

# Problem Solving & Programming 2 Assignment

## Worth 20% of Final Mark

Due Friday April 21st

The following are the requirements for your Java Assignment.

**This is the same program you wrote for Problem Solving and Programming 1 but now you should write it using Model-View-Controller**

## Car Simulator

Write a program which allows you to simulate a simple car race

- The program should allow you to specify how many cars are entering the race. Each car should be identified by its drivers name.
- The race course can be considered to be 10,000 metres long.
- The race should keep running until a car crosses the line.
- Each "second", each car will cover a random distance. This will be somewhere between 0 and 50 metres.  
(For the purposes of this program a second can be considered one iteration of a loop)
- At the end of the race the following should be printed out.
  - The name of the winner.
  - The names and distance covered by the other competitors at the point at which the winner crosses the line.
  - The number of "seconds" which the race took to complete.
- **The last race run should be automatically saved. When the program starts it should display the results of the last race along with the date and time it happened.**

### Points to note

- Code should be commented as you deem appropriate. It should be sufficient for the program to be easily understood by another person.
- Use as many aspects of the course as possible.
- Plagiarism of code from the web or other students will result in a mark of zero.

**Marking Scheme (Total = 20 Marks)**

Overall Impression and Clarity of Solution	10 Marks
Adherence to requirements	5 Marks
Quality of Code (Layout, appropriate use of classes, methods, constants, variables etc)	5 Marks