Q5] Working with java.lang.Long

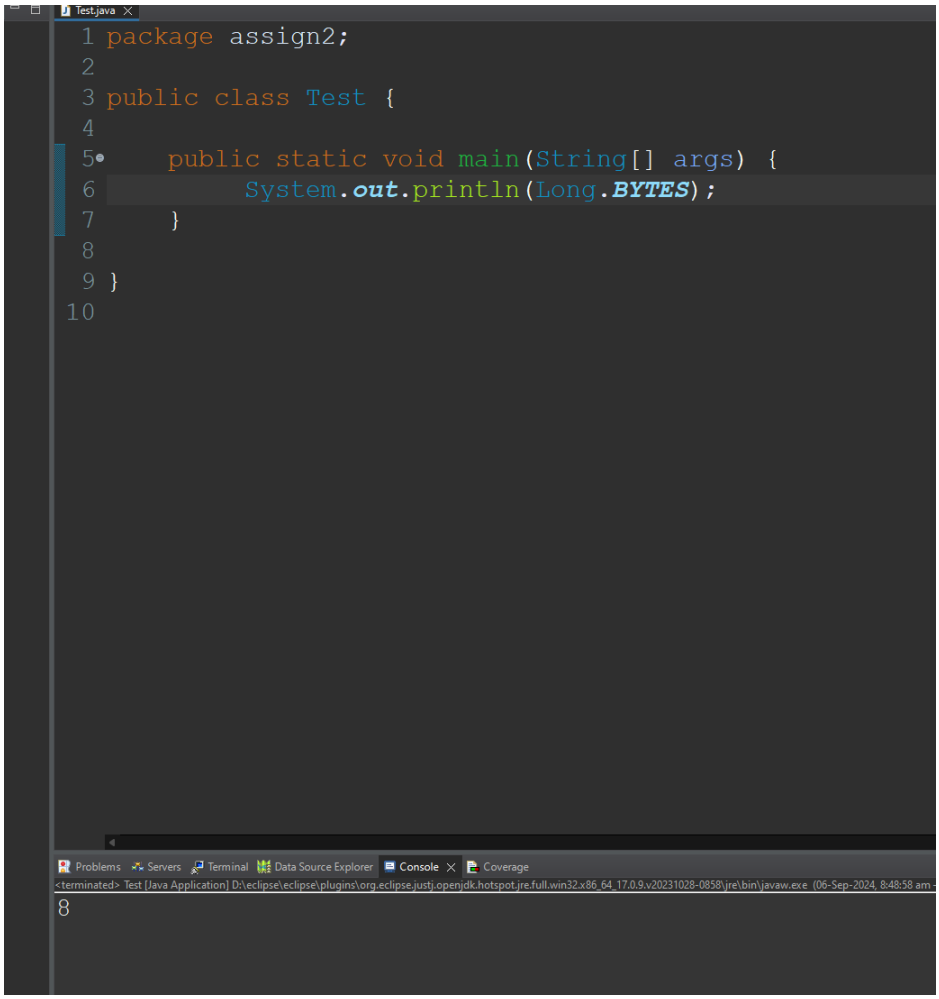
a) Explore the Java API documentation for java.lang.Long and observe its modifiers and super types.

