Q7] Working with java.lang.Double

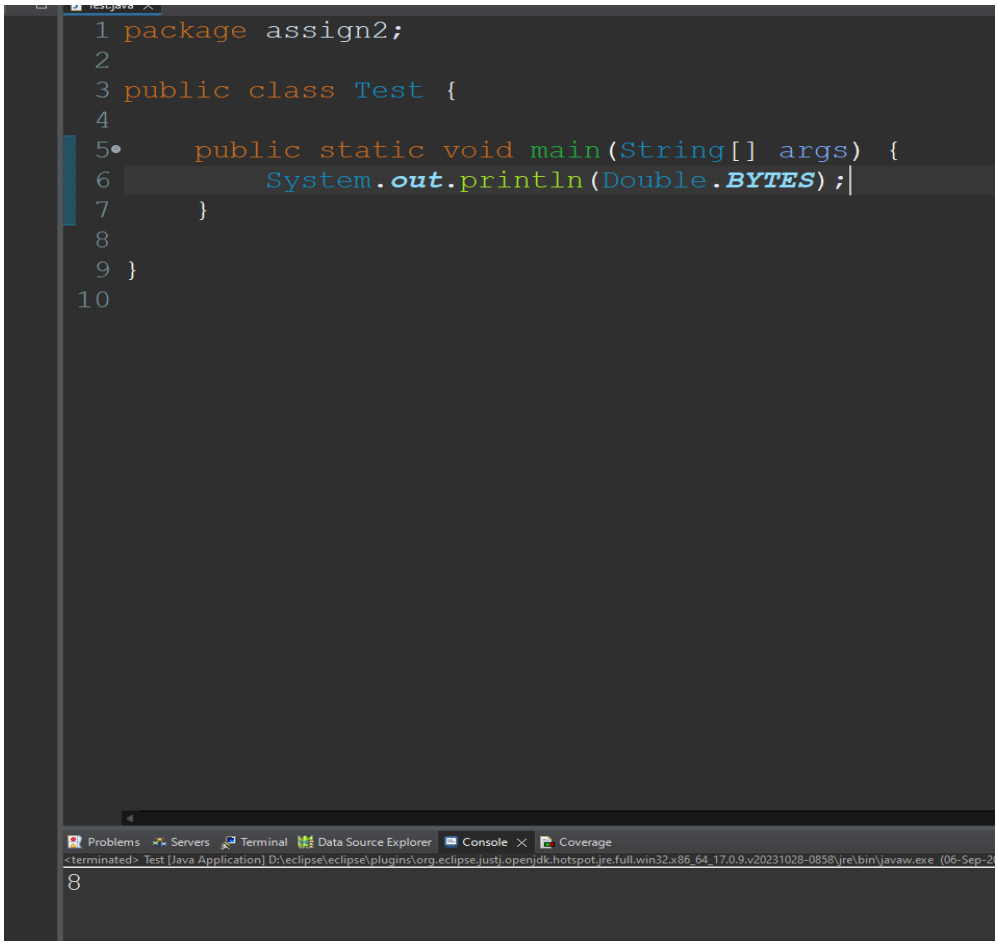
a) Explore the Java API documentation for java.lang.Double and observe its modifiers and super types.

⇒static double → MAX_VALUE

static double → MIN_VALUE

b) Write a program to test how many bytes are used to represent a double value using the BYTES field. (Hint: Use Double.BYTES).

