# *Object Oriented Programming (OOP) Lab Tasks 01 E1*

## Task 1:

You are required to implement a **`Person`** class in Java, which represents a human being. The class should have the following attributes:

- **`name` (String):** Represents the name of the person.

- **`birthYear` (int):** Represents the year of birth of the person.

- **`deathYear` (int):** Represents the year of death of the person. If the person is still alive, the value should be set to -1.

The ***Person*** class should provide the following functionalities:

1. **Parameterized Constructor:** A constructor that initializes the `name`, `birthYear`, and `deathYear` attributes of the person.
2. **Copy Constructor:** A constructor that creates a copy of an existing `Person` object.
3. Accessor Methods: Getter methods to access the `name`, `birthYear`, and `deathYear` attributes of the person.
4. **Print Method:** A method that displays the information of the person, including their name, birth year, and death year.

In the `main` function, you need to test the functionality of the `Person` class by performing the following actions:

1. Create a **`Person`** object `p1` with the following details: name - " Abdul Sattar Edhi", birthYear - 1928, deathYear - 2016.
2. Create a **`Person`** object `p2` using the copy constructor, with `p1` as the source object.
3. Create a **`Person`** object `p3` using the parametrized constuctor
4. Call the **`print`** method on `p1`, `p2`, and `p3` to display their respective information.
5. Create a **`Person`** object `p4` with no death information and print it.

## Sample Output:

```
Name: Abdul Sattar Edhi          Name: Abdul Sattar Edhi
Birth Year: 1928                 Birth Year: 1928
Death Year: 2016                 Death Year: 2016

Name: Abdul Sattar Edhi          Name: Babar Azam
Birth Year: 1928                 Birth Year: 1994
Death Year: 2016                 Death Year: -
```

## Task 2

You are required to implement a `CricketPlayer` class in Java that represents a cricket player. The class should have the following attributes:

- **`playerName` (String):** Represents the name of the player.
- **`score` (int):** Represents the total score of the player.
- **`ballsPlayed` (int):** Represents the total number of balls played by the player.
- **`numFours` (int):** Represents the number of fours hit by the player.
- **`numSixes` (int):** Represents the number of sixes hit by the player.

The `CricketPlayer` class should provide the following functionalities:

1. Parameterized Constructor: A constructor that initializes the `playerName`, `score`, `ballsPlayed`, `numFours`, and `numSixes` attributes of the player.
2. Accessor Methods: Getter methods to access the `playerName`, `score`, `ballsPlayed`, `numFours`, and `numSixes` attributes of the player.
3. Get Strike Rate: A **private** method that calculates and returns the strike rate of the player. The strike rate is calculated as (score / ballsPlayed) * 100.
4. Get Boundary Percentage: A **private** method that calculates and returns the percentage of boundaries (fours and sixes) scored by the player. The boundary percentage is calculated as ((numFours + numSixes) / ballsPlayed) * 100.
5. A public print method that displays the information of Player

*Sample Output:*

```
Player Name: Babar Azam

Total Score: 78

Balls Played: 54

Number of Fours: 8

Number of Sixes: 3

Strike Rate: 144.44

Boundary Percentage: 25.92
```