⇒static long → MAX_VALUE

static long → MIN_VALUE

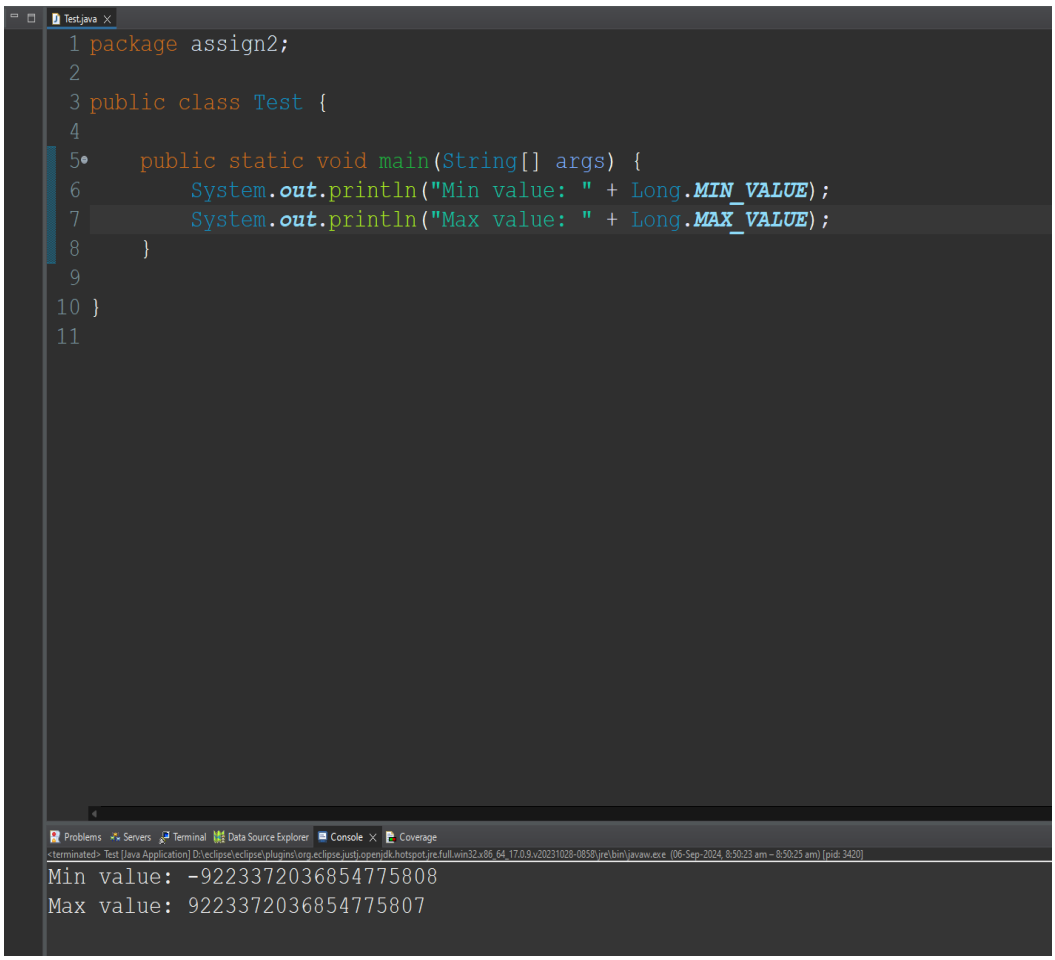
b) Write a program to test how many bytes are used to represent a long value using the BYTES field. (Hint: Use Long.BYTES).

⇒



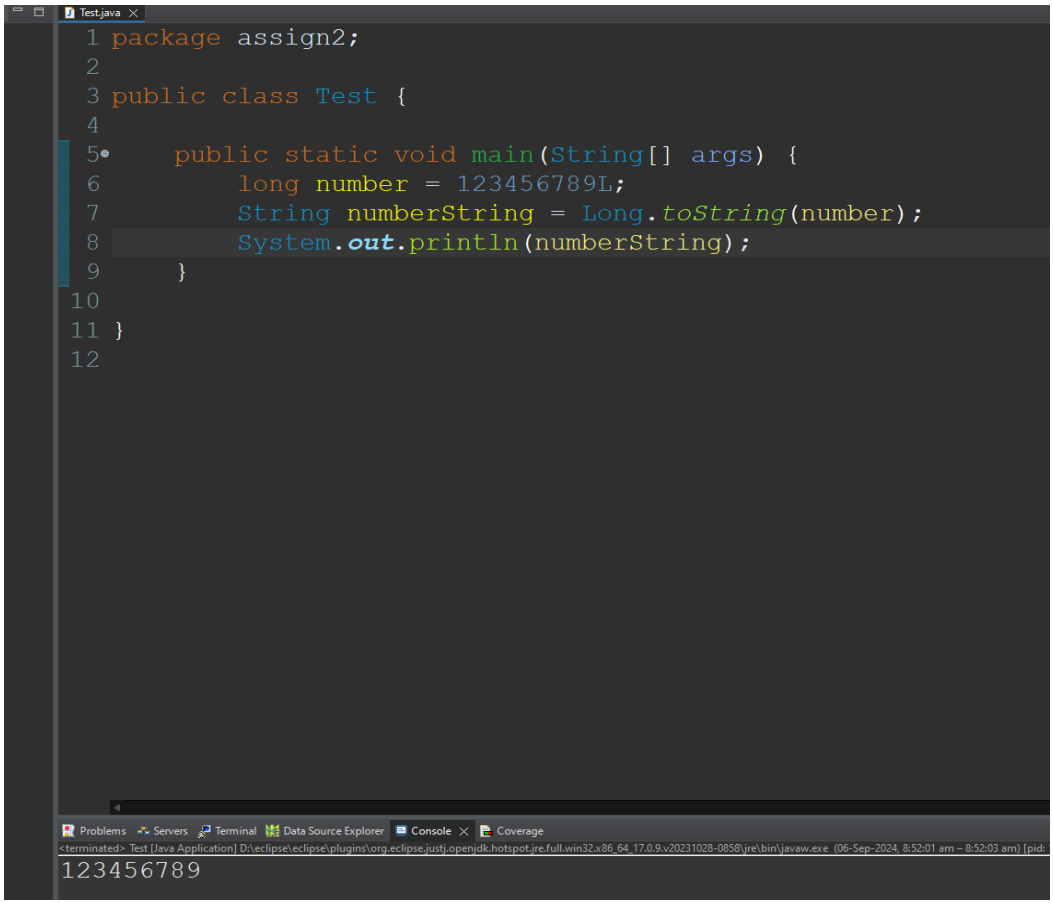
c) Write a program to find the minimum and maximum values of long using the MIN_VALUE and MAX_VALUE fields. (Hint: Use Long.MIN_VALUE and Long.MAX_VALUE).

