

**November 2023**  
**COMP7039 CI Project Brief**

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Runners like to compete with each other in an attempt to improve their times.

A series of races takes place in different venues around Cork County.

Records are kept of the runners and the races.

**Races.txt** holds the venues for the races and target-times (minutes) for race-course completion:

Blarney, 32  
Kinsale, 30  
Newmarket, 29  
Youghal, 29.5  
Castletownbere, 32.5

**Runners.txt** holds the name and the identification code for each runner registered.

Anna Fox,CK-24  
Des Kelly,CK-23  
Ann Cahill,KY-43  
Joe Flynn,CK-11  
Sally Fox,KY-12  
Joe Shine,TP-02  
Lisa Collins,WD-32  
Sil Murphy,LK-73  
Des Kelly,WD-19

When a race takes place, a file is created for that race which holds the identification code of each runner and their time in seconds.

**Kinsale.txt** holds the ids and times (in seconds) for each runner at Kinsale:

CK-24,3040  
KY-43,2915  
CK-11,3245  
CK-23,2900  
WD-32,2928  
TP-02,3125  
WD-19,2926  
LK-73,3211

**Castletownbere.txt** holds the ids and times (in seconds) for each runner at Castletownbere:

CK-24,3245  
KY-43,3151  
WD-32,3028  
TP-02,3225  
WD-19,2926  
LK-73,3121  
CK-23,3240  
KY-12,3199

**Blarney.txt** holds the ids and times (in seconds) for each runner at Blarney:

**Newmarket.txt** holds the ids and times (in seconds) for each runner at Newmarket:

**Youghal.txt** holds the ids and times (in seconds) for each runner at Youghal:

Your group/team has been asked to complete an application (partially-completed previously) to help the organisers maintain, view and edit these records. Your application should offer the following menu of options repeatedly until the user chooses to quit the application:

1. Show the results for a race
2. Add results for a race
3. Show all competitors by county
4. Display the podium-places of each race
5. Display all the race times for one competitor
6. Show all competitors who have won a race
7. Show all competitors who have not taken a podium-position in any race.
8. Quit

1 – Show the results for a race

Show the user the list of races; request the user to select a race from the list (using a number); system display the runners' ID codes together with their times in minutes and seconds.

Display the identification codes for the podium-places of the race.

2 – Add results for a race

Ask the user for the race's venue and add it to the races file. Display a list comprising competitors' names from the runners file; ask the user for the race-time for each competitor, (0 if they did not run the race). Store the results (ID code and time ) in a newly created file e.g. *MTU\_Cork.txt* if the venue was MTU\_Cork.

3 – Show all competitors by county

List all the competitors but organise them alphabetically, by county; counties listed alphabetically.

4 – Show the podium-places for each race

List the races along with the ids of the podium-places runners of each race. Ensure that you employ a nicely formatted table for displaying output.

5 - Show ***all*** the race times and finishing-positions for a selected competitor

Display a list of runners to choose from. Once the user chooses a runner, display runner's name and ID code. For each race that he/she completed show the race name, the competitor's time and finishing-position in the race. The time to be shown in minutes and seconds.

6 – Show all competitors who have won a race

List the ID codes and names of those runners who have won at least one race.

7 – Show all competitors who have not taken a podium-position in any race.

List the ID codes and names of those runners who have not achieved a 1<sup>st</sup>, 2<sup>nd</sup>, or 3<sup>rd</sup> place finish in any race.

8 - Quit The application quits.

**Note:** For this project, *podium-places* refers to 1<sup>st</sup>, 2<sup>nd</sup>, & 3<sup>rd</sup> places.

***Brief End!***