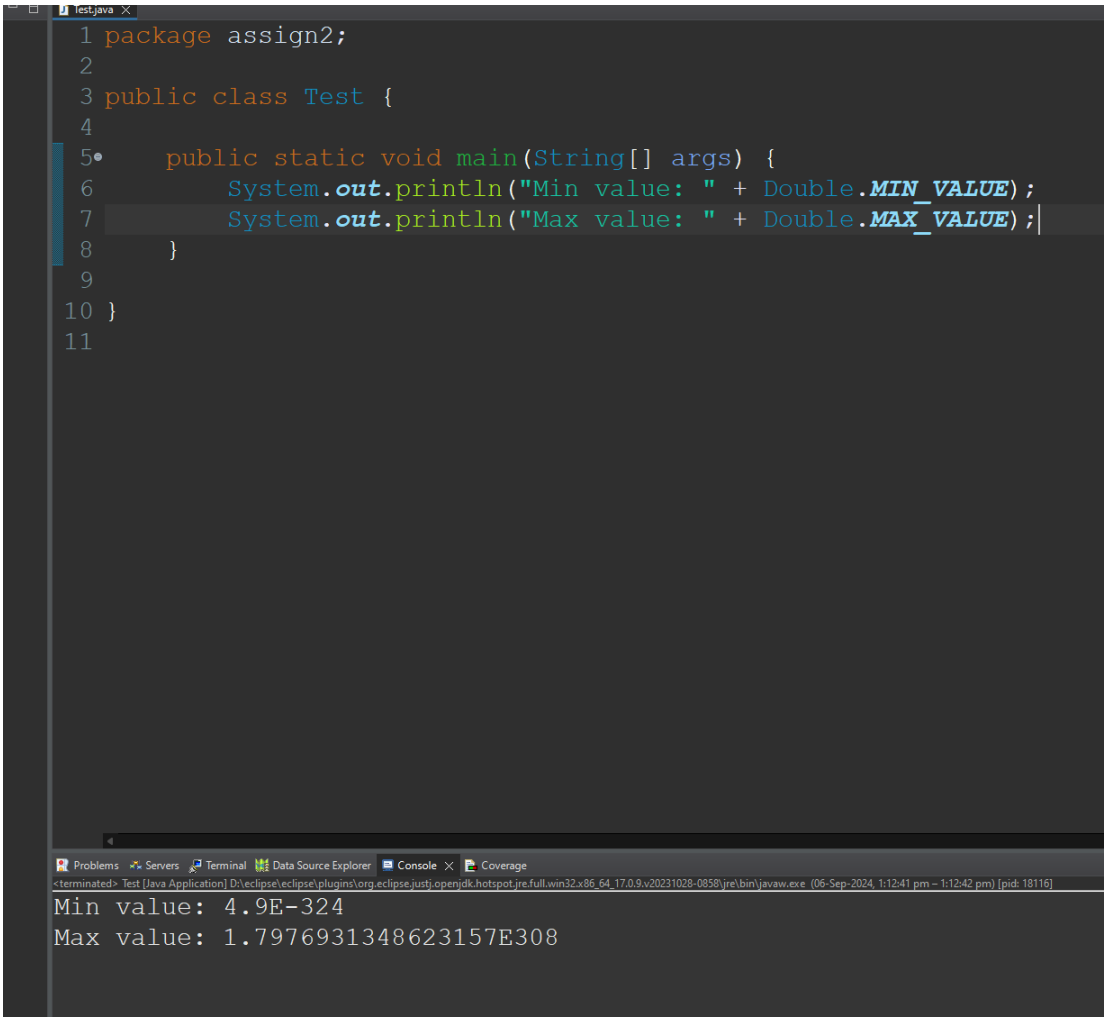
⇒



c) Write a program to find the minimum and maximum values of double using the MIN_VALUE and MAX_VALUE

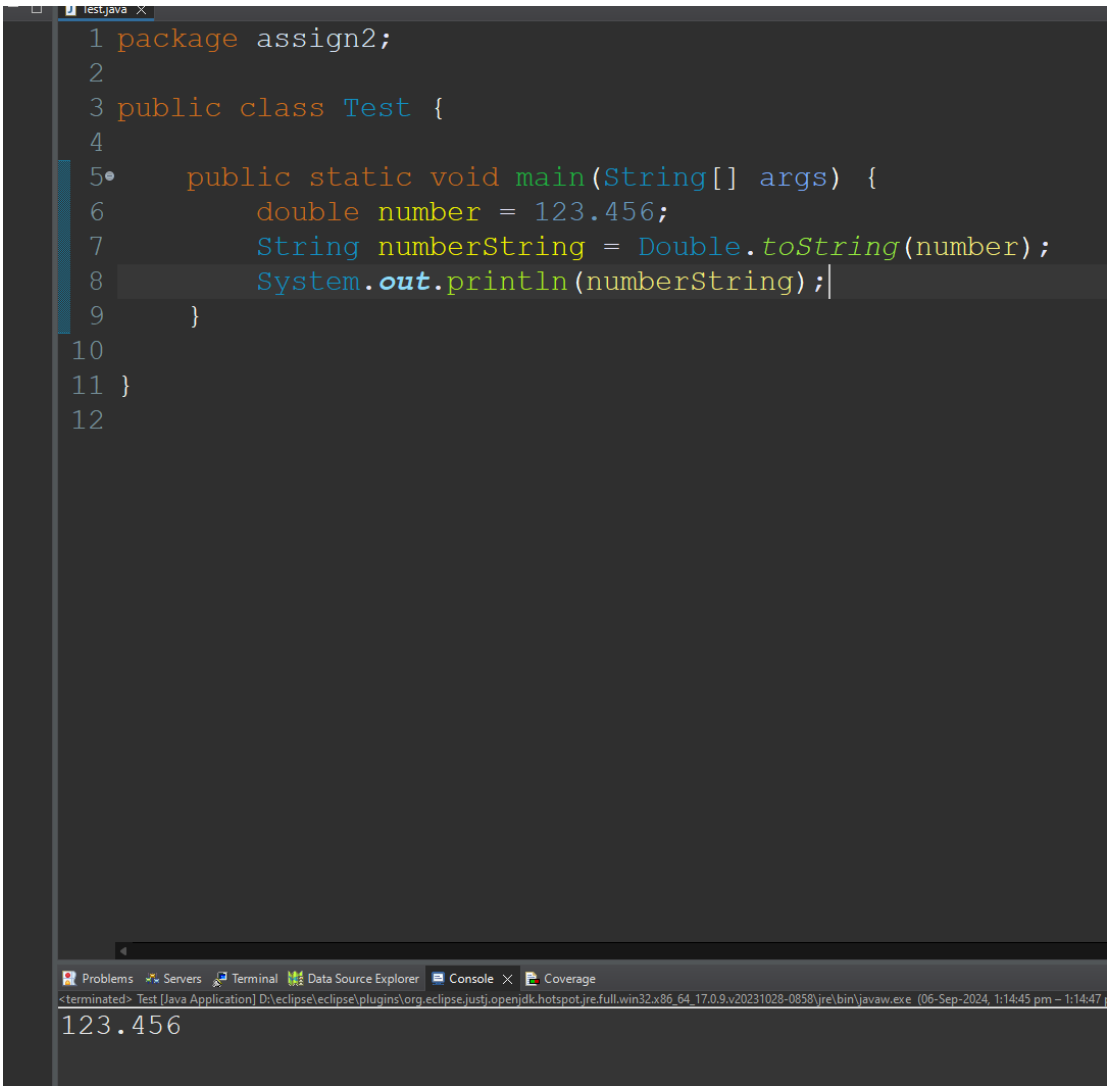
fields. (Hint: Use Double.MIN_VALUE and Double.MAX_VALUE).

