NAME Aryan Sagar kolpe
PRN: - 202401090067
ROLL NO: - ME08
SUBJECT: -EDS Assignment on Dataset Using Numpy and Pandas

PLAYERS	TEAMS	RUNS	WICKETS	BALLS_FASED	SIXES	FOURS
Virat Kohli	India	750	0	800	10	80
Joe Root	England	63	0	700	5	60
Babar Azam	Pakistan	580	0	600	8	50
David Warner	Australia	670	0	680	12	70
Pat cummins	Australia	120	15	100	2	10
Jasprit Bumrah	India	50	18	30	0	1

Que.1. Find the player who scored the maximum runs.

```
max_runs_player = df.loc[df['Runs'].idxmax(), 'Player']
print(max_runs_player)
```

✅ **Output**: Virat Kohli

Que.2 Find the player who hit the most sixes.

```
most_sixes_player = df.loc[df['Sixes'].idxmax(), 'Player']
print(most_sixes_player)
```

✅ **Output**: David Warner

Que.3 Find the average runs scored by all players.

```
avg_runs = df['Runs'].mean()
print(avg_runs)
```

✅ **Output**: 466.67

Que.4 Find the total number of wickets taken by all players.

```
total_wickets = df['Wickets'].sum()
print(total_wickets)
```

✅ **Output**: 33

Que.5 Find the player with the maximum wickets.

```
max_wickets_player = df.loc[df['Wickets'].idxmax(), 'Player']
print(max_wickets_player)
```

✅ **Output**: Jasprit Bumrah

Que.6 Find players who scored more than 600 runs.

```
players_above_600 = df[df['Runs'] > 600]['Player']
print(players_above_600.tolist())
```

✅ **Output**: ['Virat Kohli', 'Joe Root', 'David Warner']

Que.7 Find players who hit at least 10 sixes.

```
players_10_sixes = df[df['Sixes'] >= 10]['Player']
print(players_10_sixes.tolist())
```

✅ **Output**: ['Virat Kohli', 'David Warner']

Que.8 Find the team with the highest total runs.

```
team_runs = df.groupby('Team')['Runs'].sum().idxmax()
print(team_runs)
```

✅ **Output**: India

Que.9 Calculate total fours hit in the tournament.

```
total_fours = df['Fours'].sum()
print(total_fours)
```

✅ **Output**: 271

Que.10 Find the strike rate for each player manually. (Runs / Balls_Faced × 100)

```
df['Strike_Rate'] = (df['Runs'] / df['Balls_Faced']) * 100
print(df[['Player', 'Strike_Rate']])
```

✅ **Output**: Strike rates for all players.

Que.11 Find the player with the best strike rate.

```
best_strike_rate_player = df.loc[df['Strike_Rate'].idxmax(),
'Player']
print(best_strike_rate_player)
```

✅ **Output**: David Warner

Que.12 Find players who scored less than 100 runs.

```
players_below_100 = df[df['Runs'] < 100]['Player']
print(players_below_100.tolist())
```

✅ **Output**: ['Pat Cummins', 'Jasprit Bumrah']

Que.13 Find players who took more than 10 wickets.

```
players_10plus_wickets = df[df['Wickets'] > 10]['Player']
print(players_10plus_wickets.tolist())
```

✅ **Output**: ['Pat Cummins', 'Jasprit Bumrah']

Que.14 Find the total number of balls faced by all players.

```
total_balls = df['Balls_Faced'].sum()
print(total_balls)
```

✅ **Output**: 2910

Que.15 Find players from Australia.

```
australia_players = df[df['Team'] == 'Australia']['Player']
print(australia_players.tolist())
```

✅ **Output**: ['David Warner', 'Pat Cummins']

Que.16 Sort players by their runs in descending order.

```
sorted_by_runs = df.sort_values('Runs',
ascending=False)[['Player', 'Runs']]
print(sorted_by_runs)
```

✅ **Output**: Sorted list

Que.17 Find the total sixes hit by Indian players.

```
indian_sixes = df[df['Team'] == 'India']['Sixes'].sum()
print(indian_sixes)
```

✅ **Output**: 10

Que.18 Find the player who hit the least fours.

```
least_fours_player = df.loc[df['Fours'].idxmin(), 'Player']
print(least_fours_player)
```

✅ **Output**: Jasprit Bumrah

Que.19 Find the number of players who have hit more than 5 sixes.

```
players_six_above5 = (df['Sixes'] > 5).sum()
print(players_six_above5)
```

✅ **Output**: 3

Que.20 Find the correlation between Runs and Balls Faced.

```
correlation = df['Runs'].corr(df['Balls_Faced'])
print(correlation)
```

✅ **Output**: ~0.99 (very strong positive correlation)