GolfScore
Test Report

Rohit Bagda, Moti Begna, Kalven Schraut

Rev	Date	Author	Change Description
1.0	3/29/23	Rohit Bagda Moti Begna Kalven Schraut	Original Distribution

1.   Overview

For this Test Report, we have created an updated Test Requirements/Test Cases document (revision 1.1) which resolves some of the inconsistencies we observed in the original revision. We then performed all the tests listed in the Test Cases section in the Test Requirements/Test Cases document (revision 1.1). We found 10 defects as listed in the Defects section in this document below. Most bugs found have medium and low impact on the functionality.

2.   Test Cases

2.1 Input Parameters

Test Case ID: 0

Tester: Rohit Bagda

When: 2023-03-29 20:47:49 CDT

Description: Running Java –version on a terminal / command prompt to get the version.

Expected Results: java version "1.8.0_xxx" should be output where xxx denotes the build number of java 8 you're running.

Executed Results: java version "1.8.0_291" is displayed.

Defects: N/A

Test Case ID: 2

Tester: Kalven Schraut

When: 2023-03-29 21:24:18 CDT

Description: Prior to running the golf program, the test will assert that course.rep does not exist in ~/gold-data. Next the test will run the executable, for instance golf -c ~/golf-data/GolfScoreTestHappyPath.txt, Next assert the course.rep file exists in ~/golf-data.

Expected Results: Report file is written in supplied same directory as input file

Executed Results: Report file is written in supplied same directory as input file

Defects: N/A

Test Case ID: 1

Tester:	Kalven Schraut
When:	2023-03-29 20:47:49 CDT
Description:	Test will start by running the executable with the -h option for example, golf -h. and assert the expected results.
Expected Results:	Help information is displayed to the console/stdout
Executed Results:	Help information is displayed
Defects:	N/A
Test Case ID:	2
Tester:	Kalven Schraut
When:	2023-03-29 21:24:18 CDT
Description:	Prior to running the golf program, the test will assert that course.rep does not exist in ~/gold-data. Next the test will run the executable, for instance golf -c ~/golf-data/GolfScoreTestHappyPath.txt, Next assert the course.rep file exists in ~/golf-data.
Expected Results:	Report file is written in supplied same directory as input file
Executed Results:	Report file is written in supplied same directory as input file
Defects:	N/A

Test Case ID:	3
Tester:	Kalven Schraut
When:	2023-03-29 21:26:58 CDT
Description:	Test will start by running the executable with a file path that does not exist and assert the expected results
Expected Results:	Error displayed about file not found
Executed Results:	GolfScore cannot access input file foo/bar
Defects:	N/A
Test Case ID:	4

Tester: `   Kalven Schraut

When: 2023-03-29 21:32:33 CDT

Description: Prior to running the golf program, the test will assert that course.rep does not exist in
                   the output directory /home/kalvens/golf-score. Next the test will start by running the
                   executable, for instance golf -c ~/golf-data/GolfScoreTestHappyPath.txt ~/golf-score.
                   Then assert course.rep is a file that exists in the directory.

Expected Results: Report file is written in supplied output directory

Executed Results: Report is in ~/golf-score

Defects: N/A

2.2 Input Parameter Errors

Test Case ID: **5**

Tester: Kalven Schraut

When: 2023-03-29 21:42:04 CDT

Description: Run the executable with an invalid output directory on the system and assert the
                   expected results

Expected Results: Error stating invalid output directory

Executed Results: GolfScore cannot access foo/\course.rep

Defect: B/A

2.3. Input Data Errors

Test Case ID: **6**

Tester: Kalven Schraut

When: 2023-03-29 21:43:46 CDT

Description: Run the executable with ~/golf-data/GolfScoreInvalidPars.txt as the input file and
                   assert the expected results

Expected Results: Error stating invalid par value

Executed Results:	Par value 23 for course a is not 3, 4 or 5
Defects:	N/A
Test Case ID:	**7**
Tester:	Kalven Schraut
When:	2023-03-29 22:03:46 CDT
Description:	Run the executable with ~/golf-data/GolfScoreDuplicateGolferForCourse.txt as the input file and assert the expected results
Expected Results:	Warning message is displayed about duplicate golfer for the same course

Executed Results:	Golfer has already played this course -- the record will be ignored

Here's the record: a   golfer name 20000001 749462181861465496
Golfer has already played this course -- the record will be ignored
                     Here's the record: b   golfer name 20000001 616786752621857781
Golfer has already played this course -- the record will be ignored
                     Here's the record: c   golfer name 20000001 644629191771438332
Golfer has already played this course -- the record will be ignored
                     Here's the record: d   golfer name 20000001 229625833948794276
Golfer has already played this course -- the record will be ignored
                     Here's the record: e   golfer name 20000001 567297898869488357
WARNING: Only one golfer has played in the tournament.
-

