

Sports Team Management System OOP

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Time required: 120 minutes

- Comment each line of code as shown in the tutorials and other code examples.
- Follow all directions carefully and accurately.
- Think of the directions as minimum requirements.

Pseudocode

1. Write pseudocode for the exercise
2. Save it in a document
3. Submit with the assignment

Objective

Create a Python program that models a sports team using object-oriented programming principles.

Requirements

Create a class **Player** as a separate file with the following attributes:

- name (string)
- position (string)
- jersey_number (string)
- goals_scored (int)

Include:

- Getters and setters for each attribute
- A `__str__` method that returns a formatted string with player details

Player Challenge

Add validation in setters:

- `jersey_number` must be between 1 and 99
- `goals_scored` must be non-negative

Use a main application file to run the program.

Create an interactive menu that allows you to:

- Create a new player
- Change the player's name
- Change the player's position
- Change the player's jersey number
- Change the player's goals scored

Example run:

```
Player App

Enter player name: Bill
Enter position: Striker
Enter jersey number (string): 25
Enter goals scored (integer, default 0): 12

Created Player:
Player(name='Bill', position='Striker', jersey_number='25', goals_scored=12)

-- Player Menu --
1) Show details
2) Update name
3) Update position
4) Update jersey number
5) Update goals scored
0) Exit
Choose: 1
Player(name='Bill', position='Striker', jersey_number='25', goals_scored=12)

-- Player Menu --
1) Show details
2) Update name
3) Update position
4) Update jersey number
5) Update goals scored
0) Exit
Choose: 2
New name: William
Updated.

-- Player Menu --
1) Show details
2) Update name
3) Update position
4) Update jersey number
5) Update goals scored
0) Exit
Choose: 
```

Assignment Submission

1. Attach the pseudocode.
2. Attach the program files.
3. Attach screenshots showing the successful operation of the program.

4. Submit in Blackboard.