

Football Database Management System

Design and implement a **Football Database Management System** in C to manage information about football teams and players. The system should support functionalities like

1. adding players to teams
2. displaying player and team information
3. persisting the data to a file for future use.

Requirements:

1. Team Management:

- a. Create a structure representing a football player (**struct Player**) with attributes: `player_name`, `player_number`, `player_position`, `goals_scored`, `goals_conceded`, `number_of_minutes_played`.
Similarly, you need to create a structure for a football team **struct Team**. You need to identify the attributes of this structure.
- b. Implement a function **addPlayerToTeam(parameters)** to add a player to a team. The function should validate if the team has reached the maximum number of players (each team can have 20).
- c. Implement the function **updateTeam(parameters)** to update stats such as goals scored(if player position == MID or FWD) or goals conceded(if player position == DEF).
- d. Implement functions to display information about a player (**displayPlayer(parameter)**) and a team (**displayTeam(parameter)**).

2. File Handling:

- a. Implement functions to save team information to a file (**saveTeamsToFile(parameters)**) and load team information from a file (**loadTeamsFromFile(parameters)**). The file should contain information about each team, including its players. The file name should be "football_database.txt"

3. User Interaction:

- a. Create a simple menu-driven interface that allows users to interact with the Football Database Management System.
- b. Provide options for adding players to teams, displaying player and team information, saving the data to a file, and loading the data from a file.
- c. Users can also see statistics such as most goals scored and least goals conceded along with the team name. **You need to store these statistics in a separate file called "stats.txt".**

4. Constraints:

- a. Each team can have a maximum of **20** players.
- b. The system should support a maximum of **10** teams.

Note: The project skeleton has been provided along with the sample input and output file. You can find it here:

<https://drive.google.com/drive/folders/1XvzWiyFcari2e1-8gVygUAEkR7eua3rV?usp=sharing>

Submission Guidelines:

- **You can use multiple .c files in your project but make sure to create only one main.c file.**
- **You need to upload the zipped version of your project files. Rename it with your student ID.**
- **Deadline: 20 December 2023 Wednesday 11:55 pm.**
- **There will be a viva (probably online) on the project. So, make sure you understand your code and can explain it fully.**