⇒



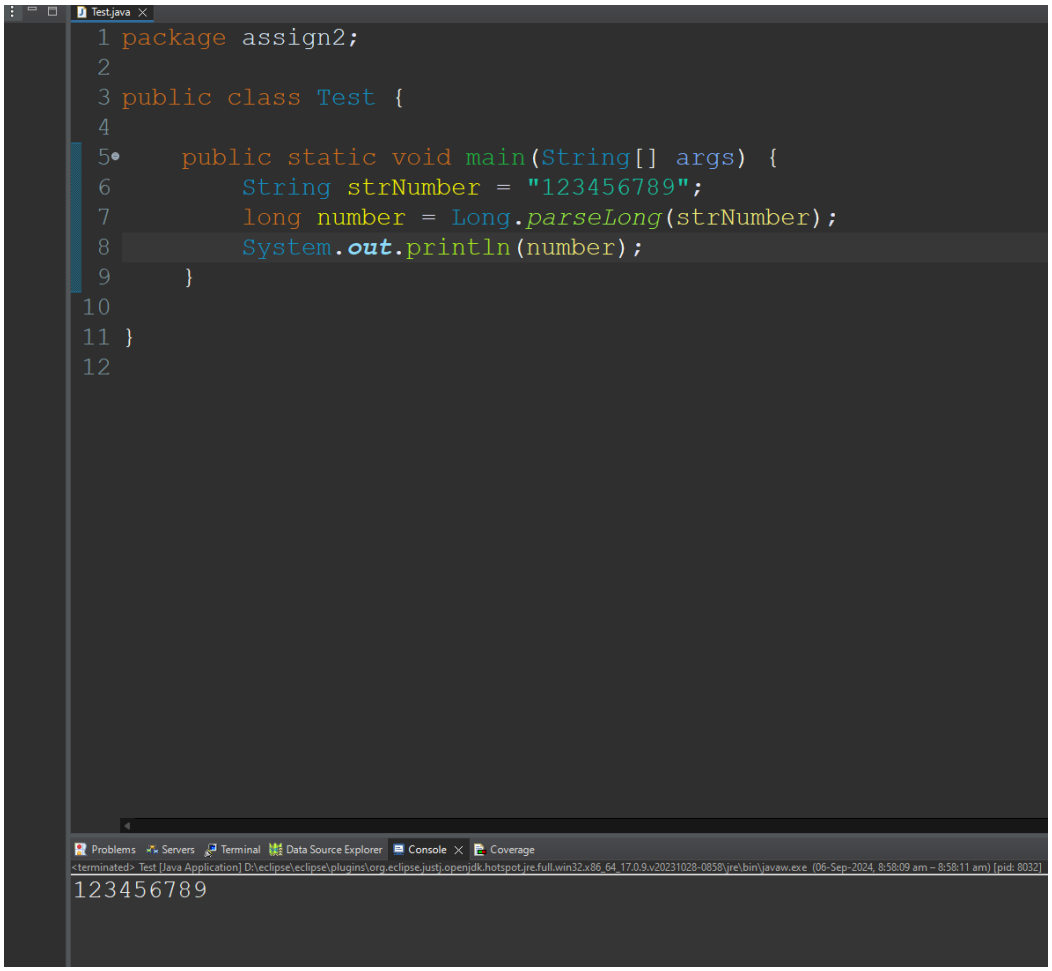
d) Declare a method-local variable number of type long with some value and convert it to a String using the toString method. (Hint: Use Long.toString(long)).

