PHP Software Engineer Technical Evaluation

OOP Software Design

The purpose of this test is to evaluate your software design and implementation skills.

Guidelines

You should spend no more than 2 hours undertaking this test make as much progress as you feel you can within the time allowed; you are not required to produce a final product.

Your code will be reviewed on an system with the following installed:

- PHP 7

If you have any specific comments or instructions regarding your code please also include them in the project readme file.

The scenario

We have been asked to build a website for a Spanish league football club, one of the features of the site is an area in which all fixtures and result information is displayed.

This information is supplied by a 3rd party aggregator who supplies a data feed to the website via HTTPS on a periodic basis. During games, updates are received frequently sometimes multiple times a minute.

The 3rd party aggregator supplies two different sets of data to the same HTTPS endpoint, these are as follows:

Fixtures Feed

A feed which contains full list of fixtures in which the club is taking part, the following is included for each fixture:

- The teams involved in the fixture.
- The location of the fixture.
- The date and time of fixture kickoff.
- The result of the fixture if it has already taken place.

Match Report Feed

A feed which contains information about a specific fixture, when the fixture is taking place the data is updated on a regular basis, it contains the following information:

- The teams involved in the fixture.
- The location of the fixture.
- The date and time of fixture kickoff.
- The result of the fixture.
- A list of players who are taking part in the fixture for each team.
- The player who scores a goal.
- The time at which a goal is scored.
- The player who receives a yellow or red card.
- The time at which a yellow or red card awarded.

What you should produce

Build a class structure to facilitate the implementation of the scenario set out above. Assume that your class library will be given to another developer at a later date to extend.

Your code should facilitate:

- The parsing of an incoming feed please assume that the feed is presented as a single JSON string as part of a Request object.
- The creation of objects representing normalised information from feed data.
- Business logic to determine if these objects need to be saved or updated.
- Sending an SMS notification when a goal is scored via an internal web services call (e.g. call a web service with the goal details, do not worry about the SMS implementation).

What we are evaluating

When reviewing your code we will be focusing on your analysis of the problem and software design skills. Code reuse, extensibility and maintainability are all important considerations.

Please use class and method commenting to explain your design decisions.

Do not worry about persistent storage/database abstraction layers/html/visuals – focus on the domain logic and class structures.