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

```
package ques1;
class wideningconversion {

  public static void main(String[] args) {

     int intValue = 42;
     double doubleValue = intValue;
     System.out.println("The int value: " + intValue);
     System.out.println("The double value after widening conversion: " + doubleValue);
  }
}
```

```
C:\Users\shree.SHREERAM_M\OneDrive\Desktop>java wideningconversion
The int value: 42
The double value after widening conversion: 42.0
```

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

```
class Ques2 {
   public static void main(String[] args) {
      double doubleValue = 42.75;
      int intValue = (int) doubleValue;
      System.out.println("The double value: " + doubleValue);
      System.out.println("The int value after narrowing conversion: " +
intValue);
   }
}
```

```
C:\Users\shree.SHREERAM_M\OneDrive\Desktop>java Ques2
The double value: 42.75
The int value after narrowing conversion: 42
```

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

```
class ArithmeticOperations{


    public static void main(String[] args) {
        int intValue = 10;
        double doubleValue = 5.5;
        float floatValue = 2.3f;


        double result1 = intValue + doubleValue;
        float result2 = intValue + floatValue;
        double result3 = doubleValue * floatValue;
        int result4 = (int) (doubleValue - floatValue);


        System.out.println("Result of int + double: " + result1);
        System.out.println("Result of int + float: " + result2);
        System.out.println("Result of double * float: " + result3);
        System.out.println("Result of double - float (cast to int): " + result4);
    }
}
```

```
C:\Users\shree.SHREERAM_M\OneDrive\Desktop>java ArithmeticOperations
Result of int + double: 15.5
Result of int + float: 12.3
Result of double * float: 12.649999737739563
Result of double - float (cast to int): 3
```

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

```
class WideningConversion {
    public static void main(String[] args) {
        int intValue = 42;
        // Widening conversion from int to double
        double doubleValue = intValue;
        // Widening conversion from int to float
        float floatValue = intValue;
        // Explicit conversion from int to String
        String stringValue = Integer.toString(intValue);
        boolean booleanValue = intValue != 0;
        System.out.println("The int value: " + intValue);
```

```
        System.out.println("The double value after widening conversion: " +
doubleValue);

        System.out.println("The float value after widening conversion: " +
floatValue);

        System.out.println("The string value after conversion: " + stringValue);

        System.out.println("The boolean value after conversion: " +
booleanValue);

    }

}
```

```
C:\Users\shree.SHREERAM_M\OneDrive\Desktop>java WideningConversion
The int value: 42
The double value after widening conversion: 42.0
The float value after widening conversion: 42.0
The string value after conversion: 42
The boolean value after conversion: true
```