⇒



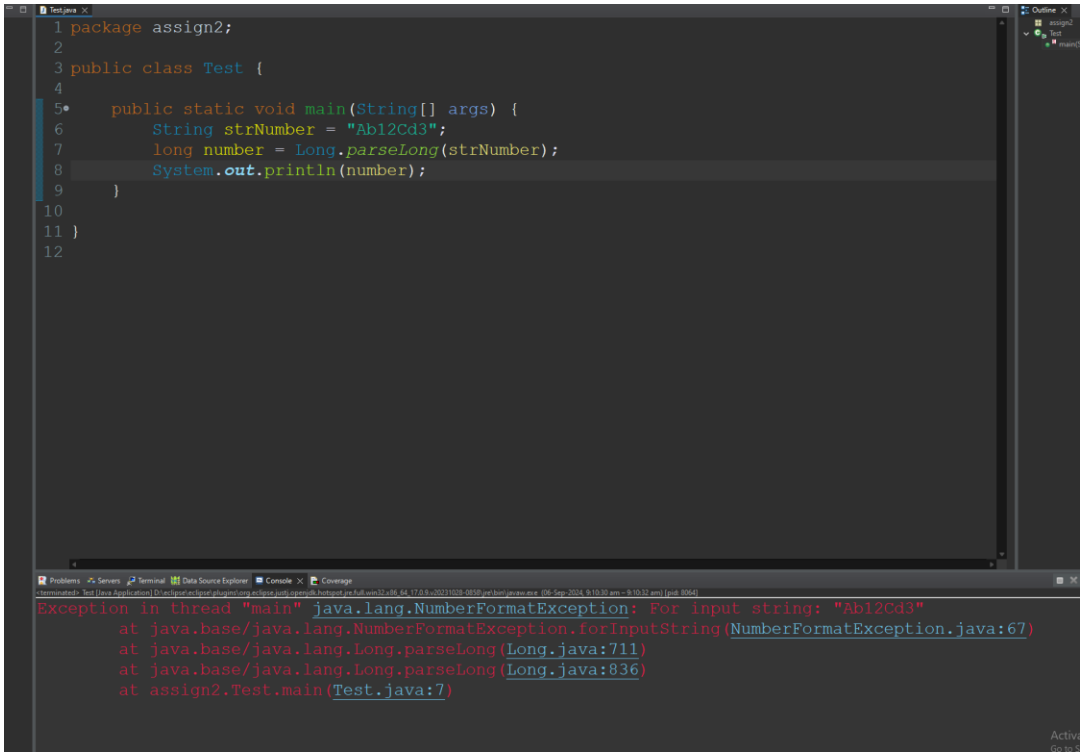
e) Declare a method-local variable strNumber of type String with some value and convert it to a long value using the parseLong method. (Hint:UseLong.parseLong(String)).

⇒



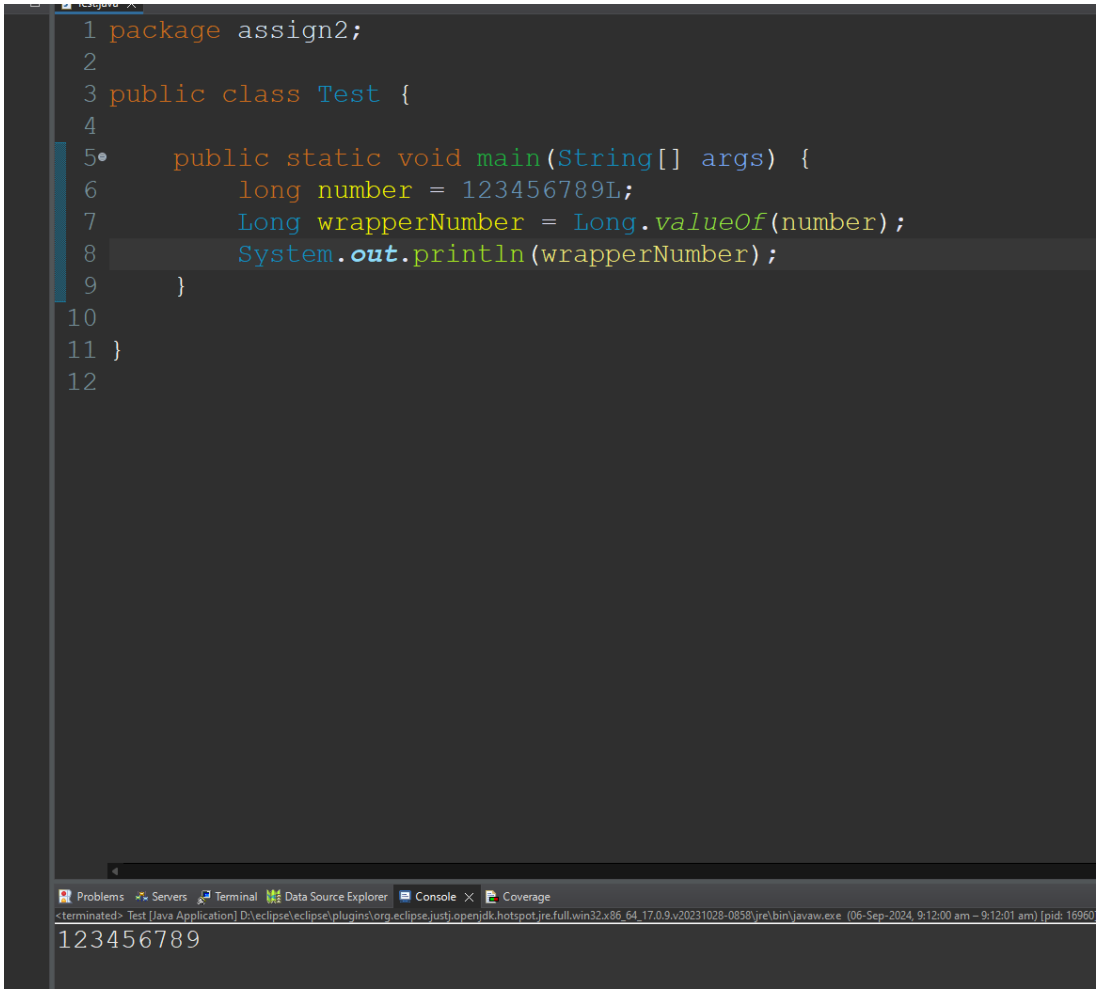
f) Declare a method-local variable strNumber of type String with the value “Ab12Cd3” and attempt to convert it to a long value. (Hint: parseLong method will throw a NumberFormatException).

