.

1.3. Process Tailoring

The GolfScore program is self-contained and does not rely on any external dependencies. Therefore, the testing plan focuses on both Functional and Non-Functional Testing within the scope of Design Verification and System Validation. The testing process is divided into the following phases:

-Entrance Test:

It will verify that the program can process a standard input parameter correctly. See Appendix C for a description of the Entrance Test cases.

-Main Test:

It will verify the functionality of the program's software and hardware. The Main Test confirms that all the requirements specified in the Software Requirements Specification (SRS) have been met. Main test is divided into the following phases:

- ➢ Specification testing
- ➢ Functional testing
- ➢ Compatibility testing
- ➢ Documentation review

See Appendix C for a description of the Main Test cases.

-Exit Test:

The exit test verifies whether the program's output is correct and if it is being saved in the correct format.

See Appendix C for a description of the Exit Test cases.

-Regression Test:

Regression Test will be performed as a subset of Main Test to verify the integrity of the Program after all problems found during Main Testing have been attended to.

See Appendix C for a description of the Regression Test cases.

References:

-Software Requirements Specification for GolfScore Revision 1, July 18,2017.

-System Verification Test Plan for Advanced Color Module, Revision2, 22 February, 2000.

-Test Plan (a Real Sample) softwaretestinghelp.com Live Project Training OrangeHRM , 2 January 2014.

2.0 Assumptions/Dependencies

- Quality Assurance Group will carry out test case design activities.

- Developer Team will take ownership of test environment and preparation activities.

- To meet the scheduled confirmation, the development team needs to make the program available by April 1, 2023.

3.0 Test Requirements

- Entrance Testing

- The program run on a PC running Windows 2000 or any later version.

-Once executed, GolfScore will complete its processing within one minute.

-The program be run from a command line prompt.

-Input to the program will come from an input record file.

- The output file from the program will placed given name of the file directory or path where the output files should be placed.

-The output file from the program will placed the path containing filename will be used,if no path name is specified.

- Main Testing

-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 can be from 2 to 12.

-Par for each hole is either 3,4 or 5 strokes

-Golfer can earn for each hole from 0 to 6 score.

-Golfer's stroke count for a particular golf course is the sum of the stroke counts for each of the 18 holes.

-Input to GolfScore consist of a formatted text file, and it contains course records, delimeter records and golfer records, which are described in SRS document.[Section 2.4]

- Exit Testing

-The program should generate a number of reports based on input options.

- Output to GolfScore consist of a formatted text file.

- Output reports can be Tournament Ranking Report, Golfer Report and Course Report, which are described in SRS document.[Section 2.5]

4.0 Test Tools

-For execution of unit tests, Google test (gtest) are used.

-For managing tasks, tracking and organizing, JIRA are used as management application

-VirtualBox will be used creating virtual machine and installing Windows versions

-Installation of various Windows version from Windows 2000 to newest version (Windows 10)

5.0 Resource Requirements

Resource Requirements can be listed below:

- Human Resource

-1 Test manager: manage the whole project, reviewing tests documents. The manager is need to be Senior level.

-2 Tester: execute tests, entry the results and generate reports. One of the employees must be mid level and the other must be mid or junior.

-Project manager and Programming Lead: they and Test manager are responsible of reviewing test reports and take action based on current reports

- System Resource

-Computer:3 PC are required

6.0 Test Schedule

Developing a well-defined Schedule is a widely used practice in project management. By establishing a robust schedule during the Test Planning phase, the Test Manager can effectively monitor the advancement of the project and manage any potential cost overruns.

Applying test plan for GolfScore are planned from 01.04.2023 to 26.04.2023. The program need to be available at April 1, 2023. The detailed graph of test schedule can be seen at Appendix B.

7.0 Risks/Mitigation

Risk	Mitigation
Insufficient collaboration has a detrimental impact on the productivity of employee.	Encourage each team member in his task, and inspire them to greater efforts.
The project schedule is too tight.	Set Test Priority for each of the test activity.
Delayed Testing Due To new Problems, defects	If new defects are discovered, the defect management and issue management procedures are in place to immediately provide a resolution.

