

## 2. UML Class Diagram - International Football Association

Unified Modeling Language(UML) as the name suggests is a modelling language in the world of software architecture. It includes various types of diagrams which helps visualise a system from various perspectives, i.e., interaction, structure and behaviour.

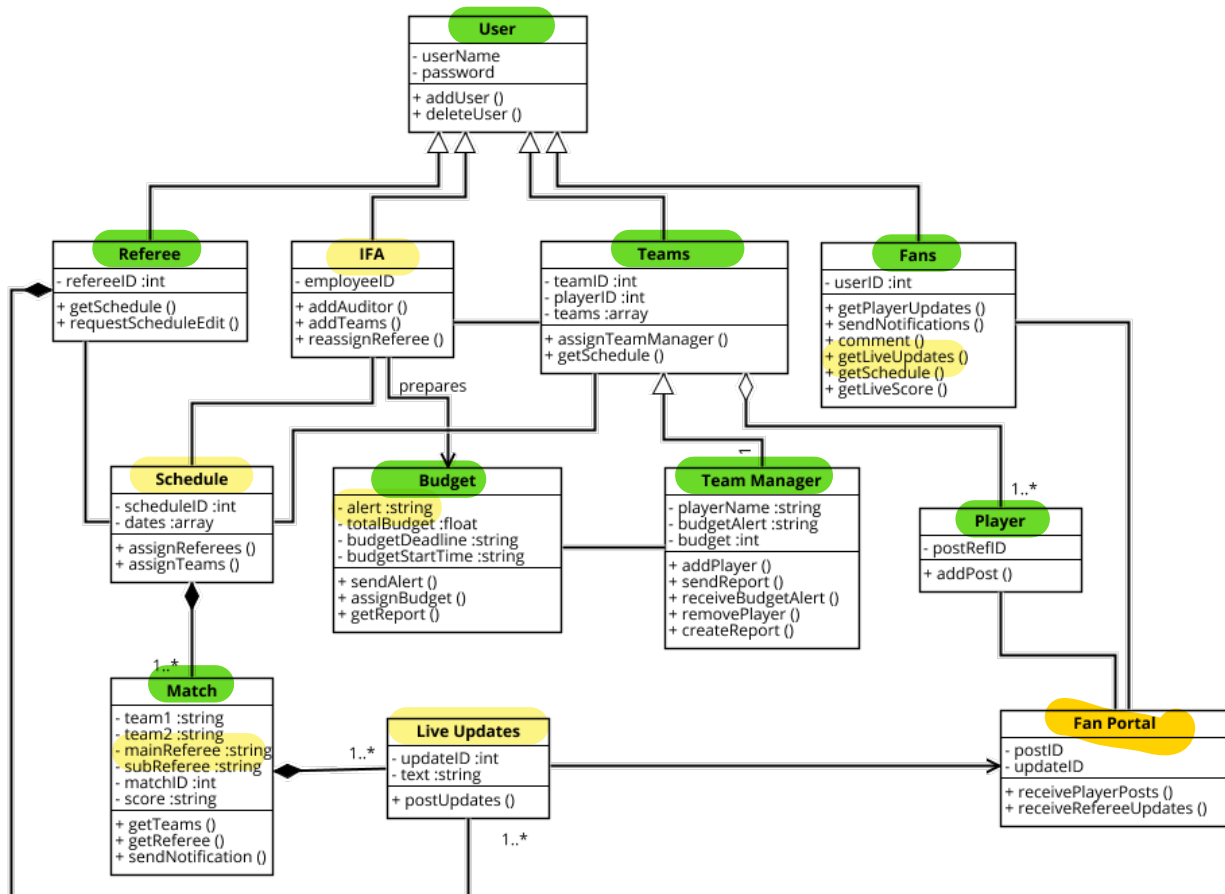
A class diagram is a type of UML diagram which helps visualise the object-oriented structure of a system. In simple terms, it depicts the technical architecture of the system and helps software developers understand how each function is programmed.

### *The Derivation Process:*

In the coming class diagram, the to-be IFA system is represented with the following thoughts in mind:

- Every user who wants to interact with the system has to have a user profile. Without logging into the system, the user cannot input any information and will be redirected to a dormant interface. This makes user class as our first super class. All the user details will flow from this super class into subsequent base classes.
- Each prime level of the user is then depicted as class. Referee, IFA, Teams and Fans are each a class which inherits the User class. IFA and Teams share a logical association as Teams are a part of IFA.
- IFA is inherited by Schedule and Budget class. Each of the latter classes represents the important functionalities performed by the IFA officials.
- The Schedule class is also associated with the IFA, Teams and Referee. This is because it needs the details of every referee to schedule the matches in the tournament. An instance of this class is a Match which has the information of referees assigned to the match and the playing teams. Please note that the relationship between Match and Schedule.
- The Budget class is logically associated with IFA and Team Manager. This is because there is a flow of communication and files between the three classes.

- The Team Manager inherits Teams. This is because each Team has one team manager and this manager is them in charge of players. The association between Team Manager and Player can be seen in the diagram.
- The Live Updates is associated with the Match and Referee. As it requires information from both these classes to process with its own functionality.
- Fan Portal is associated with Fans, Players are Live Updates. This is because all the latter classes are involved to provide comprehensive information on the portal



UML CLASS DIAGRAM