



The screenshot shows the Eclipse IDE interface. The Package Explorer on the left displays the project structure: corejava > JRE System Library [JavaSE-21] > src > LAB. The LAB package contains LAB2.java, LAB3.java (selected), and LAB4.java. The main editor shows the code for LAB3.java, which declares and prints various data types. The Outline view on the right shows the class LAB3 with a main method.

```
1 package LAB;
2 public class LAB3 {
3     public static void main(String[] args) {
4         // Declare variables of different data types
5         byte byteValue = 100;           // 1 byte
6         short shortValue = 10000;       // 2 bytes
7         int intValue = 100000;          // 4 bytes
8         long longValue = 1000000L;      // 8 bytes
9         float floatValue = 10.5f;       // 4 bytes
10        double doubleValue = 20.99;      // 8 bytes
11        char charValue = 'A';            // 2 bytes
12        boolean booleanValue = true;     // 1 bit
13
14        // Print the values of the variables
15        System.out.println("Byte Value: " + byteValue);
16        System.out.println("Short Value: " + shortValue);
17        System.out.println("Integer Value: " + intValue);
18        System.out.println("Long Value: " + longValue);
19        System.out.println("Float Value: " + floatValue);
20        System.out.println("Double Value: " + doubleValue);
21        System.out.println("Character Value: " + charValue);
22        System.out.println("Boolean Value: " + booleanValue);
23    }
24 }
25
26
27
28
```

Boot Dashboard

Type tags, projects, or working set names to match (incl. * and ? wildcards)

local

Problems Javadoc Declaration Console

<terminated> LAB3 [Java Application] C:\java\sts-4.26.0.RELEASE\plugins\org.eclipse.jst.j2ee.openjdk.hotspot.jre.full.win32.x86_64.21.0.4.v20240802-1551\re\bin\javaw.exe (04-Nov-2024, 1:38:43 pm - 1:38:43 pm) [pid: 9476]

Short Value: 10000

Integer Value: 100000

Long Value: 1000000

Float Value: 10.5

Double Value: 20.99

Character Value: A

Boolean Value: true

The screenshot shows the Spring Tool Suite 4 IDE with the following components:

- Package Explorer (Left):** Displays the project structure. The 'LAB' package is expanded, showing files 'LAB2.java', 'LAB3.java', and 'LAB4.java'. The 'src' folder is also visible.
- Editor (Center):** Displays the code for 'LAB4.java'. The code calculates the area and perimeter of a square based on user input.

```
1 package LAB;
2 import java.util.Scanner;
3 public class LAB4 {
4
5
6
7     public static void main(String[] args) {
8         // Create a Scanner object for user input
9         Scanner scanner = new Scanner(System.in);
10
11         // Prompt the user to enter the side length of the square
12         System.out.print("Enter the side length of the square: ");
13         double sideLength = scanner.nextDouble();
14
15         // Calculate the area and perimeter
16         double area = sideLength * sideLength; // Area = side*2
17         double perimeter = 4 * sideLength; // Perimeter = 4 * side
18
19         // Display the results
20         System.out.println("Area of the square: " + area);
21         System.out.println("Perimeter of the square: " + perimeter);
22
23         // Close the scanner
24         scanner.close();
25     }
26
27
28
29 }
```
- Outline (Right):** Shows the project structure with 'LAB' and 'LAB4'.
- Boot Dashboard (Bottom Left):** Shows the 'local' workspace.
- Console (Bottom):** Displays the output of the program:

```
<terminated> LAB4 [Java Application] C:\java\sts-4.26.0.RELEASE\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_21.0.4.v20240802-1551\jre\bin\javaw.exe (04-Nov-2024, 1:39:01 pm - 1:39:06 pm) [pid: 19772]
Enter the side length of the square: 97
Area of the square: 9409.0
Perimeter of the square: 388.0
```

The screenshot displays the Spring Tool Suite 4 IDE with the following components:

- Package Explorer:** Shows the project structure under 'corejava'. The 'LAB' package is expanded, showing files 'LAB2.java', 'LAB3.java', and 'LAB4.java'.
- Outline:** Shows the class hierarchy for 'LAB2', with the 'main(String[]): void' method listed.
- Editor:** Displays the code for 'LAB2.java':

```
1 package LAB;  
2 import java.util.Scanner;  
3  
4 public class LAB2 {  
5  
6  
7     public static void main(String[] args) {  
8         // Create a Scanner object for user input  
9         Scanner scanner = new Scanner(System.in);  
10  
11         // Prompt the user to enter their name  
12         System.out.print("Please enter your name: ");  
13         String name = scanner.nextLine();  
14  
15         // Display a welcome message with the user's name  
16         System.out.println("Welcome, " + name + "!");  
17  
18         // Close the scanner  
19         scanner.close();  
20     }  
21 }  
22  
23  
24  
25
```
- Console:** Shows the output of the program:

```
<terminated> LAB2 [Java Application] C:\java\sts-4.26.0.RELEASE\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64.21.0.4.v20240802-1551\jre\bin\javaw.exe (04-Nov-2024, 1:37:45 pm - 1:38:05 pm) [pid: 21332]  
Please enter your name: JUNGKOOK  
Welcome, JUNGKOOK!
```
- Boot Dashboard:** Located at the bottom left, it shows the 'local' workspace.