Question 6

Write a java program to demonstrate the usage of feature package. Create package to convert temperature in centigrade into Fahrenheit and one more package to calculate simple interest. Implement both packages in main.

File 1 (Convertor.java):

*{**The below file should be saved in a separate folder, whose name matches the name of the package mentioned**}*

```java
package tempconvert;    //folder name should be tempconvert

import java.io.*;
import java.util.Scanner;

public class Convertor {
    public void cent_fahren() {
        double f = 0, c = 0;
        Scanner b = new Scanner(System.in);

        try {
            System.out.print("Enter the temperature in Centigrade: ");
            c = b.nextDouble();
        } catch (Exception e) {}

        f = (c * 9) / 5 + 32;

        System.out.println("The temperature in Fahrenheit is: " + f);
    }

    public void fah_cent() {
        double f = 0, c = 0;
        Scanner b = new Scanner(System.in);

        try {
            System.out.print("Enter the temperature in Fahrenheit: ");
```

```
            f = b.nextDouble();
        } catch (Exception e) {}

        c = (f - 32) * 5 / 9;

        System.out.println("The temperature in Centigrade is: " + c);
    }
 }
```

File 2 (SimpleInterest.java):

{**The below file should be saved in a different folder, whose name matches the name of the package mentioned**}

```
 package calculate;    //folder name should be calculate

 import java.util.Scanner;

 public class SimpleInterest {
     float p, n, r, si;

     public void getdata() {
         Scanner b = new Scanner(System.in);

         try {
             System.out.print("Enter Principal: ");
             p = b.nextFloat();

             System.out.print("Enter Time in Years: ");
             n = b.nextFloat();

             System.out.print("Enter the Rate of Interest: ");
             r = b.nextFloat();
         } catch (Exception c) {}
     }

     public void process() {
         si = (p * r * n) / 100;
     }

     public void putdata() {
         System.out.println("The Principal Amount: " + p);
         System.out.println("The Number of Years is: " + n);
         System.out.println("The Rate of Interest is: " + r);
         System.out.println("Simple Interest is: " + si);
     }
 }
```

File 3 (Calculation.java):

*{**The below file is to be saved outside the folder in which the above two files are saved. In this file, we are importing the above two packages**}*

```java
import tempconvert.*;
import calculate.*;

public class Calculation {
    public static void main(String args[]) {
        Convertor c = new Convertor();
        SimpleInterest s = new SimpleInterest();

        System.out.println("Output for Temperature:");
        c.cent_fahren();
        c.fah_cent();

        System.out.println("\nOutput for Simple Interest:");
        s.getdata();
        s.process();
        s.putdata();
    }
}
```
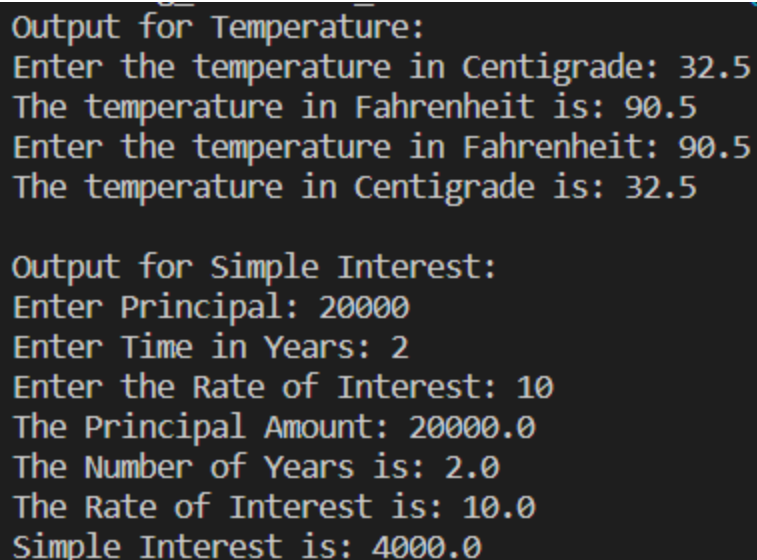
Output:

```
Output for Temperature:
Enter the temperature in Centigrade: 32.5
The temperature in Fahrenheit is: 90.5
Enter the temperature in Fahrenheit: 90.5
The temperature in Centigrade is: 32.5

Output for Simple Interest:
Enter Principal: 20000
Enter Time in Years: 2
Enter the Rate of Interest: 10
The Principal Amount: 20000.0
The Number of Years is: 2.0
The Rate of Interest is: 10.0
Simple Interest is: 4000.0
```