Sports Management System

Introduction

The Welsh government want to encourage more children into participating in sports outside of school. They are therefore investing in a system that sports teams can use to manage their teams. They hope that they will be able to collect the data from each team at the end of the year in order to track how many children are participating.

Managers of Welsh sports teams have been contacted to ask what features they would like in such systems. As there are a number of different sports teams available a blanket default system is wanted to begin with before additional features are added later on.

The system is expected to manage the information held on players such as name, DOB, and address. Each player is also allocated to a team. E.g. Team A, Team B, Team C.

The manager of the club is expected to log in to retrieve player information. They can also allocate players to teams. Teams can hold up to 15 players.

The system must also manage the subs payments. Each training session (held weekly) is £3, however if players attend 3 weeks in a row they receive a £1.50 discount on their 4th session, as an incentive to return.

Your task is to write a system that will allow the team manager to:
- input and store player details
- input and store team details
- record payments made
- check if the player can receive a discount
- display player, team and payment details

To produce the application you should:
- analyse the given information

- design a solution to the given problem
- program the solution to the given problem
- test the application

Design [12 marks]

Produce a design for the application that includes:

- input and output facilities provided by the user interface
- suitable data structures to enable the application to carry out the required tasks
- proposals for validation rules to control data input and limit errors
- designs for input formats including features to aid data entry
- designs for outputs including the intended layout of reports to be generated by the
  application
- designs for authentication routines
- processing stages as algorithms using standard conventions such as pseudo code or flowcharts.

Effectiveness of Solution [15 marks]

You need to make sure that the finished application:

- is functional and fulfils all the requirements of the Welsh Government
- has an interface that is easy to use
- is modular and makes efficient use of resources
- has authentication routines
- is reliable and robust.

Technical Quality [20 marks]

- ☐ is self-documenting and well structured
- uses a consistent style throughout including indentation and use of white space
- uses meaningful identifiers and appropriate constants
- uses local variables to minimise the use of global variables
- has validation routines and can handle errors such as division by zero
- has informed annotation to demonstrate your understanding of the