⇒



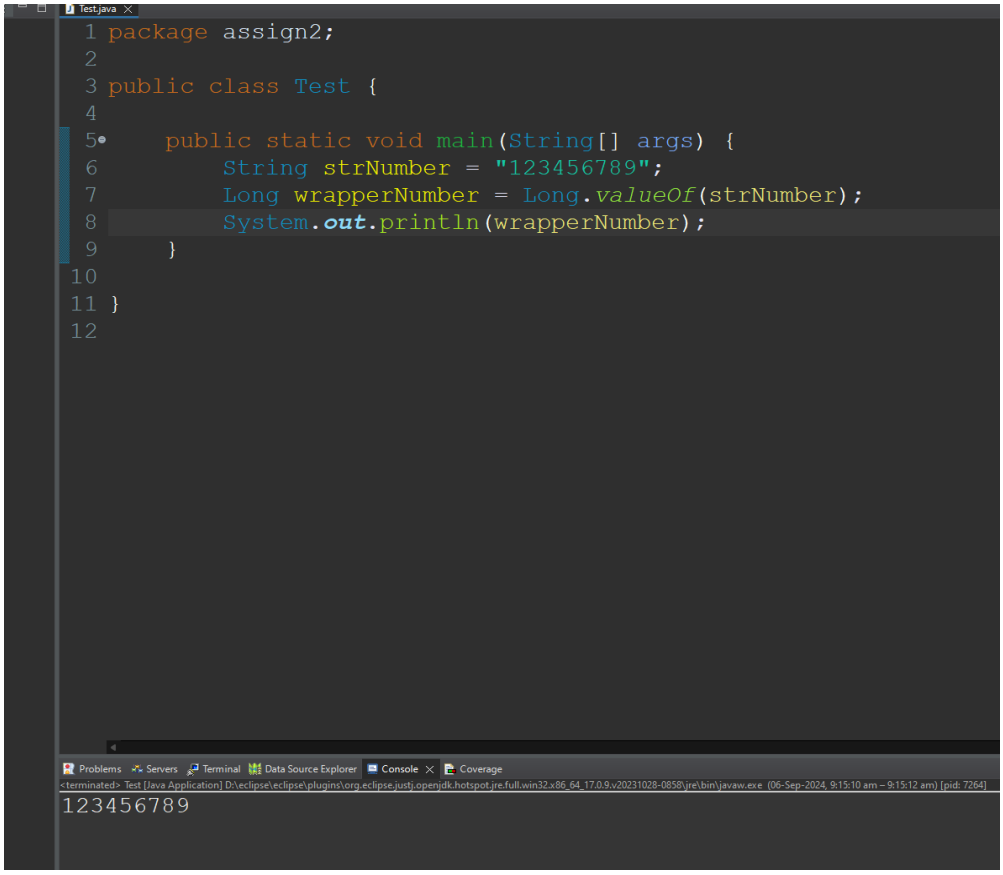
g) Declare a method-local variable number of type long with some value and convert it to the corresponding wrapper class using Long.valueOf(). (Hint:Use Long.valueOf(long)).

