## 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 half century
- Additional 10 points for 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 per 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 economy rate between 2 and 3.5
- 10 points for economy rate less than 2

### Fielding

- 10 points each for catch/stumping/run out

The performance of each player is stored in a dictionary object. Displayed below is data for 5 players.

```
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 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': 73}
{'name': 'du Plessis', 'batscore': 84}
{'name': 'Bhuvneshwar Kumar', 'bowlscore': 20}
{'name': 'Yuzvendra Chahal', 'bowlscore': 30}
{'name': 'Kuldeep Yadav', 'bowlscore': 45}
>>>
```

## Hint

The calculation of points will require conditional logic to be applied. Since this is to be performed for 5 players, there's looping involved. Defining and calling functions from a module is also required.

You can approach this assignment in the following sequence:

1. First, create the required variables.
2. Next, convert the rules into expressions and conditions. For example, points = runs/2 or if runs >50, points = points+2 and so on.
3. Next, define each of the two functions for batting or fielding and bowling.
4. Finally write your program using the conditions and the functions.

## Learning outcomes being evaluated

- Use conditional logic in Python programs
- Write programs using conditionals, loops, iterators and generators, functions and modules and packages.