

Final Lab Assignment

Note:

- This is a graded assignment. Only those students who are going to opt for Advanced Programming, need to submit the assignment. Grades will be counted only for those who are opting for AP.
- It is mandatory for all the students to make GUI applications for this assignment.
- **Deadline is till Thursday 11:59 pm.**
- **Submissions done after 11:59 pm will not at all be graded.**
- There will also be Demos for this assignment for which you will get the slots from the assigned TAs.
- Naming Convention to be followed: RollNo_Name_FA.zip

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A group of 15 IITD friends decide to run different categories of Marathons. Their names, times (in minutes) and the category of marathon are below:

Name	Time (minutes)	Category
Austin	341	Great Delhi Run
Thomas	273	Open 10K Run
Hamilton	278	Great Delhi Run
Jane	329	Half Marathon
Phil	445	Open 10K Run
Harry	402	Half Marathon
Alex	388	Open 10K Run
Emma	275	Half Marathon
John	243	Great Delhi Run
Julie	334	Open 10K Run
Emily	393	Half Marathon
Daniel	299	Open 10K Run
Neda	343	Half Marathon
Aaron	317	Great Delhi Run
Kate	265	Great Delhi Run

Winners from each category get the prize money as follows:

1. Half Marathon (20 Km)-

First:- Rs. 2,80,000/-

Second:- Rs. 2,10,000/-

2. Open 10K Run (10Km)-

First:- Rs. 1,90,000/-

Second:- Rs.1,50,00/-

3. Great Delhi Run (5Km)-

First:- Rs. 1,35,000/-

Second:- Rs.1,15,000/-

Problem:

Make an interactive Java GUI application that finds the fastest runners in each category. Display their names and prize money depending on the marathon category.

All the information of the participants must be provided in the class named as **Runner**. Each participant must be stored as a node of the linked list. So, for 15 participants, there must be 15 nodes in the linked list. (Use of array of objects is not

allowed)

Apart from this, you can make use of appropriate OOP concepts wherever possible, to enhance your code.

Input:

It takes input data of given number of participants(runners).. The program prompts the user for Name, Time(in minutes) and Category of marathon for each participant. For name and time, use TextFields to take the input. For marathon category, use radio buttons.

Output:

The applet displays: The winners from each category with their names and prize money. The output must be displayed using the TextFields.

Use appropriate labels wherever required.