

# Rajalakshmi Engineering College

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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;
import java.util.Scanner;

interface AgeCalculator {
    int calculateAge(int birthYear);
}

class HumanAgeCalculator implements AgeCalculator {
    public int calculateAge(int birthYear) {
        int currentYear = 2024;
        return currentYear - birthYear;
    }
}

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int birthYear = sc.nextInt();

        HumanAgeCalculator calc = new HumanAgeCalculator();
        int age = calc.calculateAge(birthYear);

        System.out.println("You are " + age + " years old.");
    }
}
// You are using Java

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