

ASSIGNMENT NO. 4

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

```
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 2024)
Widening conversion from int to double: 42.0

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

```
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 2024)
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.

```
package mam.Assignment_4;

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

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```
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);
16    }
17 }
```

Console × Problems Debug Shell

<terminated> p3 (5) [Java Application] C:\Users\ACER\p2\pool\plugins\org.eclipse.justi.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);
```

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```
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. }
```

```
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);
16    }
17 }
```

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