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

# 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

Task	Responsible Person	Estimate effort
Creating test specification	1 Tester (mid level) and Test manager	40 man-hour
Run Entrance Tests	1 Tester (mid level) and 1 Tester (junior level)	20 man-hour
Run Main Tests	1 Tester (mid level) and 1 Tester (junior level)	100 man-hour
Run Exit Tests	1 Tester (mid level) and 1 Tester (junior level)	20 man-hour
Run Regression Tests	1 Tester (mid level) and 1 Tester (junior level)	20 man-hour
Test Delivery	1 Tester (mid level), 1 Tester (junior level) and Test manager	10 man-hour
Reviewing test reports	Test manager, project manager and programming lead	10 man-hour
Total		220 man-hour

Table 1

Appendix B – Detailed Test Schedule

[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.]

Task Name	Start Date	End Date
Creating test specification	1.04.2023	5.04.2023
Run Entrance Tests	5.04.2023	7.04.2023
Run Main Tests	7.04.2023	18.04.2023
Run Exit Tests	18.04.2023	20.04.2023
Run Regression Tests	20.04.2023	24.04.2023
Test Delivery	24.04.2023	25.04.2023
Reviewing test reports	25.04.2023	26.04.2023

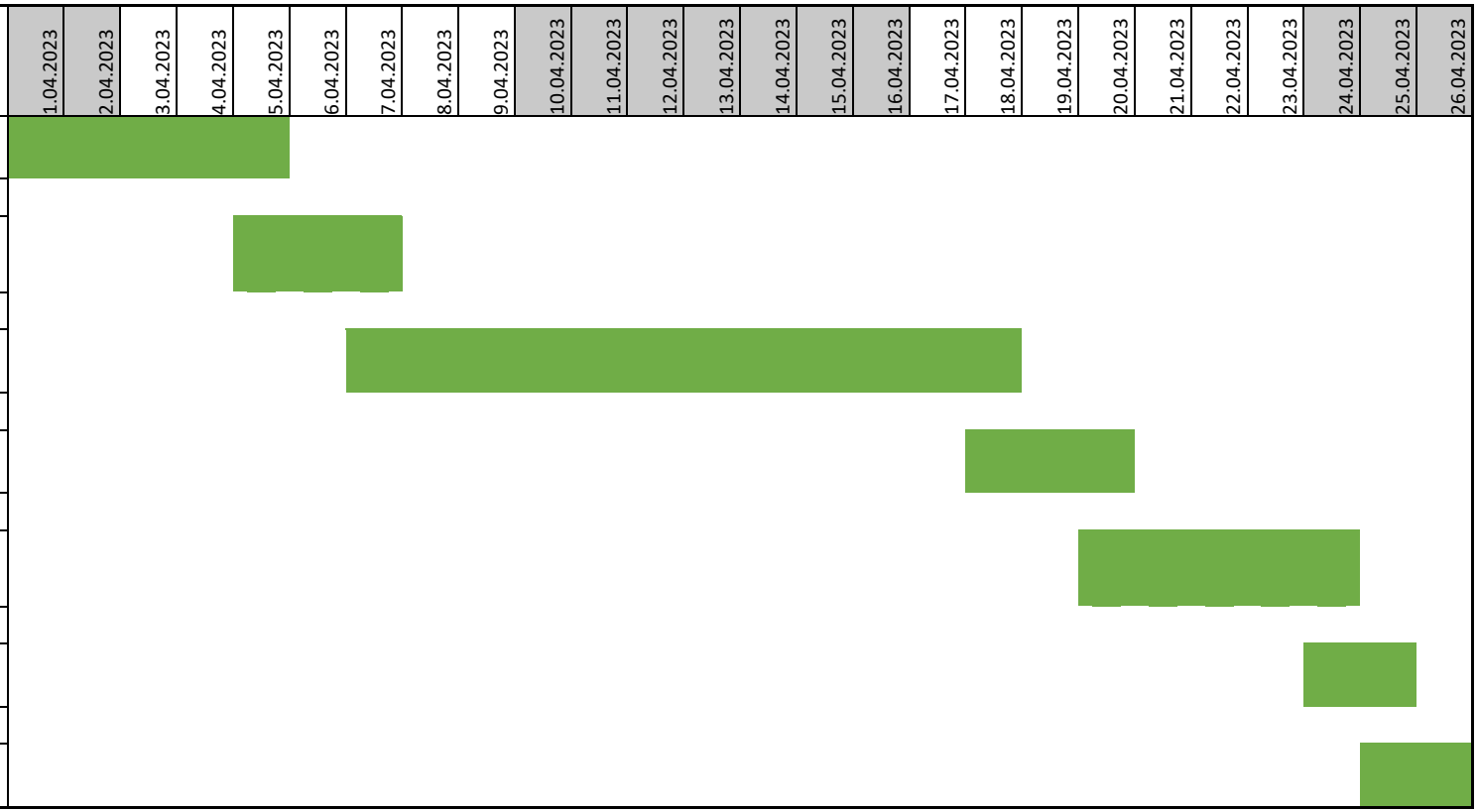

Table 2

Appendix C – Test Cases

Test No.	Test Case	Test
1	After executed,GolfScore shall complete its processing within one minute	Non-functional
2	GolfScore shall run on a PC running Windows 2000	Non-functional
3	GolfScore shall run on a PC running Windows XP	Non-functional
4	GolfScore shall run on a PC running Windows Vista	Non-functional
5	GolfScore shall run on a PC running Windows 7	Non-functional
6	GolfScore shall run on a PC running Windows 8	Non-functional
7	GolfScore shall run on a PC running Windows 10	Non-functional
8	GolfScore shall run from command line prompt	Non-functional
9	Command line option “-c” shall be accepted	functional
10	Command line option “-t” shall be accepted	functional
11	Command line option “-g” shall be accepted	functional
12	Command line option “-ct” shall be accepted	functional
13	Command line option “-ctg” shall be accepted	functional
14	Command line option “-h” shall be accepted and shall display help information	functional
15	Command line option “-a” shall display an unrecognizable option error message	functional
16	Command line option “-ha” shall display an unrecognizable option error message	functional
17	Command line option “-f4” shall display an unrecognizable option error message	functional
18	Command line option “-” shall display an input parameter error message	functional
19	Calling the program as “-tg – example.txt outputfile” where “in.txt” exits and is valid and folder “outputfile” exits shall be accepted	functional
