

# Rajalakshmi Engineering College

Name: RAGHAVAN M.K

Email: 240701408@rajalakshmi.edu.in

Roll no: 240701408

Phone: 7397247776

Branch: REC

Department: CSE - Section 3

Batch: 2028

Degree: B.E - CSE

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## 2024\_28\_III\_OOPS Using Java Lab

### 2028\_REC\_OOPS using Java\_Week 7\_Q5

Attempt : 1

Total Mark : 10

Marks Obtained : 10

### Section 1 : Coding

#### 1. Problem Statement

Raj is curious about how old he is in the current year.

He has asked you to create a simple program that calculates a person's age based on their birth year. You decide to implement this functionality using the AgeCalculator interface and the HumanAgeCalculator class.

Note: The current year is 2024. Calculate the current age by using the formula: current year - birth year.

#### ***Input Format***

The input consists of an integer representing the birth year.

#### ***Output Format***

The output displays "You are X years old." where X is an integer representing the calculated age based on the entered birth year.

Refer to the sample output for formatting specifications.

### **Sample Test Case**

Input: 1934

Output: You are 90 years old.

### **Answer**

```
import java.util.Scanner;
// You are using Java
import java.util.*;
interface AgeCalculator{
    int calculateAge(int birth_year);
}
class HumanAgeCalculator implements AgeCalculator{
    int birth_year;

    @Override
    public int calculateAge(int birth_year){
        this.birth_year = birth_year;
        int output = 2024-birth_year;
        return(output);
    }
}

class AgeCalculatorApp {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        AgeCalculator ageCalculator = new HumanAgeCalculator();

        int birthYear = scanner.nextInt();
        int age = ageCalculator.calculateAge(birthYear);

        System.out.println("You are " + age + " years old.");
    }
}
```

Status : Correct

Marks : 10/10