⇒



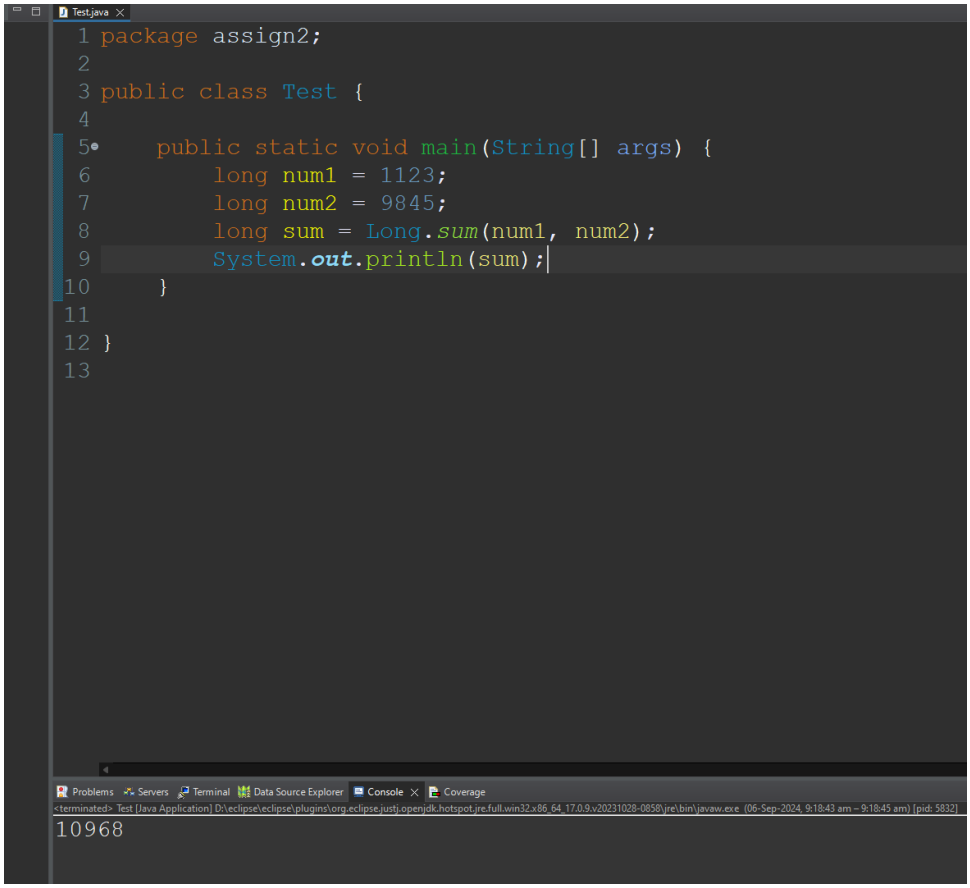
h) Declare a method-local variable strNumber of type String with some long value and convert it to the corresponding wrapper class using Long.valueOf(). (Hint: Use Long.valueOf(String)).