20	Calling the program as “-tg – example.txt outputfile” where “in.txt” does not exit and folder “outputfile” exits shall display an input parameter error.	functional
21	Calling the program as “-tg – example.txt outputfile” where “in.txt” exits and folder “outputfile” does not exit shall display an input parameter error.	functional
22	The number of golf course “1” shall be accepted	functional
23	The number of golf course “5” shall be accepted	functional
24	The number of golf course “6” shall be accepted	functional
25	The number of golf course “0” shall be accepted	functional

26	Having non-numeric data in input file shall cause error message	functional
27	Having multiple records of the same golfer for same golf course shall be accepted and can generate files. But second data of golfer for same golf course will not be considered.	functional
28	The number of golfers "2" shall be accepted	functional
29	The number of golfers "5" shall be accepted	functional
30	The number of golfers "12" shall be accepted	functional
31	The number of golfers "20" shall return error	functional
32	Par values for hole "3" shall be accepted	functional
33	Par values for hole "2" shall return error	functional
34	Par values for hole "6" shall return error	functional
35	Golfer score per hole "0" shall be accepted	functional
36	Golfer score per hole "4" shall be accepted	functional
37	Golfer score per hole "7" shall return error	functional
38	Golfer score per hole "3" shall return error	functional
39	Having data that violates delimiter constrain in input file shall return an error	functional
40	Calling the program as "-c" shall generate an output file names "course.rep". If the requested output report already exits, the program ask user if the file should be overwritten or not..If respond of user is "Y" the output file will be overwritten.	functional
41	Calling the program as "-t" shall generate an output file names "trank.rep". If the requested output report already exits, the program ask user if the file should be overwritten or not..If respond of user is "Y" the output file will be overwritten.	functional
42	Calling the program as "-g" shall generate an output file names "golfer.rep". If the requested output report already exits, the program ask user if the file should be overwritten or not..If respond of user is "Y" the output file will be overwritten.	functional
43	Calling the program as "-ctg" shall generate an output file names "trank.rep", golfer.rep". "course.rep" .If the requested output reports already exit, the program ask user if the file should be overwritten or not..If respond of user is "Y" the output file will be overwritten.	functional