⇒



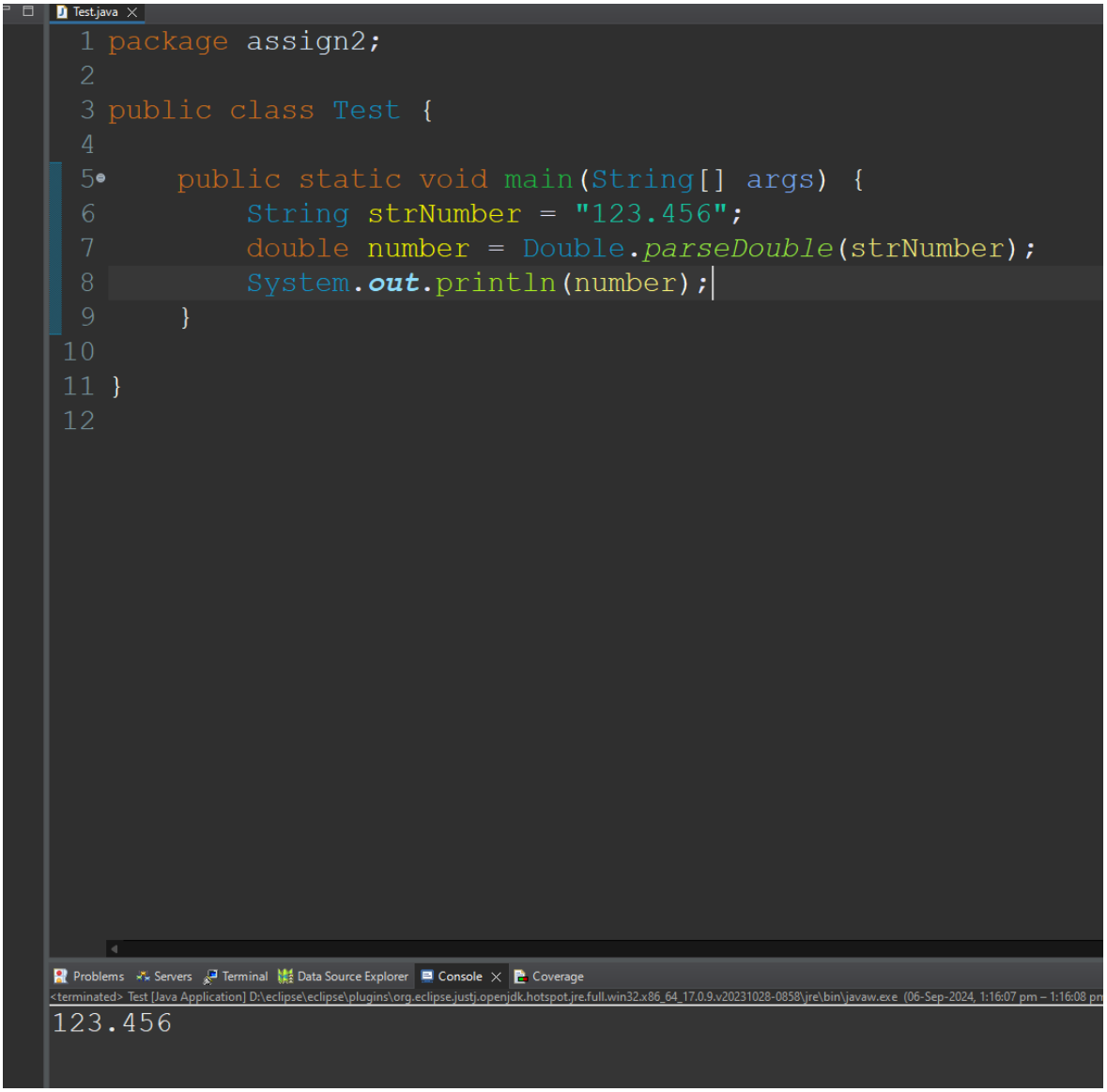
d) Declare a method-local variable number of type double with some value and convert it to a String using the toString method. (Hint: Use Double.toString(double)).

