

JAVA CLASS ATTRIBUTES

Java Class Attributes

In the previous chapter, we used the term "variable" for **x** in the example (as shown below).

It is actually an **attribute** of the class. Or you could say that class attributes are variables within a class:

Example

Create a class called "Main" with two attributes: x and y:

```
public class Main {  
    int x = 5;  
    int y = 3;  
}
```

Fields – another term for class attributes.

Accessing Attributes

You can access attributes by creating an object of the class, and by using the dot syntax (.):

The following example will create an object of the **Main** class, with the name **myObj**. We use the **x** attribute on the object to print its value:

Example

Create an object called "myObj" and print the value of x:

```
public class Main {  
    int x = 5;  
  
    public static void main(String[] args) {
```

```
Main myObj = new Main();  
System.out.println(myObj.x);  
}  
}
```

Output: 5

Modify Attributes

You can also modify attribute values:

Example:

Set the value of x to 40:

```
public class Main {  
    int x;  
  
    public static void main(String[] args) {  
        Main myObj = new Main();  
        myObj.x = 40;  
        System.out.println(myObj.x);  
    }  
}
```

Output: 40

Or override existing values:

Example

Change the value of x to 25:

```
public class Main {
```

```
int x = 10;
```

```
public static void main(String[] args) {  
    Main myObj = new Main();  
    myObj.x = 25; // x is now 25  
    System.out.println(myObj.x);  
}  
}
```

Output: 25

If you don't want the ability to override existing values, declare the attribute as **final**:

```
public class Main {  
    final int x = 10;  
  
    public static void main(String[] args) {  
        Main myObj = new Main();  
        myObj.x = 25; // will generate an error: cannot assign a value to a final variable  
        System.out.println(myObj.x);  
    }  
}
```

Output: Error

The **final** keyword is useful when you want a variable to always store the same value, like PI (3.14159...).

The **final** keyword is called a "modifier".

Reference:

https://www.w3schools.com/java/java_class_attributes.asp

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