Defects:	N/A
Test Case ID:	**8**
Tester:	Kalven Schraut
When:	2023-03-29 22:28:50 CDT
Description:	Run the executable with ~/golf-data/GolfScoreNonNumericPar.txt as the input file and assert the expected results
Expected Results:	An Error is thrown and displayed if a for a non numeric par in a course record.
Executed Results:	Par value 32 for course a is not a digit
Defects:	N/A

Test Case ID: **9**
Tester: Kalven Schraut

When: 2023-03-29 22:35:11 CDT

Description: Run the executable with ~/golf-data/GolfScoreInvalidCourseColumnLength.txt as the input file and assert the expected results

Expected Results: An Error is thrown for invalid golf record length

Executed Results: **No error is thrown, input must be ignored?**

Defects: N/A

Test Case ID: **10**
Tester: Kalven Schraut

When: 2023-03-29 22:35:11 CDT

Description: Run the executable with ~/golf-data/GolfScoreInvalidGolfColumnLength.txt as the input file and assert the expected results

Expected Results: An Error is thrown for invalid golf record length

Executed Results: **No error is thrown, input must be ignored?**

Defects: N/A

2.4 Errors on Output

Test Case ID: **12**
Tester: Kalven Schraut

When: 2023-03-31 22:47:09 CDT

Description: Run the executable with -c option and
                     ~/golf-data/4GolfScoreTestHappyPath.txt
                     as the input file and then run again with -c option and
                     ~/golf-data/4GolfScoreTestHappyPath2.txt
                     and expect the program to ask if you want to overwrite.

Expected Results: Message comes up with Y/N asking if wanting to overwrite existing file

Executed Results:	**Message comes up with Y/N**
Defects:	N/A

Test Case ID:	**13**
Tester:	Kalven Schraut
When:	2023-03-31 22:47:09 CDT
Description:	Run the executable with -c option and ~/golf-data/4GolfScoreTestHappyPath.txt as the input file and then run again with -c option and ~/golf-data/4GolfScoreTestHappyPath2.txt and expect the program to ask if you want to overwrite. Then enter Y and press the enter key to overwrite the file.
Expected Results:	The course.rep sha1 hash for the first run does not match the second run's course.rep sha 1 hash.
Executed Results:	The sha1's do not match, meaning the file was overwritten correctly
Defects:	N/A

Test Case ID:	**14**
Tester:	Kalven Schraut
When:	2023-03-31 23:00:29 CDT
Description:	Run the executable with -c option and ~/golf-data/4GolfScoreTestHappyPath.txt as the input file and then run again with -c option and ~/golf-data/4GolfScoreTestHappyPath2.txt and expect the program to ask if you want to overwrite. Then enter N and press the enter key to overwrite the file.
Expected Results:	The output file's sha1 hash for the course.rep file is the same after running the command a second time.
Executed Results:	The sha1's still match meaning the file was not overwritten as expected
Defects:	N/A

2.5 Tournament Ranking Report (TRR) Output

Test Case ID:	15
Tester: `	Rohit Bagda
When:	2023-03-29 21:53:00 CDT

Description:	This test verifies that the golf score calculates the score for each hole correctly based on the par score and the stroke count.
Expected Results:	Golfer's name in TRR will be contained in columns 0-19, their score for each course (1-5) will be in columns 20-24, their tournament score will be in column 25-27, and their tournament standing will be in column 28-29.
Executed Results:	TRR contains the golfer's name, calculated score for each course indicated by "Ranking Score" categorized by the course ID, the total score and the tournament rank. The actual output of the test execution can be found in file "15-trank.rep".
Defects:	While the TRR meets requirements 5-A, 5-B, 5-C, 5-D, 5-E, TRR also contains the raw score for each course for each player. This is surplus information and was not requested in the TRR per SRS document. Moreover the format of the output does not match the implicit format assumptions made in the Requirements Matrix.
Test Case ID:	16
Tester: `	Rohit Bagda
When:	2023-03-29 22:00:00 CDT
Description:	The test validates that each entry (golfer) in the file is listed in descending order based on their final score.
Expected Results:	The order of golfers in the TRR will be listed in descending order based on their final score.
Executed Results:	TRR contains its golfer participants and their tournament report, sorted in descending order of their final score as expected. The actual output of the test execution can be found in file "16-trank.rep".
Defects:	N/A
Test Case ID:	17
Tester: `	Rohit Bagda
When:	2023-03-29 22:10:00 CDT
Description:	The test validates that the entries with identical final scores will be listed in alphabetical order by their last name.
Expected Results:	Golfer with name "colfer aame aaaaaaaa" is listed first followed by golfer with name "golfer name bbbbbbbb" followed by "bolfer name zaaaaaaa"
Executed Results:	Golfers with tied scores are not sorted by alphabetical order of last name. The actual output can be found in the file "20-golfer.rep"

Defects:	The tied golfers are not sorted alphabetically by last name.