⇒



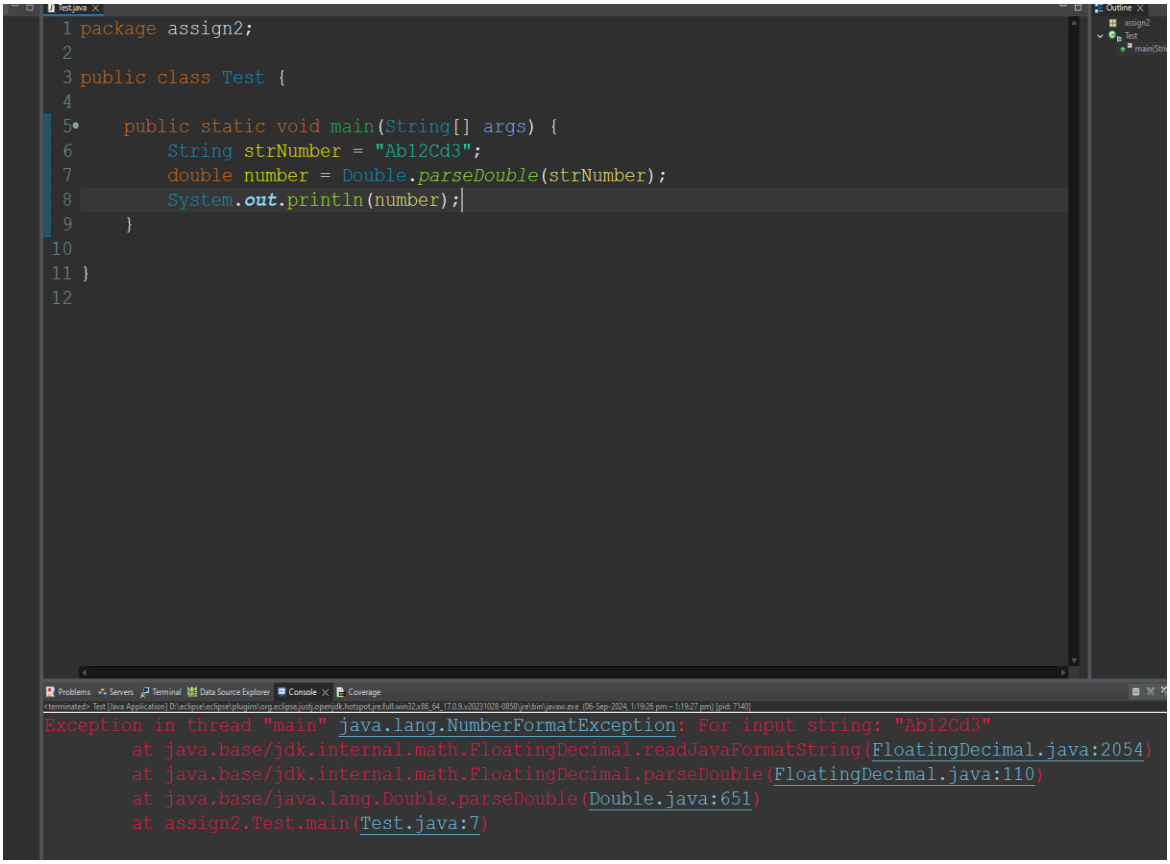
e) Declare a method-local variable strNumber of type String with some value and convert it to a double value using the parseDouble method. (Hint: Use Double.parseDouble(String)).

⇒



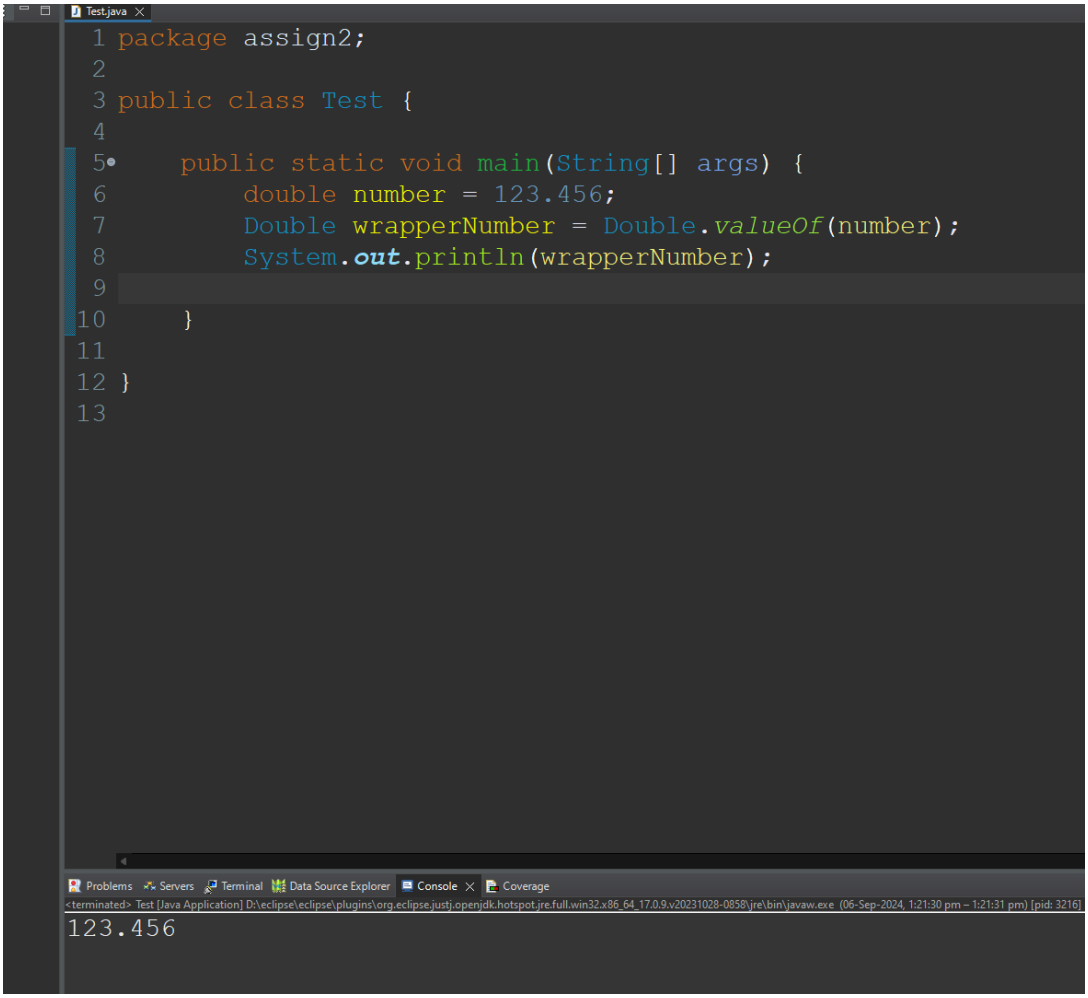
f) Declare a method-local variable strNumber of type String with the value “Ab12Cd3” and attempt to convert it to a double value. (Hint: parseDouble method will throw a NumberFormatException).

