

Software Requirements Specification

Golf Tournament Report

Revision 1.0

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1. Scope

1.1 Objective

This document specifies the functional requirements of *Golf Tournament Report* Release 1.0. The purpose of the program is to process scores from a golf tournament, and produce reports showing the final result of the tournament.

This document is intended for the Golf Tournament Report development team (software developers and test engineers), Service representatives, and Marketing personnel.

1.2 Identification

The title of the software is: *Golf Tournament Report Release 1.0.*

The program will display its title and revision number on the screen at execution time.

1.3 System Architecture

Golf Tournament Report will be written in Java and is required to run on a platform that supports JDK 6.

2. Functional Requirements

2.1 Program Description

Golf Tournament Report is a program used to generate a report of the result of a golf tournament. The input to the program will consist of 3 plain text files described in Section 2.4 below. The output from the program will consist of a plain text report as described in Section 2.5 below. The program is accessed via a command line interface – there is no GUI associated with the application. Any errors in the inputs or outputs will be handled as specified in Section 2.6 below.

2.2 Invoking Golf Tournament Report

Format for invoking Golf Tournament Report:

>golf	<i>filename</i>	<i>report</i>
<i>filename</i>	The name of the input file containing the data of the golf courses used in the tournament, the players in the tournament, and the scores of each player in each round of the tournament [See Section 2.4 below]. This may be a fully-qualified name; if no drive or directory is supplied, the directory that the program was executed from will be used.	
<i>report</i>	The name of the output file containing the report of the golf tournament [See Section 2.5 below]. This may be a fully-qualified name; if no drive or directory is supplied, the directory that the program was executed from will be used.	

Example:

```
prompt> golf tournament.in report.txt
```

2.3 Program Functionality

2.3.1 Tournament Assumptions

The number of golf courses specified for each golf tournament can be from 1 to 5. The number of required rounds of each golf tournament can be from 1 to 5. The number of golfers entered in a tournament can be from 2 to 12. Golfers who do not complete the required rounds are disqualified.

Each golf course has 18 holes, and the par for each hole must be 3, 4 or 5 *strokes*. A golfer's score for a particular round is the sum of the strokes taken by the golfer to complete each of the 18 holes. A golfer's total tournament score is the sum of his or her scores for each round played in the tournament.

2.4 Data Input Format

The input to Golf Tournament Report will consist of a plain text file in the format described below. The name of the input file is supplied as a parameter on the command line. [See Section 2.2.]

The input file consists of the following sections in the order given below:

- Section 1 The Tournament Information section
- Section 2 The Course Information section
- Section 3 The Player Information section
- Section 4 The Score section

Each section is delimited by a *section header* and a *section footer*.

A section header is a line in the following form:

< *section-name* >

A section footer is a line in the following form:

< /*section-name* >

2.4.1 Tournament Information Section

The Tournament Information section contains the information of the golf tournament.

The section name of the Tournament Information section is: **Tournament**

The body of the Tournament Information section consists of the following lines:

- Line 1 The name of the golf tournament
- Line 2 Three integers delimited by one or more white spaces, as described below
- Integer 1 The number of required rounds, from 1 to 5
- Integer 2 The number of courses used in the tournament, from 1 to 5
- Integer 3 The maximum number of players in the tournament, from 2 to 12

2.4.2 Course Information Section

The Course Information section contains the information of the various golf courses being used in the tournament.

The section name of the Course Information section is: **Courses**

The body of the Course Information section consists of one or more Course Records, one Course Record for each golf course used in the tournament. Each record consists of three consecutive non-blank lines. Records are separated by one or more blank lines.

Each Course Record consists of the following lines:

Line 1	The name of the golf course.
Line 2	A unique ID of the golf courses, which consists of 2 to 5 upper case letters.
Line 3	Eighteen integers delimited by one or more white spaces, representing the pars for holes 1-18. The numbers must be 3, 4, or 5.

2.4.3 Player Information Section

The Player Information section contains the information of the players entered in the tournament.

The section name of the Player Information section is: **Players**

The body of the Player Information section consists of a number of Player Records, one Player Record for each golfer entered in the tournament. Each record consists of a single line with 2 fields.

Field 1	Player ID, an alpha-numeral string, 2 to 5 characters long and begins with a letter.
Field 2	The full name of the player.

The two fields are separated by one or more white spaces.

2.4.4 Scores Section

The Scores section contains the scores of each round by each golfer entered in the tournament.

The section name of the Player Information section is: **Scores**

The body of the Scores section consists of a number of Score Records, one Score Record for the score of each round by each golfer. Each record consists of a single line with the following fields.

Field 1	Player ID
Field 2	Round number, an integer from 1 to 5
Field 3	Course ID
Field 4-21	Number of strokes for holes 1-18

The fields are separated by one or more white spaces.

2.5 Data Output

Golf Tournament Report will generate a tournament ranking report, based on the input data to the program. The generated report will be a plain text file in the directory specified on the command line.

2.5.1 Tournament Ranking Report

The Tournament Ranking Report consists of a list of all the golfers with the golfer's name, the score for each round, the total score, and that golfer's final standing (1st place, 2nd place, etc.). The list is ordered according to the ascending order of the standings of the golfers, i.e., the 1st place golfer is listed on top.

The standing of each golfer is determined based on the ascending order of final scores, i.e., the golfer with the lowest total score is in 1st place. In the case of ties, the golfers will be listed alphabetically. All disqualified golfers are considered tied for the last place.

2.6 Error Handling

2.6.1 Input Parameter Errors

For any input parameter errors the program will simply stop processing, return to the command prompt, and display a message explaining the error.

If the input file specified by *filename* does not exist, an input parameter error will be reported.

Extra input parameters will be ignored.

2.6.2 Input Data Errors

Input Data errors checked for are as follows:

- i) Non-numeric data where numeric data is expected: the program will stop with an appropriate error message
- ii) Par values that are not 3, 4, or 5: the program will stop with an appropriate error message.
- iii) Any golfer that has two or more Score Records for the same round: the additional records after the first one will be ignored, a message will be displayed, and processing will continue.

2.6.3 Errors on Output

If the specified output file already exists, the program will pause and ask the user if the file should be overwritten. Sample prompt: “File <file> already exists. Do you want to overwrite it? (Y/N)”.

The user will then respond “Yes” or “No”. If “Yes”, the output file will be overwritten; if “No”, the generated output will be discarded.

If the specified output file does not exist, it will be created.

If any other errors occur while attempting to write the output files, program behavior is unspecified.

3. Deliverables

- Golf Tournament Report executable file
- Golf Tournament Report User's Guide

4. Performance Requirements

Once executed, Golf Tournament Report will complete its processing within 15 seconds.