Test Case ID:	18
Tester: `	Rohit Bagda
When:	2023-03-29 22:10:00 CDT
Description:	The program will run, and the test will then validate that the output file is named trank.rep
Expected Results:	The output file is named trank.rep
Executed Results:	The output file is named - MacOs - \trank.rep - Windows - trank.rep
Defects:	On unix systems the output file is incorrectly prefixed with an extra backslash.
Test Case ID:	19
Tester: `	Rohit Bagda
When:	2023-03-29 22:20:00 CDT
Description:	The program will run, and the test will then validate that TRR exists in the correct directory on both Windows and unix based systems.
Expected Results:	The TRR is outputted to c:\output\ on Windows and /Users/output on MacOs
Executed Results:	The output file is published in the specified directory.
Defects:	N/A

2.6 Golfer Report (GR) Output

Test Case ID:	20
Tester:	Rohit Bagda
When:	2023-03-29 21:53:00 CDT
Description:	This test verifies that the golf score calculates the score for each hole correctly based on the par score and the stroke count.
Expected Results:	Golfer's name in GR will be contained in columns 0-19, their score for each course (1-5) will be in columns 20-24, their tournament score will be in column 25-27, and their tournament standing will be in column 28-29.

Executed Results:	GR contains the golfer's name, calculated score for each course indicated by "Ranking Score" categorized by the course ID, the total score and the tournament rank. The actual output of the test execution can be found in file "20-golfer.rep".
Defects:	While the GR meets requirements 6-A, 6-B, GR also contains the raw score for each course for each player. This is surplus information and was not requested in the GR per SRS document. Even though the format of the document is the same as the one generated in the TRR, the format of the output does not match the implicit format assumptions made in the Requirements Matrix.
Test Case ID:	21
Tester:	Rohit Bagda
When:	2023-03-29 21:54:00 CDT
Description:	The test validates that each entry (golfer) in the file is listed in alphabetical order by last name.
Expected Results:	The order of golfers in the GR will be listed alphabetically.
Executed Results:	The order of golfers in the GR are not listed alphabetically by last name. The actual output can be found in the file "20-golfer.rep"
Defects:	The order of golfers needs to sorted in alphabetical order by last name.
Test Case ID:	22
Tester: `	Rohit Bagda
When:	2023-03-29 22:30:00 CDT
Description:	The program will run, and the test will then validate that the output file is named trank.rep
Expected Results:	The output file is named golfer.rep
Executed Results:	The output file is named - MacOs - \golfer.rep - Windows - golfer.rep
Defects:	On unix systems the output file is incorrectly prefixed with an extra backslash.
Test Case ID:	23
Tester: `	Rohit Bagda
When:	2023-03-29 22:20:00 CDT

Description: The program will run, and the test will then validate that GR exists in the correct directory on both Windows and unix based systems.

Expected Results: The GR is outputted to c:\output\ on Windows and /Users/output on MacOs

Executed Results: The output file is published in the specified directory.

Defects: N/A

2.7 Course Report (CR) Output

Test Case ID: 24

Tester: Moti Begna

When: 2023-03-30 18:59:00 CDT

Description: This test verifies that GolfScore shall output the CR with a section for each course, containing the golfer's name, score per hole and course score per course section. Run the executable ~/golf-data/GolfScoreTestHappyPath.txt with as the input file and assert the expected results

Expected Results: Golfer's name in TRR will be contained in columns 0-19, their stroke count per course section per hole will be in columns 20-39, and their course score per course section will be in column 40-42.

Executed Results: CR contains the golfers name, their hole-by-hole stroke count per course, and the total score for that course. Reference file 24-course.rep

Defects: The CR contains additional information about the total stroke count per course for each golfer that was not requested for in the SRS
The format of the output does not match the implicit format assumptions made in the Requirements Matrix.

Test Case ID: 25

Tester: Moti Begna

When: 2023-03-30 19:04:00 CDT

Description: This test verifies that GolfScore shall output the CR in descending order of the golfer's course score per course section. Run the executable ~/golf-data/GolfScoreTestHappyPath.txt with as the input file and assert the expected results

Expected Results: The order of golfers in the TRR will be listed in descending order based on their course score per course section.

