Section B: Question 1

Formula 1 Management System

Mogau Mokaleng

ST10490324

**Problem**

The aim of this system is to be able to handle the driver and car data to allow a user to manage the team’s performance throughout a race season because there is inefficient tracking of a racing team’s key data. In the real-world Formula 1 teams need a dynamic way to manage their personnel and performance data without having to use complicated spreadsheets or handwritten notes.

**Solution**

The solution is to create an application console to use for classes namely:

* TeamMember: Base class that sets up the inheritance structure.
* F1Driver: Inherits from TeamMember and adds F1 data such as points and car numbers to fulfil the inheritance requirement.
* F1Manager: This is the main application which contains the menu, while loop for navigating and a driver array for storing all the drivers and methods to add drivers, updating points and searching for drivers and to generate a report on the results.
* F1ManagerTest: Contains unit testing method to ensure the code is verifiable and efficient according to the required criteria.

Therefore, the solution is to create a functional code that achieves all the goals set by the problem which is Formula 1 management.