⇒



g) Declare a method-local variable number of type double with some value and convert it to the corresponding wrapper class using Double.valueOf(). (Hint: Use Double.valueOf(double)).

⇒



h) Declare a method-local variable strNumber of type String with some double value and convert it to the corresponding wrapper class using Double.valueOf().(Hint: Use Double.valueOf(String)).

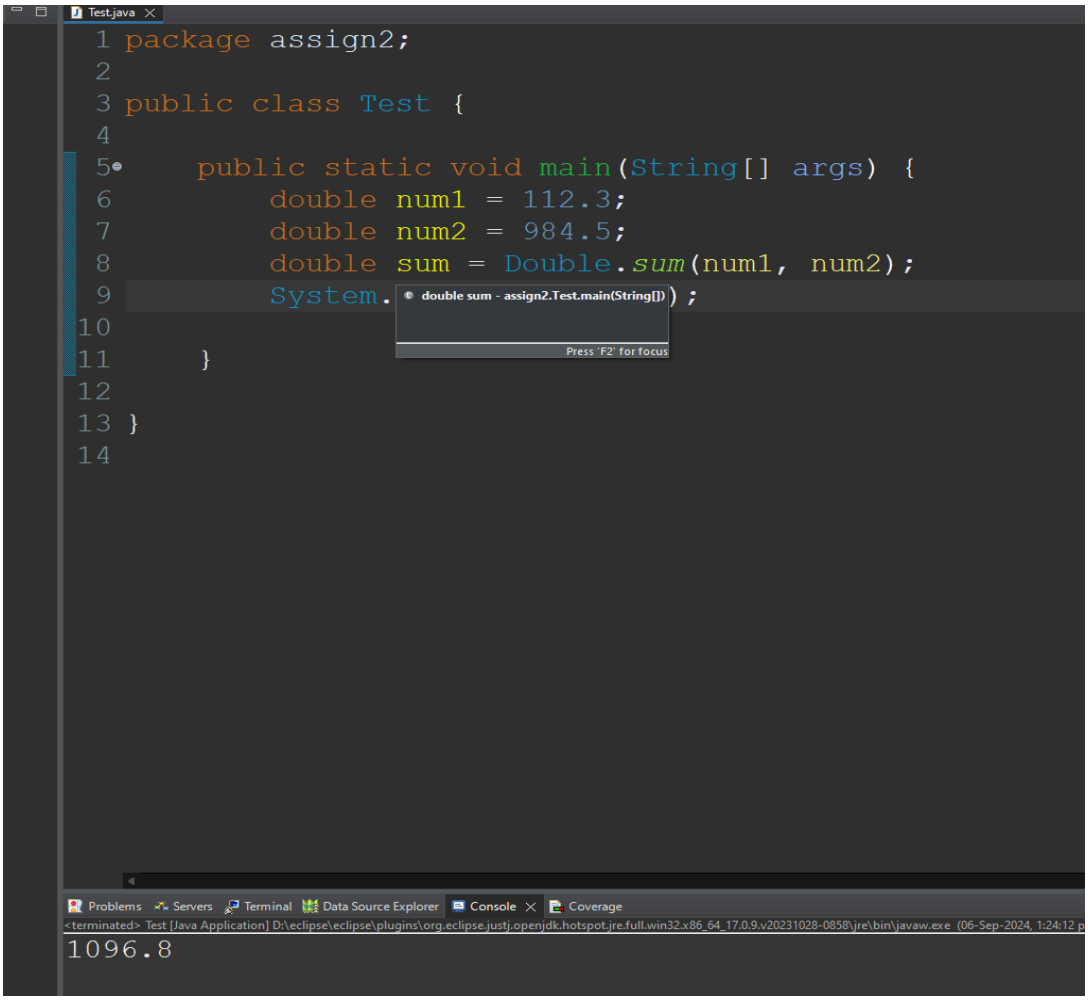
⇒

```java
package assign2;

public class Test {

    public static void main(String[] args) {
        String strNumber = "123.456";
        Double wrapperNumber = Double.valueOf(strNumber);
        System.out.println(wrapperNumber);

    }

}
```

```
Problems  Servers  Terminal  Data Source Explorer  Console  Coverage
<terminated> Test [Java Application] D:\eclipse\eclipse\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.9.v20231028-0858\jre\bin\javaw.exe  (06-Sep-2024, 1:22:43 pm – 1:22:44 pm) [pid: 11056]
123.456
```

