

Problem Statement: ****Cricket Scoreboard****

You are tasked with creating a basic ****Cricket Match Scoreboard**** system. The system should allow you to:

1. Add players to teams.
2. Record runs and wickets for the match.
3. Display the current score and match summary.

Classes

1. ****Player**** (2 Marks)

- Represents a player with attributes:
 - ``name``: Name of the player.
 - ``runs``: Total runs scored by the player.
- Methods:
 - ``__str__``: Returns the player's name and runs in the format: `"Player Name: X runs"`.

2. ****Team**** (3 Marks)

- Represents a cricket team.
- Attributes:
 - ``team_name``: Name of the team.
 - ``players``: List of ``Player`` objects in the team.
- Methods:
 - ``add_player``: Adds a new player to the team.
 - ``__str__``: Returns a summary of the team's players and their runs.

3. ****Match**** (5 Marks)

- Represents a simple cricket match.
- Attributes:
 - ``team``: The team currently batting.
 - ``score``: Total runs scored by the team.
 - ``wickets``: Number of wickets fallen.

- Methods:
 - ``record_run``: Adds runs to the team's score.
 - ``record_wicket``: Increases the wicket count.
 - ``summary``: Displays the team's total score, wickets fallen, and each player's performance.

Example Interaction

Sample Scenario

1. A match starts with **Team A** batting.
2. Players are added to the team.
3. Runs and wickets are recorded.
4. Display the match summary at the end.

Example Code

```
```python
Create a Team
team_a = Team("Team A")

Add players to the team
team_a.add_player(Player("Player A1"))
team_a.add_player(Player("Player A2"))

Start a match with Team A batting
match = Match(team_a)

Record some runs and wickets
match.record_run("Player A1", 4) # Player A1 hits a boundary
match.record_run("Player A1", 1) # Player A1 scores a single
```

```
match.record_wicket("Player A1") # Player A1 is out
```

```
match.record_run("Player A2", 6) # Player A2 hits a six
```

```
Display match summary
```

```
match.summary()
```

```
...
```

```

```

### ### Mark Distribution

1. **\*\*Player Class\*\*** (2 Marks): Correct implementation of the `Player` class and its `\_\_str\_\_` method.
2. **\*\*Team Class\*\*** (3 Marks): Proper handling of players in the team and its `add\_player` and `\_\_str\_\_` methods.
3. **\*\*Match Class\*\*** (5 Marks): Complete functionality for recording runs, wickets, and displaying the match summary.

```

```

### ### Challenge Task (Optional Bonus)

1. Track the number of balls faced by each player.
2. Display the strike rate for each player in the summary.