

## Management System for Marathon

Created a management system for an athletic club organizing a marathon in Java using OOPs concepts, which will track runners and announce the results and sponsorship donations. Each runner in the marathon has a number.

A runner is described as e.g. "Runner 42" where 42 is their number. They finish the race at a specified time recorded in hours, minutes and seconds. Their result status can be checked and will be displayed as either "Not finished" or "Finished in hh:mm:ss" (All zero for hh mm and ss means Not finished).

Every competitor is either a professional runner or amateur runner. Further to the above, a professional additionally has a world ranking and is described as e.g. "Runner 174 (Ranking 17)". All amateurs are fund raising for a charity so each additionally has a sponsorship form.

A sponsorship form has the number of sponsors, a list of the sponsors, and a list of amounts sponsored. A sponsor and amount can be added, and a list can be printed showing the sponsors and sponsorship amounts and the total raised.

A fancy dress runner is a kind of amateur (with sponsorship etc.) who also has a costume, and is described as e.g. "Runner 316 (Duck)". (Used OOPs concepts wherever possible like fancy dress runner inherits armature runner, sponsor is a different class and armature runner has many objects of class sponsors in it. Always created separate class with attributes and inherited).

Sample input:

1 - Add Runner details

2- Display runner details.

3- Exit

Enter choice - 1

Type of Runner

1-Professional

2-Armature

3-Fancy dress runner

Enter choice -1

Enter runner details(Number ranking and finish time in hh:mm:ss format)

10 127 5:30:20

1- Add Runner details.

2- Display runner details.

Enter choice - 1

Type of Runner

1-Professional

2-Armature

3-Fancy dress runner

Enter choice-2

Enter runner details(Number,finish time in hh:mm:ss format)

11 8:20:20

Enter number of sponsors 2

Enter sponsorship details (Name of sponsor and amount)

google 10000

amazon 20000

1- Add Runner details.

2- Display runner details.

3- Exit

Enter choice - 1

Type of Runner

1-Professional

2-Armature

3-Fancy dress runner

Enter choice – 1

Type of Runner

1-Professional

2-Armature

3-Fancy dress runner

Enter choice - 3

Enter runner details(Number costume and finish time in hh:mm:ss format)

12 duck 0:0:0

Enter number of sponsors - 1

Enter sponsorship details (Name of sponsor and amount)

yahoo 10000

1- Add Runner details.

2- Display runner details.

3- Enter choice - 2

Runner 10(Ranking 127) Finished in 5:30:20.

Runner 11 sponsors google - 10000, amazon- 20000 Total 30000 Finished in 8:20:20.

Runner 12(Duck) sponsors yahoo - 10000 Total 10000 Not finished.

1- Add Runner details.

2- Display runner details.

3- Exit Enter choice - 3