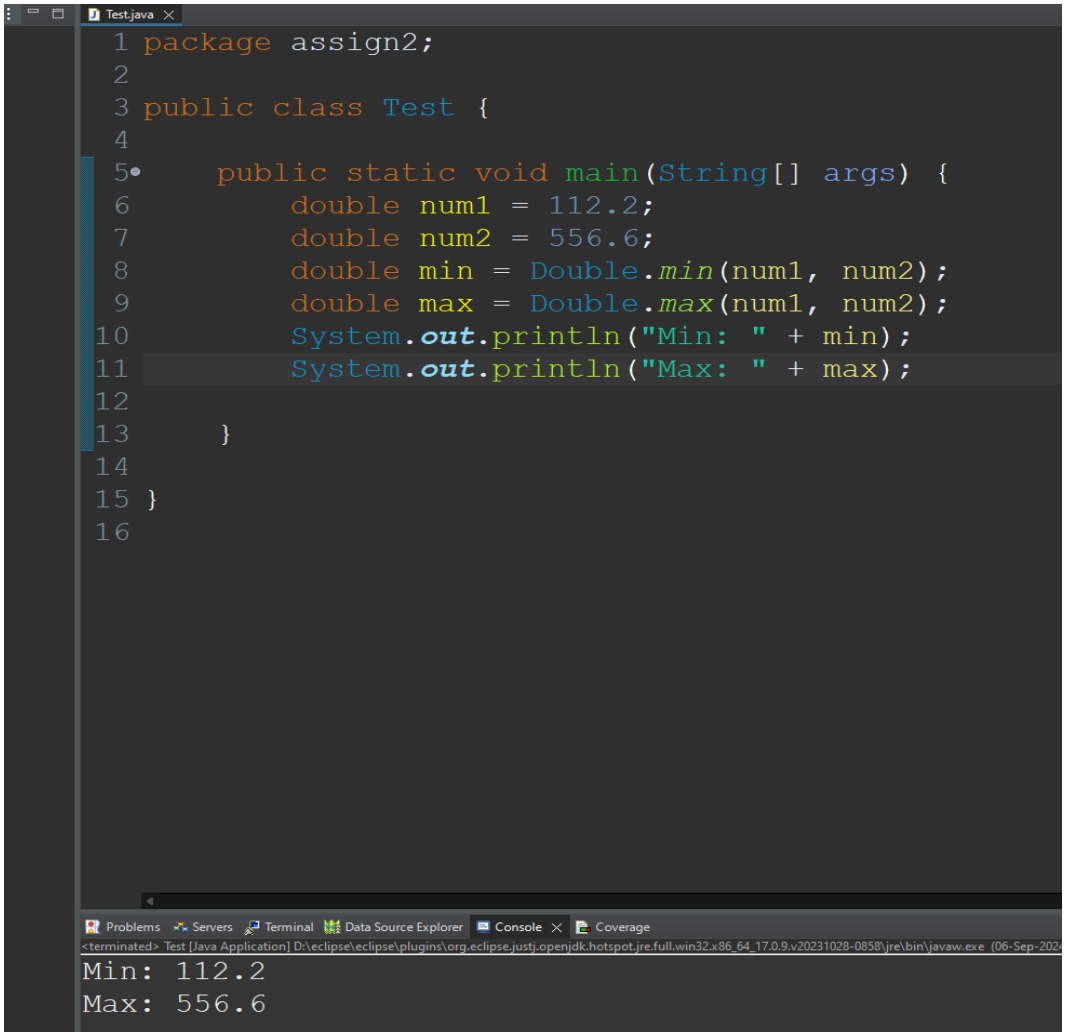
i) Declare two double variables with values 112.3 and 984.5, and add them using a method from the Double class. (Hint: Use Double.sum(double, double)).

