

Objective:

Create a program that will help the local youth soccer association manage registrations for their summer league. The program allows the user to add players to the league, edit a player's information, print lists of players, and search for players using a variety of criteria.

Components:

Viewer

The Viewer component is responsible for providing a user interface for managing the soccer league registrations. It will display the main view, search results view, and execute user commands. The Viewer will also handle the interaction between the user and the Buffer.

Buffer

The Buffer component stores player data and manages the player list. It provides methods for adding, editing, and searching players. The Buffer will also be responsible for handling input validation and ensuring that the data is stored and retrieved efficiently.

PlayerMap

The PlayerMap component will store search results and provide methods for navigating and editing player data within the search results. It will work in collaboration with the Buffer component to manage player data.

Player

The Player class represents individual players in the soccer league. It will store player information such as name, year of birth, category, and registration status. The Player class will also provide methods for retrieving and updating player information.

SearchCriteria

The SearchCriteria class will be used for specifying the search criteria during player searches. It will store the search parameters provided by the user and will be used by the Buffer component to search for players based on the given criteria.

File Management

The program will provide functionality for saving and loading player data from a file. This will include methods for writing the player list to a file, reading player data from a file, and handling any file-related errors.

Error Handling

The program will include error handling for user input validation, file management, and any other issues that may arise during the program's execution. This will ensure a smooth and user-friendly experience.

Statistics

The program will provide functionality for displaying statistics about the soccer league registrations. This will include the total number of players, the number of players who have paid and not paid, and the number of players in each category.