By Vardan Daneilyan

Project Overview

Football Cham	pionship	Manager -	- Java	OOP	Pro	ect

Summary:

A desktop application developed in Java using OOP principles and Swing GUI to simulate a football championship.

Features:

- Add/view teams and players.
- Track points, goals scored, and conceded.
- Automatically determine the champion when a team reaches 40 points.

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Object-Oriented Design

Core Classes:

- Team: Stores team name, players, goals, points.
- Player: Holds player name, goals, assists.
- ChampionshipManager: Manages teams, match logic, point updates.
- ChampionshipGUI: Java Swing GUI for user interaction.

OOP Concepts Used:

- Encapsulation: Private fields with getters/setters.
- Inheritance & Polymorphism: Could be extended for different sports.
- Abstraction: ChampionshipManager hides logic from the GUI.

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GUI and Functionality

Technologies:
- Java Swing (JFrame, JTable, JButtons, Layouts)

GUI Features:

- Team list auto-sorted by points.
- Display of team stats: goals scored/conceded.
- Message box shows winner when competition ends.

Logic Flow:

- 1. User interacts with GUI.
- 2. Events update backend data.
- 3. GUI updates in real-time.

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Challenges & Future Work

Challenges:

- Managing UI responsiveness.
- Updating team rankings dynamically.
- Clean separation of logic and GUI.

Possible Extensions:

- Add match simulation.
- Save/load data using file I/O or databases.
- Expand to mobile or web versions.