The Python Challenge

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Fantasy Cricket Game

Done By:

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Problem Statement

Build a desktop application which is a fantasy cricket game where you would create a virtual team of cricket players and score points on how the players perform in different matches.

Coding Language

Python 3.7 and packages used in are sqlite3, pyqt5.

Applications and Environment

I used Windows 10 as my operating system and the following tools have been used
- Qt Designer
- DB Browser for SQLite
- VS Code
- Command Prompt

Project Approach

1. Database
   - Creating Relations/Tables
   - Adding Respective Data
2. GUI
   - Designing the window
   - Generating .py file from .ui file
3. Linking Front-end and Back-end
   - Connecting to the database
   - Adding Functions and Event listeners

Working Application

When the application is executed, at first the application window loads and the database is connected and it checks for any team data availability and based on that the options in the menu bar are accordingly enabled.

- **New Team**: A dialogue box is opened prompting the user to enter the name of the team the user wants to create. Then the from the database the player availability list is loaded and the user will be given an initial 1000 points.

- **Open Team**: A dialogue box appears prompting the user to input the team which he wants to open. From the database, the selected player list gets populated and remaining fields accordingly based on this.

- **Save Team or Save Button**: Initially, it is disabled and enabled when the selected player list is populated to 11 members satisfying the given conditions. This Event inserts or updates the data in the database.

- **Evaluate Team**: This is also disabled if there're no saved teams in the database. When this is triggered, a new window is opened with two dropdown menus or comboBoxes(one for team selection and other for a match), two listWidgets(to show the players and the points they scored respectively), and a push-button(a submit button to trigger the calculation of points scored).

Error Handling

I used the QMessageBox feature from PyQt5 to show a pop-up message whenever there is a rule violation or search error or load error etc. Some of the places where this is used are

- Checking Uniqueness of Team Name
- Search for Team Name in the Database
- Rule Violation while Selecting players
- Successful Save

Reference and Doubts

1. Most of the doubts I got were cleared after referring to the videos and helper texts in the training.
2. Also going through the discussion forum and myself starting a conversation on my doubts was extremely helpful.
3. Online websites StackOverflow, Qt Documentation, and some youtube video explanations clarified the remaining misunderstood concepts.