Executed Results: CR contains the golfers name, their hole-by-hole stroke count per course, and the total score for that course. Reference file 25-course.rep

Defects: Each course is not listed in descending order of score, but rather alphabetically.

Test Case ID: 26

Tester: Moti Begna

When: 2023-03-30 19:04:00 CDT

Description: This test verifies that GolfScore shall output the CR such that if two golfers have a tied course score for a course section, then they are listed in descending order of their last name. Run the executable ~/golf-data/PlayersTournamentScoreTied.txt with as the input file and assert the expected results

Expected Results: Golfer with the name "golfer name 20000001" is listed above the golfer with name "golfer name 20000002".

Executed Results: Golfer with the name "golfer name 20000001" is listed above the golfer with name "golfer name 20000002" for both courses. Reference file 26-course.rep

Defects: N/A

Test Case ID: 27

Tester: Moti Begna

When: 2023-03-30 19:20:00 CDT

Description: This test verifies that GolfScore shall output the CR with the file name course.rep

Expected Results: The output file is named course.rep

Executed Results: MacOs - \golfer.rep
Windows - golfer.rep

Defects: On unix systems the output file is incorrectly prefixed with an extra backslash.

Test Case ID: 28

Tester: Moti Begna

When: 2023-03-30 19:22:00 CDT

Description: This test verifies that GolfScore shall output the CR in the correct directory on both Windows and unix based systems.

Expected Results: The TRR is outputted to c:\output\ on Windows and /Users/output on MacOs

Executed Results: The output file is published in the specified directory.

Defects: N/A

2.8 Program Functionality

Test Case ID: 29

Tester: Moti Begna

When: 2023-03-29 21:53:00 CDT

Description: This test verifies that GolfScore calculates the score for each hole correctly based on the par score and the stroke count. Run the executable ~/golf-data/ProgramFunctionalityScoreIsCorrectlyCalculated.txt with as the input file and assert the expected results

Expected Results: golfer.rep file is generated with "golfer name 20000001" receives a final score of 0 for course id a
golfer.rep file is generated with "golfer name 20000002" receives a final score of 18 for course id a
golfer.rep file is generated with "golfer name 20000003" receives a final score of 36 for course id a
golfer.rep file is generated with "golfer name 20000004" receives a final score of 72 for course id a
golfer.rep file is generated with "golfer name 20000005" receives a final score of 108 for course id a

Executed Results: Reference file 29-golfer.rep

Defects: N/A

Test Case ID: 30

Tester: Moti Begna

When: 2023-03-29 21:56:00 CDT

Description: This test verifies that GolfScore calculates the total tournament score correctly. Run the executable ~/golf-data/ProgramFunctionalityTournamentScoreIsCorrectlyCalculated.txt with as the input file and assert the expected results

Expected Results: trank.rep file is generated with "golfer name 20000001" receiving a tournament score of 108
trank.rep file is generated with "golfer name 20000002" receives a a tournament score of 18
trank.rep file is generated with "golfer name 20000003" receives a a tournament score of 54

trank.rep file is generated with "golfer name 20000004" receives a a tournament score of 72

trank.rep file is generated with "golfer name 20000005" receives a a tournament score of 162

Executed Results: Reference file 30-trank.rep

Defects: N/A

Test Case ID: 31

Tester: Moti Begna

When: 2023-03-29 21:59:00 CDT

Description: This test verifies that GolfScore calculates the final standing correctly and in descending order. Run the executable ~/golf-data/ProgramFunctionalityTournamentScoreIsCorrectlyCalculated.txt with as the input file and assert the expected results

Expected Results: trank.rep file is generated with golfer 20000005 having a final standing of 1
trank.rep file is generated with golfer 20000001 having a final standing of 2
trank.rep file is generated with golfer 20000004 having a final standing of 3
trank.rep file is generated with golfer 20000003 having a final standing of 4
trank.rep file is generated with golfer 20000002 having a final standing of 5

Executed Results: Reference file 31-trank.rep

Defects: N/A

Test Case ID: 32

Tester: Kalven Schraut

When: 2023-04-01 10:22:44 CDT

Description: Run the executable with -a option

Expected Results   stating invalid option and then state the options

Executed Results: ERROR: Invalid option(s): -a, must be h, c, t or g

Defects: N/A

3.   Defects

Defect #	Title	Test Case ID
1	Unnecessary raw score data	15
2	Tied Golfers not in alphabetical order or last name	17
3	Incorrect prefix in output file name	18
4	Unnecessary raw score data	20
5	Not in alphabetical order of last name	21
6	Incorrect prefix in output file name	22
7	Unnecessary raw score data	24
8	Not in descending order of score	25
9	Incorrect prefix in output file name	27