⇒



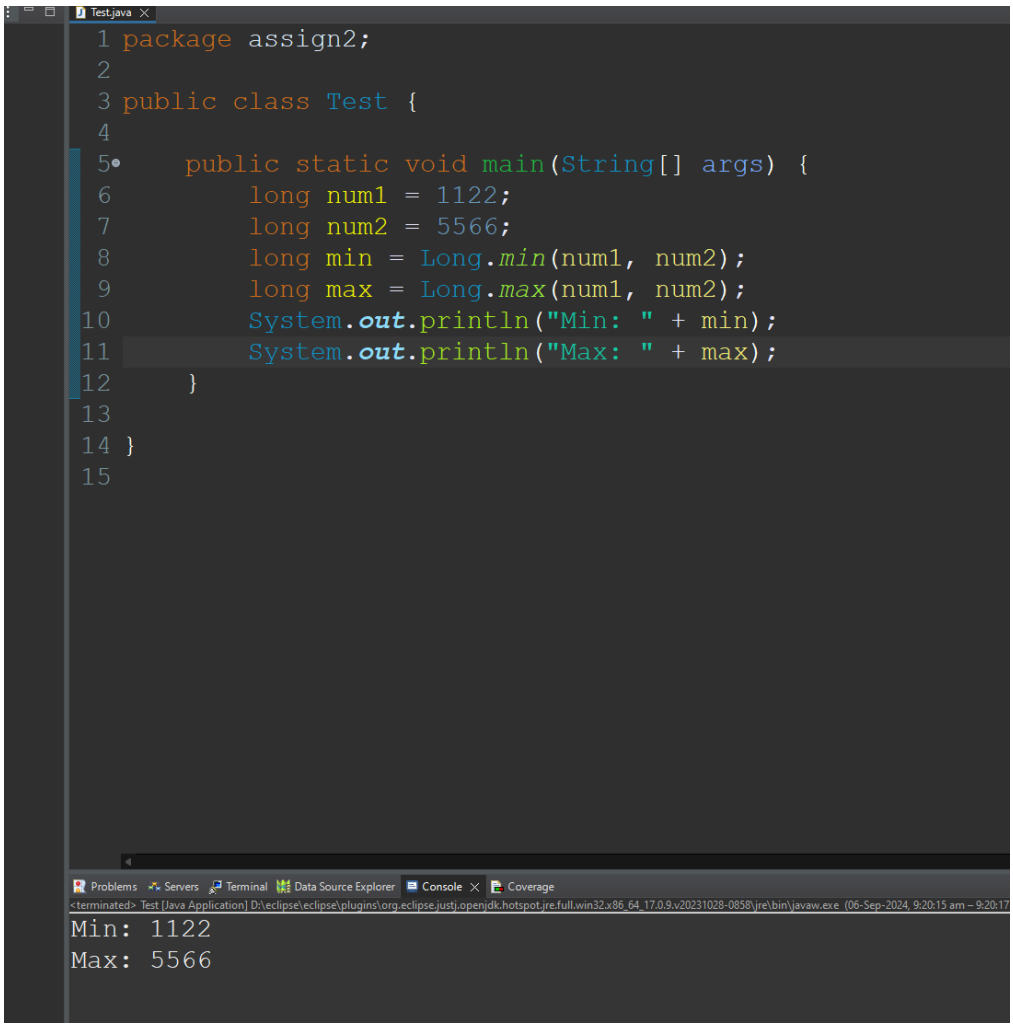
i) Declare two long variables with values 1123 and 9845, and add them using a method from the Long class. (Hint: Use Long.sum(long, long)).

⇒



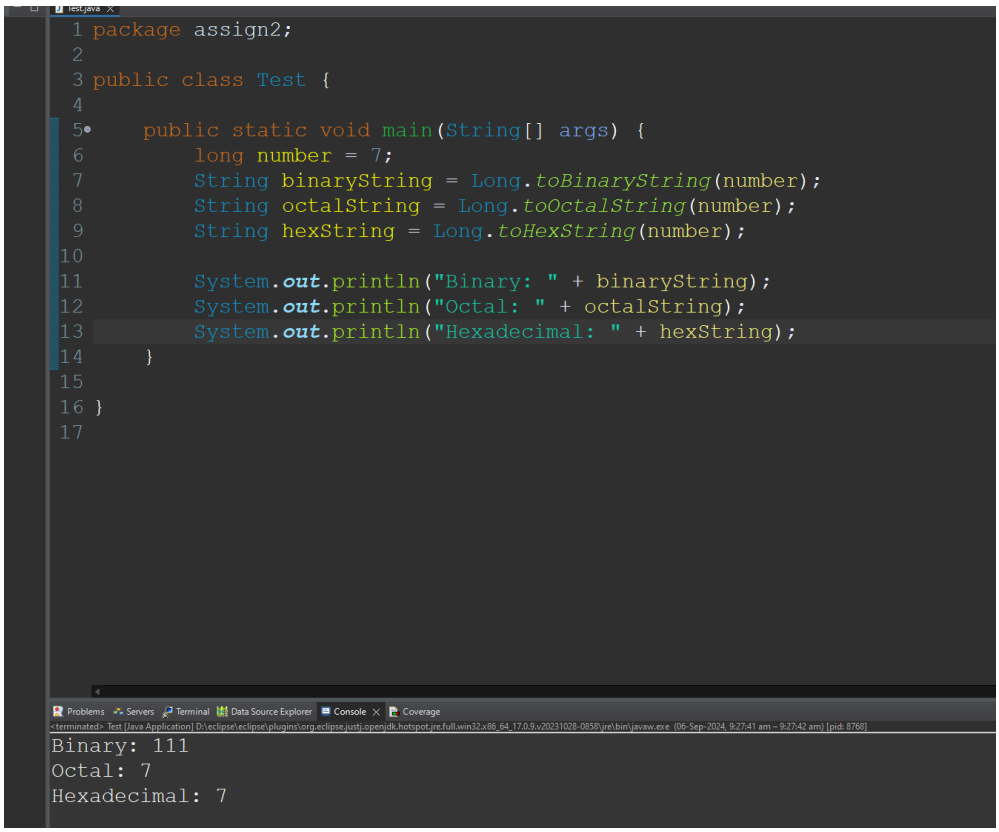
j) Declare two long variables with values 1122 and 5566, and find the minimum and maximum values using the Long class. (Hint: Use Long.min(long, long) and Long.max(long, long)).

