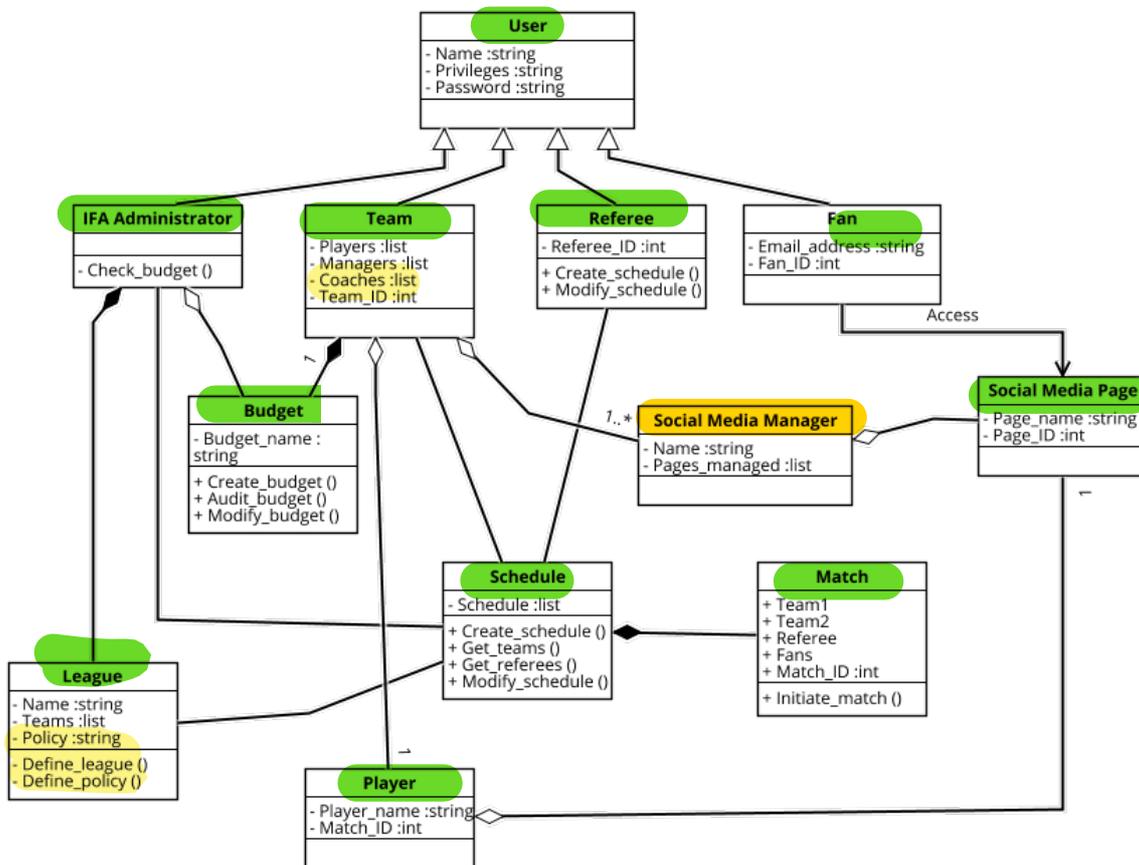


1. Derivation of conceptual models from user stories

1.1 Static/structural model in the form of an UML class diagram



The classes in the UML diagram were derived from the user stories by using each stakeholder as a single entity. Firstly, a superclass called *User* was created as all of the stakeholder classes include many of the same attributes such as name, privileges in the system and password. The subclasses of this superclass *User* are:

1. *IFA Administrator*
2. *Team*
3. *Referee*
4. *Fan*

In addition, there are other classes which have relationships with these subclasses. The *IFA Administrator* has a relationship with the class *League*, as they are the only stakeholder who is able to define policies and a league. The *Team* has a relationship with the class *Social Media Manager*, as they choose the person to manage their page. The *Team* also has a relationship with the class *Player*, as each player is part of one team. In turn, the *Social Media Manager* has a relationship with the class *Social Media Page*, as they manage the team pages. On top of this, the *Player* also has a relationship with the *Social Media Page*, as they are able to manage their own page. The *IFA Administrator*, the *Team*, the *Referee* and the *League* all have

a relationship with the class *Schedule*, as they all have to be involved when a new scheduling activity is initiated. Lastly, the class *Match* has a relationship with *Schedule* as the *Schedule* is required to initiate a new instance of the class *Match*.

The aggregation and composition in the model were derived in the following way:

A league cannot exist without the *IFA Administrator*, so it is a composite relationship. A *budget* cannot exist without a *team*, so a *budget* has a composite relationship with *Team*, while the *IFA Administrator* only can view a *team's budget*, so the relationship is an aggregate one. In addition, a *Match* cannot exist without a *Schedule*, so the relationship is a composite one. All the other relationships in the model are aggregated or simple associations.