ASSIGNMENT NO. 4

Kunal More

1. Write a program that demonstrates widening conversion from int to double and prints the result.

```java
3 public class p1 {
4    public static void main(String[] args) {
5        int num = 42;
6        double result = num;
7        System.out.println("Widening conversion from int to double: " + result);
8    }
9 }
10
```

```
Console ×  Problems  Debug Shell
<terminated> p1 (8) [Java Application] C:\Users\ACER\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_22.0.2.v20240802-1626\jre\bin\javaw.exe  (17 Sept 2
Widening conversion from int to double: 42.0
```

2. Create a program that demonstrates narrowing conversion from double to int and prints the result.

```java
3 public class p2 {
4    public static void main(String[] args) {
5        double num = 42.67;
6        int result = (int) num;
7        System.out.println("Narrowing conversion from double to int: " + result);
8    }
9 }
10
```

```
Console ×  Problems  Debug Shell
<terminated> p2 (4) [Java Application] C:\Users\ACER\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_22.0.2.v20240802-1626\jre\bin\javaw.exe  (17 Sept 20
Narrowing conversion from double to int: 42
```

3. Write a program that performs arithmetic operations involving different data types (int, double, float) and observes how Java handles widening conversions automatically.

```java
package mam.Assignment_4;

public class p3 {
    public static void main(String[] args) {
        int intValue = 10;
```

```
        double doubleValue = 15.5;
        float floatValue = 20.2f;

        double result1 = intValue + doubleValue;
        float result2 = floatValue + intValue;
        double result3 = floatValue + doubleValue;

        System.out.println("Result of int + double: " +
result1);
        System.out.println("Result of float + int: " +
result2);
        System.out.println("Result of float + double: " +
result3);
    }
}
```

```
 3 public class p3 {
 4     public static void main(String[] args) {
 5         int intValue = 10;
 6         double doubleValue = 15.5;
 7         float floatValue = 20.2f;
 8
 9         double result1 = intValue + doubleValue;
10         float result2 = floatValue + intValue;
11         double result3 = floatValue + doubleValue;
12
13         System.out.println("Result of int + double: " + result1);
14         System.out.println("Result of float + int: " + result2);
15         System.out.println("Result of float + double: " + result3);
```

Console × Problems Debug Shell
<terminated> p3 (5) [Java Application] C:\Users\ACER\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_22.0.2.v20240802-1626\jre\bin\j
```
Result of int + double: 25.5
Result of float + int: 30.2
Result of float + double: 35.70000076293945
```

4. Write a Program that demonstrates widening conversion from int to (double,float, boolean, string) and prints the result.

```
5. package mam.Assignment_4;
6.
7. public class p4 {
8.     public static void main(String[] args) {
9.         int num = 42;
10.
11.         double doubleResult = num;
12.         float floatResult = num;
13.         boolean booleanResult = (num != 0);
```

ASSIGNMENT NO. 4

```
14.            String stringResult = Integer.toString(num);
15.
16.            System.out.println("Widening conversion from
   int to double: " + doubleResult);
17.            System.out.println("Widening conversion from
   int to float: " + floatResult);
18.            System.out.println("Widening conversion from
   int to boolean: " + booleanResult);
19.            System.out.println("Widening conversion from
   int to String: " + stringResult);
20.        }
21. }
```

```java
3 public class p4 {
4°     public static void main(String[] args) {
5          int num = 42;
6
7          double doubleResult = num;
8          float floatResult = num;
9          boolean booleanResult = (num != 0);
10         String stringResult = Integer.toString(num);
11
12         System.out.println("Widening conversion from int to double: " + doubleResult);
13         System.out.println("Widening conversion from int to float: " + floatResult);
14         System.out.println("Widening conversion from int to boolean: " + booleanResult);
15         System.out.println("Widening conversion from int to String: " + stringResult);
```

Console × Problems Debug Shell
<terminated> p4 (3) [Java Application] C:\Users\ACER\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_22.0.2.v20240802-1626\jre\bin\javaw.exe (17 Sept 2024, 12:53:40 a
```
Widening conversion from int to double: 42.0
Widening conversion from int to float: 42.0
Widening conversion from int to boolean: true
Widening conversion from int to String: 42
```