⇒



k) Declare a long variable with the value 7. Convert it to binary, octal, and hexadecimal strings using methods from the Long class. (Hint: Use Long.toBinaryString(long), Long.toOctalString(long), and Long.toHexString(long)).

⇒

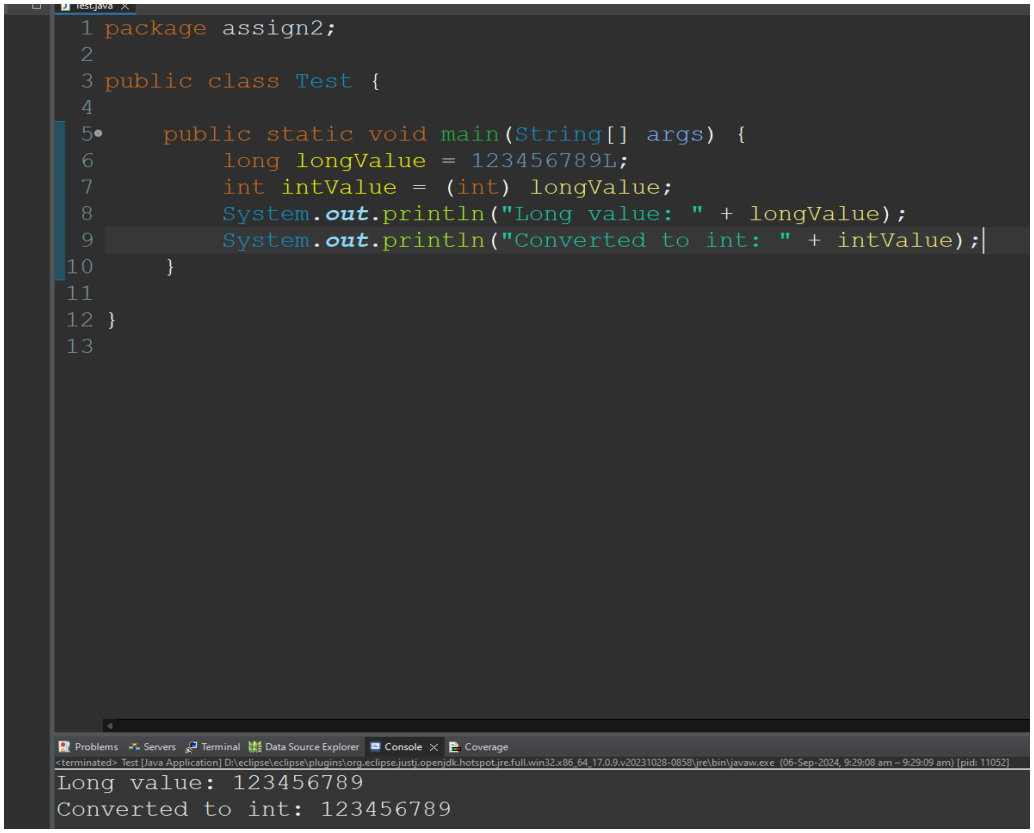


```java
package assign2;

public class Test {

    public static void main(String[] args) {
        long number = 7;
        String binaryString = Long.toBinaryString(number);
        String octalString = Long.toOctalString(number);
        String hexString = Long.toHexString(number);

        System.out.println("Binary: " + binaryString);
        System.out.println("Octal: " + octalString);
        System.out.println("Hexadecimal: " + hexString);
    }

}
```

```
Binary: 111
Octal: 7
Hexadecimal: 7
```

l) Experiment with converting a long 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 long longValue = 123456789L;
7 int intValue = (int) longValue;
8 System.out.println("Long value: " + longValue);
9 System.out.println("Converted to int: " + intValue);
10 }
11
12 }
13
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, 9:29:08 am – 9:29:09 am) [pid: 11052]
Long value: 123456789
Converted to int: 123456789