⇒



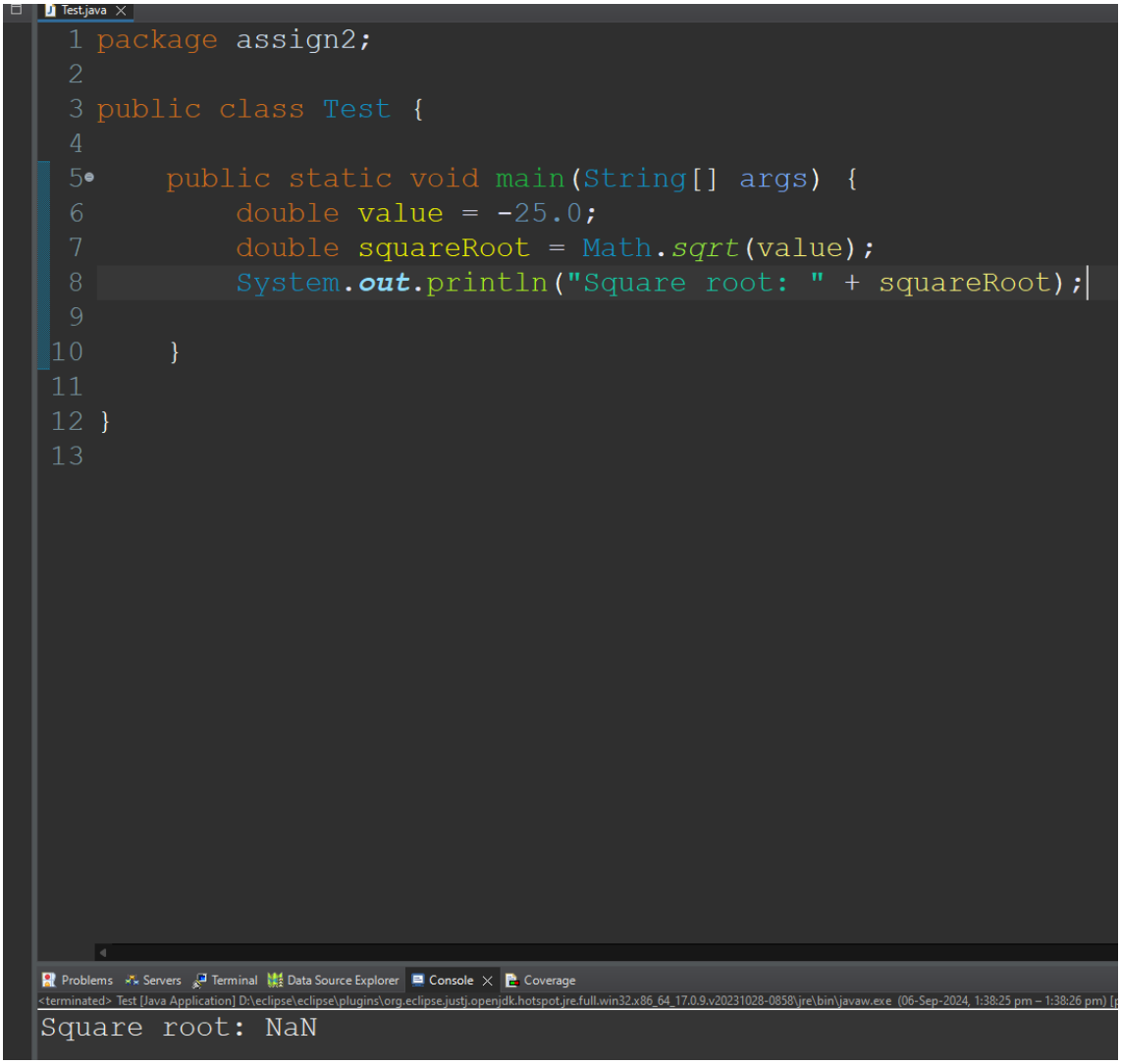
j) Declare two double variables with values 112.2 and 556.6, and find the minimum and maximum values using the Double class. (Hint: Use Double.min(double,double) and Double.max(double, double)).

⇒



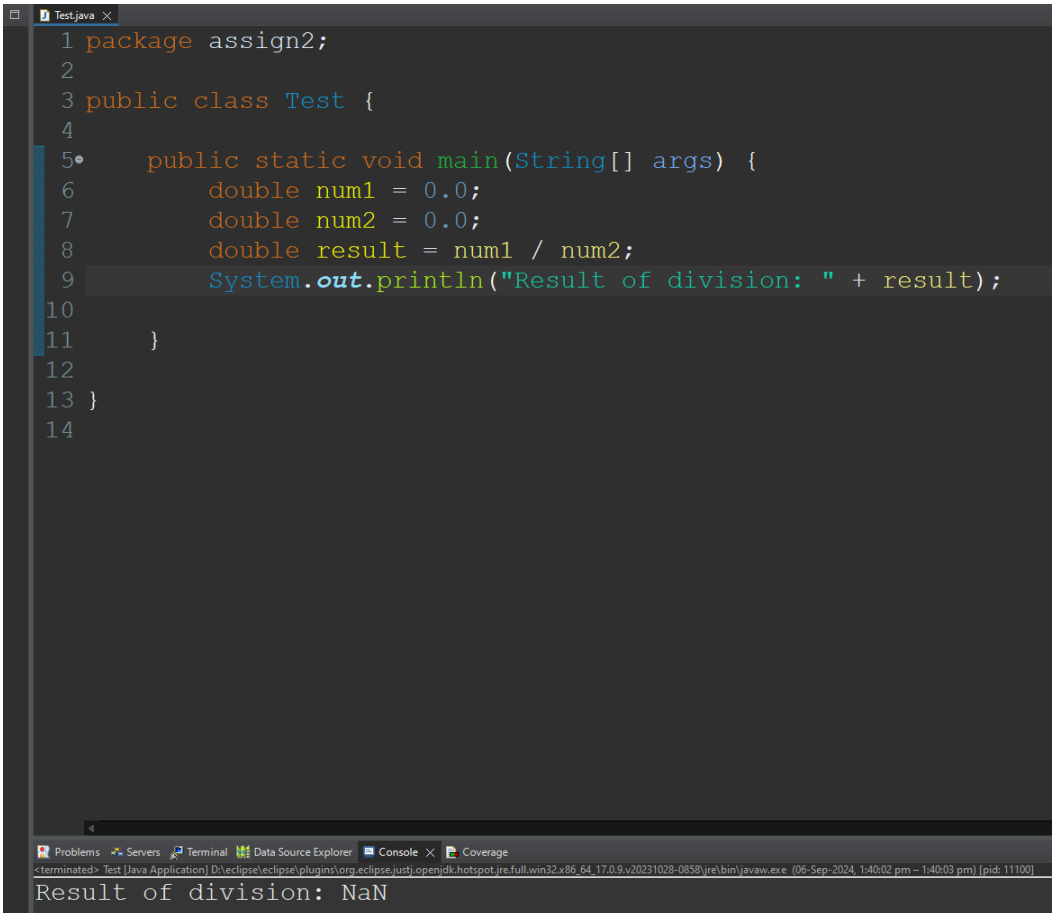
k) Declare a double variable with the value -25.0. Find the square root of this value.(Hint: Use Math.sqrt() method).

