



Primitive Types

Integers and Doubles

Lecture Contents



- Using *integers* (`int`)
- Using *floating point numbers* (`double`)

Using Integers

The screenshot shows the Eclipse IDE interface with a workspace titled "eclipse-workspace - com.bjfls.app.helloworld/src/com/bjfls/app/helloworld/PrimitiveTypes.java - Eclipse...". The central editor window displays the following Java code:

```
1 package com.bjfls.app.helloworld;
2
3 public class PrimitiveTypes {
4
5     public static void main(String[] args) {
6         System.out.println("3 + 5");
7         System.out.println(3+5);
8     }
9
10 }
11
```

The code defines a class named "PrimitiveTypes" with a main method that prints the sum of 3 and 5 to the console. The code is color-coded for syntax highlighting.

The left side of the interface shows the project structure in the "Project Explorer" view, which includes "JRE System Library", "src", and files like "HelloWorld.java" and "module-info.java".

The right side shows the "Outline" view, which lists the class "PrimitiveTypes" and its "main(String[]) : void" method.

At the bottom, there are tabs for "Problems", "Javadoc", "Declaration", and "Console".

Using Integers

The screenshot shows the Eclipse IDE interface with a Java project named "com.bjfles.app.helloworld". The "PrimitiveTypes.java" file is open in the editor, displaying the following code:

```
1 package com.bjfles.app.helloworld;
2
3 public class PrimitiveTypes {
4
5     public static void main(String[] args) {
6         System.out.println("3 + 5");
7         System.out.println(3+5);
8     }
9
10 }
```

The "Outline" view on the right shows the class structure: `com.bjfles.app.helloworld.PrimitiveTypes` with a method `main(String[])`.

The "Console" tab at the bottom shows the output of the application:

```
<terminated> PrimitiveTypes [Java Application] /Users/christophernielsen/p2/pool/plugins/org.eclipse.justj.openjdk.h
3 + 5
8
```

Using Integers



```
System.out.println("Hello World!");
```

```
System.out.println("Hello " + "World!");
```

```
System.out.println("Hello " + World);
```

```
System.out.println("3 + 5");
```

```
System.out.println("3" + "5");
```

```
System.out.println(3 + 5);
```

Using Integers

```
System.out.println("Hello World!");
```

```
System.out.println("Hello " + "World!");
```

```
System.out.println("Hello " + World);
```

```
System.out.println("3 + 5");
```

```
System.out.println("3" + "5");
```

```
System.out.println(3 + 5);
```

Hello World!

Hello World!

3 + 5

35

8

Using Integers

```
System.out.println("Hello " + 3);
```

```
System.out.println("Hello " + 3 + 5);
```

```
System.out.println("Hello " + (3 + 5) );
```

```
System.out.println(3 + 5 + " Hello");
```

```
System.out.println(3 + (5 + " Hello") );
```

Using Integers

```
System.out.println("Hello " + 3);
```

Hello 3

```
System.out.println("Hello " + 3 + 5);
```

Hello 35

```
System.out.println("Hello " + (3 + 5) );
```

Hello 8

```
System.out.println(3 + 5 + " Hello");
```

8 Hello

```
System.out.println(3 + (5 + " Hello") );
```

35 Hello

Using Floating Point Numbers

```
System.out.println("Hello " + 3.0);
```

```
System.out.println("Hello " + 3.0 + 5.0);
```

```
System.out.println("Hello " + (3.0 + 5.0) );
```

```
System.out.println(3 + 5.0);
```

```
System.out.println(3.0 + 5);
```

Using Floating Point Numbers

```
System.out.println("Hello " + 3.0);
```

Hello 3.0

```
System.out.println("Hello " + 3.0 + 5.0);
```

Hello 3.05.0

```
System.out.println("Hello " + (3.0 + 5.0) );
```

Hello 8.0

```
System.out.println(3 + 5.0);
```

8.0

```
System.out.println(3.0 + 5);
```

8.0

Using Floating Point Numbers



```
System.out.println(3.0 / 5.0);
```

```
System.out.println(3 / 5.0);
```

```
System.out.println(3.0 / 5);
```

```
System.out.println(3 / 5);
```

Using Floating Point Numbers



```
System.out.println(3.0 / 5.0);
```

0.6

```
System.out.println(3 / 5.0);
```

0.6

```
System.out.println(3.0 / 5);
```

0.6

```
System.out.println(3 / 5);
```

0



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Integers and Doubles