



Java Class Attributes

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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;  
}
```

Another term for class attributes is **fields**.

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) {  
  
    }  
}
```

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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);  
}  
}
```

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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();  
  
        System.out.println(myObj.x);  
    }  
}
```

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

Example

```
public class Main {  
  
    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);
}
}
```

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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". You will learn more about these in the [Java Modifiers Chapter](#).

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Multiple Objects

If you create multiple objects of one class, you can change the attribute values in one object, without affecting the attribute values in the other:

Example

Change the value of `x` to 25 in `myObj2`, and leave `x` in `myObj1` unchanged:

```
public class Main {  
    int x = 5;  
  
    public static void main(String[] args) {  
        Main myObj1 = new Main(); // Object 1  
        Main myObj2 = new Main(); // Object 2  
        myObj2.x = 25;  
        System.out.println(myObj1.x); // Outputs 5  
        System.out.println(myObj2.x); // Outputs 25  
    }  
}
```

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Multiple Attributes

You can specify as many attributes as you want:

Example

```
public class Main {  
    String fname = "John";  
    String lname = "Doe";  
    int age = 24;  
  
    public static void main(String[] args) {  
        Main myObj = new Main();  
        System.out.println("Name: " + myObj.fname + " " + myObj.lname);  
        System.out.println("Age: " + myObj.age);  
    }  
}
```

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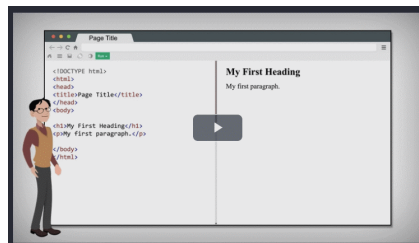
The next chapter will teach you how to create class methods and how to access them with objects.

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