

# 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;  
  
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interface AgeCalculator {  
    int calculateAge(int birthYear);  
}  
  
class HumanAgeCalculator implements AgeCalculator {  
    private static final int CURRENT_YEAR = 2024;  
  
    @Override  
    public int calculateAge(int birthYear) {  
        return CURRENT_YEAR - birthYear;  
    }  
}  
  
public class Main {  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);  
  
        int birthYear = sc.nextInt();  
  
        AgeCalculator calculator = new HumanAgeCalculator();  
        int age = calculator.calculateAge(birthYear);  
  
        System.out.println("You are " + age + " years old.");  
    }  
}  
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