⇒



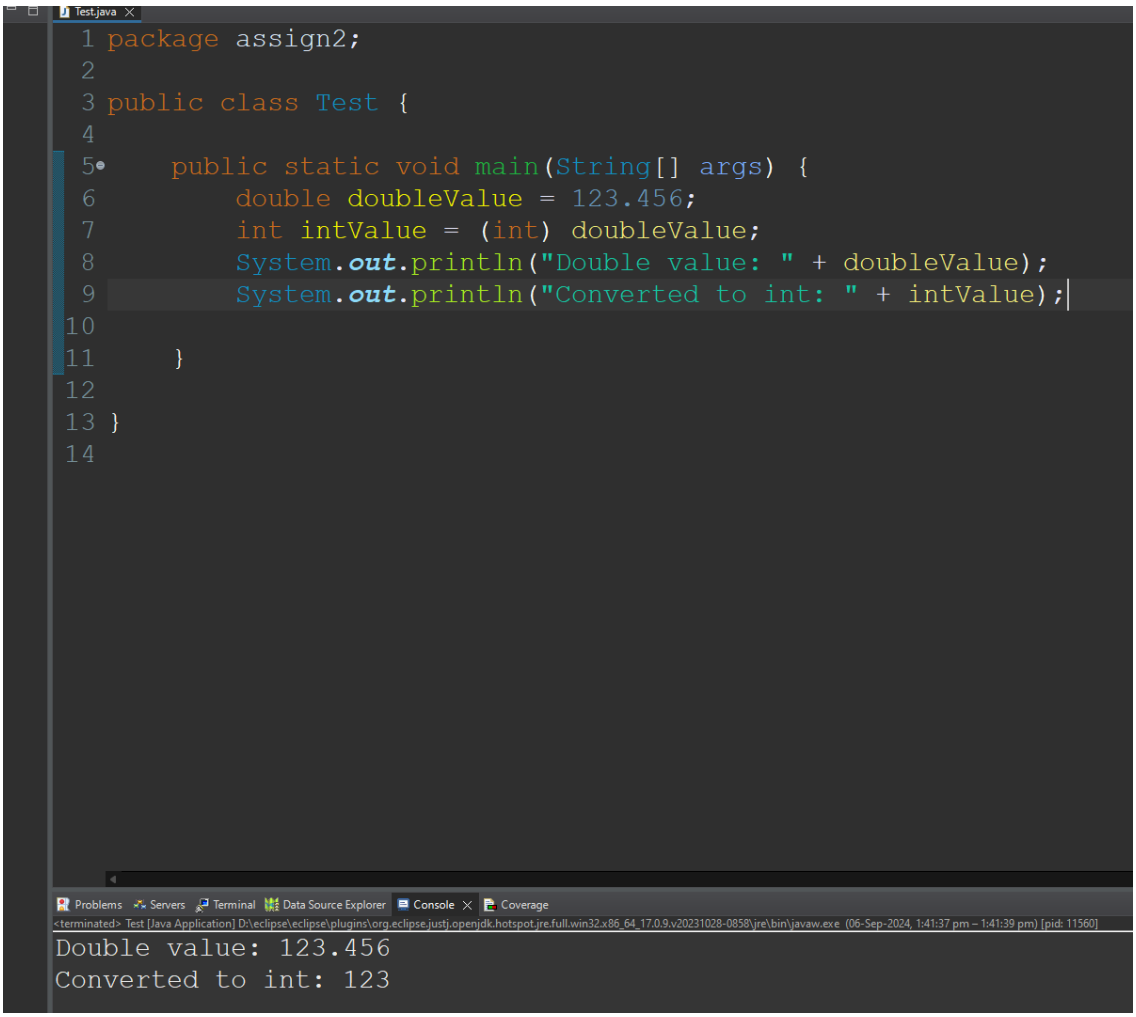
l) Declare two double variables with the same value, 0.0, and divide them. (Hint: Observe the result and any special floating-point behavior).

⇒



m) Experiment with converting a double value into other primitive types or vice versa and observe the results.

⇒


Test.java
1 package assign2;
2
3 public class Test {
4
5 public static void main(String[] args) {
6 double doubleValue = 123.456;
7 int intValue = (int) doubleValue;
8 System.out.println("Double value: " + doubleValue);
9 System.out.println("Converted to int: " + intValue);
10
11 }
12
13 }
14
Problems Servers Terminal Data Source Explorer Console Coverage
<terminated> Test [Java Application] D:\eclipse\eclipse\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.9.v20231028-0858\jre\bin\javaw.exe (06-Sep-2024, 1:41:37 pm – 1:41:39 pm) [pid: 11560]
Double value: 123.456
Converted to int: 123