

## 29. JUNIT TESTING TO CHECK WHETHER THE SIMPLE INTEREST IS VALID OR NOT

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### AIM

To Perform junit Testing to Check Whether the Calculated simple interest is valid or not

### PROGRAM

```
package sse;

import static org.junit.Assert.assertTrue;
import java.util.Scanner;

class intrest
{
    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);
        float P=sc.nextFloat();
        float R=sc.nextFloat();
        float T=sc.nextFloat();
        float SI = (P * T * R) / 100;
        System.out.println("Simple interest = " + SI);
        assertTrue(12000==SI);
    }
}
```

### OUTPUT

The screenshot shows the Eclipse IDE with the file `intrest.java` open. The code defines a package `sse` and a class `intrest` with a `main` method. The `main` method uses a `Scanner` to read three floating-point values `P`, `R`, and `T` from `System.in`. It then calculates the simple interest `SI = (P * T * R) / 100` and prints it. An `assertTrue` statement checks if the calculated `SI` is equal to 12000.0. The console output shows the program terminated successfully, printed the value 200000, and then the simple interest calculation result: `Simple interest = 12000.0`.

```
1 package sse;
2
3 import static org.junit.Assert.assertTrue;
4
5 class intrest
6 {
7     public static void main(String[] args)
8     {
9         Scanner sc=new Scanner(System.in);
10        float P=sc.nextFloat();
11        float R=sc.nextFloat();
12        float T=sc.nextFloat();
13        float SI = (P * T * R) / 100;
14        System.out.println("Simple interest = " + SI);
15        assertTrue(12000==SI);
16    }
17 }
18
19
```

Console Output:

```
<terminated> intrest [Java Application] C:\Program Files\Java\jre1.8.0_171\bin\javaw.exe (25-May-2023, 3:45:44 pm)
200000
3
2
Simple interest = 12000.0
```

The screenshot shows the Eclipse IDE with the file `intrest.java` open. The code is identical to the previous one, but the `assertTrue` statement checks if the calculated `SI` is equal to 40000.0. The console output shows the program terminated successfully, printed the value 2000000, and then the simple interest calculation result: `Simple interest = 40000.0`. This is followed by an `AssertionError` exception stack trace, indicating that the assertion failed.

```
1 package sse;
2
3 import static org.junit.Assert.assertTrue;
4
5 class intrest
6 {
7     public static void main(String[] args)
8     {
9         Scanner sc=new Scanner(System.in);
10        float P=sc.nextFloat();
11        float R=sc.nextFloat();
12        float T=sc.nextFloat();
13        float SI = (P * T * R) / 100;
14        System.out.println("Simple interest = " + SI);
15        assertTrue(40000==SI);
16    }
17 }
18
19
```

Console Output:

```
<terminated> intrest [Java Application] C:\Program Files\Java\jre1.8.0_171\bin\javaw.exe (25-May-2023, 3:47:16 pm)
2000000
2
1
Simple interest = 40000.0
Exception in thread "main" java.lang.AssertionError
    at org.junit.Assert.fail(Assert.java:86)
    at org.junit.Assert.assertTrue(Assert.java:41)
    at org.junit.Assert.assertTrue(Assert.java:52)
    at sse.intrest.main(intrest.java:15)
```

## RESULT

Hence the junit Testing Check Whether the Calculated simple interest is valid or not performed successfully.