Introduction

For this assignment, read the scenario below and then respond to the problem statement described.

Scenario

The 'Man of the Match' award of a 50-over cricket match is decided by computing points earned by players. The points are calculated on the basis of the following rules:

Batting

- 1 point for 2 runs scored
- Additional 5 points for a half-century
- Additional 10 points for a century
- 2 points for strike rate (runs/balls faced) of 80-100
- Additional 4 points for strike rate>100
- 1 point for hitting a boundary (four) and 2 points for over boundary (six)

Bowling

- 10 points for each wicket
- Additional 5 points for three wickets in innings
- Additional 10 points for 5 wickets or more in innings
- 4 points for economy rate (runs given per over) between 3.5 and 4.5
- 7 points for an economy rate between 2 and 3.5
- 10 points for an economy rate less than 2

Fielding

- 10 points each for catch/stumping/run out

In [1]:

```
p1={'name':'Virat Kohli', 'role':'bat', 'runs':112, '4':10, '6':0,'balls':119, 'field':
0}

p2={'name':'du Plessis', 'role':'bat', 'runs':120, '4':11, '6':2,'balls':112, 'field':0
}

p3={'name':'Bhuvneshwar Kumar', 'role':'bowl', 'wkts':1, 'overs':10,'runs':71, 'field':
1}

p4={'name':'Yuzvendra Chahal', 'role':'bowl', 'wkts':2, 'overs':10,'runs':45, 'field':0
}

p5={'name':'Kuldeep Yadav', 'role':'bowl', 'wkts':3, 'overs':10, 'runs':34,'field':0}
```

Problem Statement

Assuming that these are the top 5 performers, write a Python program to decide the player with the highest points. Develop separate functions to compute batting and bowling points and save them in a module. These functions should be imported into the main code.

Assignment Submission

Your submission should have a fully functional code with:

1. One module containing the required functions.
2. One script file with the main code which computes the top player amongst the 5 given players.

When your script is run, it should generate a result which might look like this:

{'name': 'Virat Kohli', 'batscore': 83}

{'name': 'du Plessis', 'batscore': 94}

{'name': 'Bhuvneshwar Kumar', 'bowlscore': 10}

{'name': 'Yuzvendra Chahal', 'bowlscore': 24}

{'name': 'Kuldeep Yadav', 'bowlscore': 42}

In [2]:

```
def player_point(player):
    points=0

    if player['role']=='bat':
        points += player['runs']//2

        if player['runs'] > 50:
            points += 5
            if player['runs'] > 100:
                points += 10

        strike_rate = (player['runs']/player['balls'])*100

        if(strike_rate>=80 and strike_rate<=100):
            points += 2
        elif(strike_rate>100):
            points += 4

        points += player['4']*1
        points += player['6']*2
        points += player['field']*10

        MOM_Score ={'name':player['name'],'batscore':points}
        print(MOM_Score)


    elif player['role']=='bowl':
        points += player['wkts']*10
        if player['wkts'] >= 3 and player['wkts'] < 5:
            points = player['wkts']*10 + 5
            if player['wkts'] >= 5:
                points += 10

        economy_rate = player['runs'] / player['overs']
        if (economy_rate > 3.5 and economy_rate < 4.5):
            points += 4
        elif (economy_rate > 2 and economy_rate < 3.5):
            points += 7
        elif (economy_rate < 2):
            points += 10

        points += player['field']*10


        MOM_Score ={'name':player['name'],'bowlscore':points}
        print(MOM_Score)
    return
```

In [3]:

```
player_point(p1)
player_point(p2)
player_point(p3)
player_point(p4)
player_point(p5)
```

```
{'name': 'Virat Kohli', 'batscore': 83}
{'name': 'du Plessis', 'batscore': 94}
{'name': 'Bhuvneshwar Kumar', 'bowlscore': 20}
{'name': 'Yuzvendra Chahal', 'bowlscore': 20}
{'name': 'Kuldeep Yadav', 'bowlscore': 42}
```