ultraplay
advanced betting solutions

Introduction

We want you to build an application which shows betting data. It should have two pages which look like this one Matches in next 24h and this one Match view. Your task is to build the backend for our Front-end team.

Requirements

1. You have to consume our eSports xml feed from here. You must pull it every 60 seconds and store the data in a persistent storage. Here is more info about the feed structure:
    a. **Sport** - groups all Events (i.e Tournaments) currently taking place within the Sport.
    b. **Event** - groups all Matches currently taking place within the Events (i.e Tournaments).
    c. **Match** - contains information about participants, start date and the type of match. There are 3 types of matches:
        i. **Prematch** - contains prematch/pregame markets (i.e. Markets are betting opportunities for customers – e.g Winner of the Game; Total Number of Kills; Duration of the Game, etc.) , which are open for betting before the start date of a match.
        ii. **Live** - contains live markets, which are open for betting after the start date of a match.
        iii. **Outright** - ignore this type of matches as they are not relevant to the task at hand.
    d. **Bet** - these are the actual markets. We use “market” instead of “bet” everywhere in this text. **IsLive** indicates whether a market is live or prematch;
    e. **Odd** - these are the lines in a market. They can be grouped by **SpecialBetValue**, if it is different than NULL;
    f. **Values that could change**: Match.MatchType, Match.StartDate, Odd.Value
    g. Note: The feed returns only currently active matches, markets and odds.

2. Once you process the feed, you have to expose **two endpoints**:
    a. **Endpoint 1**: It should return all matches starting in the next 24 hours. Minimum required data:
        i. match name
        ii. match start date

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iii. all active preview markets with their active odds

Preview markets are one of the following: “Match Winner “, "Map Advantage" or "Total Maps Played". If their odds do not have a SpecialBetValue, then return all their active odds. Otherwise, return only their first group of active odds when grouped by SpecialBetValue.

SpecialBetValue (SBV) is used in "Map Advantage", “Total Maps Played" and others. It indicates the condition to win. For instance, the Total Maps Played market can have odds of under 2.5 / over 2.5 maps played, where the SBV in that case is 2.5.

b. **Endpoint 2**: It should return a single match by given unique identifier. Minimum required data:
   i. match name
   ii. match start date
   iii. all active markets with all their active odds

3. **Optional Task:** Users often stay on the pages for a long time, so the Front-end team wants to receive updates:
   a. When they have to hide a Match / Bet / Odd from their views.
   b. When there are changes in Match / Bet / Odd.

   Note: We only want to see the structure and approach for creating these update messages. Instead of sending them to a web page via WebSocket technology, you can use one of the following of your choosing:
      a. insert update messages in persistent storage;
      b. add them to in-memory queue;
      c. trigger event in C#.

Evaluation Criteria

In order of importance:

1. Code quality - readability, maintainability, extensibility and performance

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2. SOLID principles
3. The architecture of the system
4. The implementation of the architecture
5. Performance of the application

Deadline

You have 8 days to complete the task (starting tomorrow). If you have any questions, please reply back to this email.

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