

Using Classes and Objects in Swift



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ARC

Automatic Reference Counting

```
var kettle = Appliance()  
kettle.manufacturer = "Megappliance, Inc"  
kettle.model = "TeaMaster 5000"
```

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Megappliance, Inc
TeaMaster 5000

kettle

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kettle.manufacturer = "Megappliance, Inc"  
kettle.model = "TeaMaster 5000"
```

```
// later, drop out of scope
```

ARC

Automatic Reference Counting

Megappliance, Inc
TeaMaster 5000

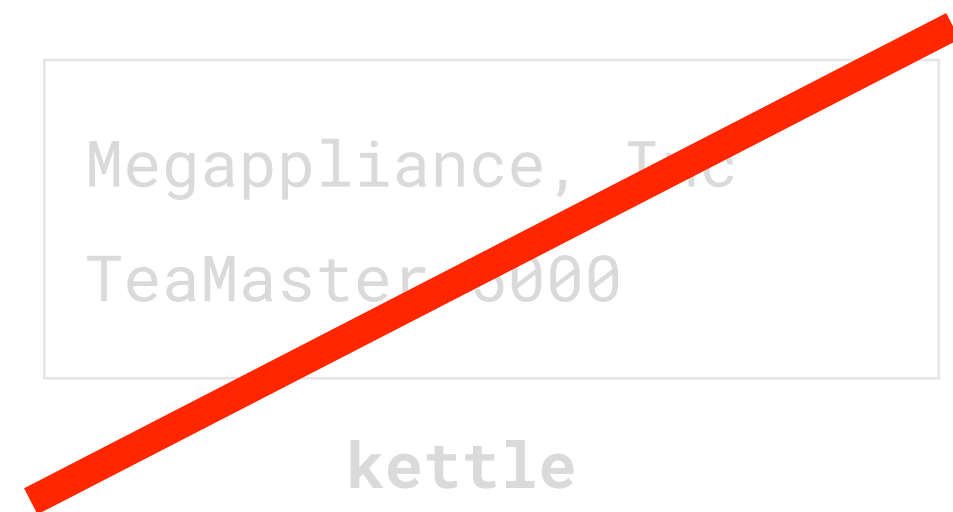
kettle

```
var kettle = Appliance()  
kettle.manufacturer = "Megappliance, Inc"  
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```

```
// later, drop out of scope
```

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Revisiting Structs

```
struct color {  
    int red;  
    int green;  
    int blue;  
    // no functions  
};
```

C-style Structs

"A container for variables"

Swift Structs

Have similar capability to Classes

```
struct SomeStruct {  
    // properties,  
    // methods,  
    // initializers,  
    // protocols,  
    // subscripts...  
}
```

Swift Structs

Have similar capability to Classes

```
struct SomeStruct {  
    // properties,  
    // methods,  
    // initializers,  
    // protocols,  
    // subscripts...  
}
```

Int	Array
String	Dictionary
Double	Set
Bool	(etc.)

Swift Structs

Have similar capability to Classes

Structs (and Enums)

Value types

Assign it to a new variable or constant?
The value is **copied**.

Pass it into a function?
The value is **copied**.

Classes

Reference types

Assign it to a new variable or constant?
Not copied - a **reference** is passed.

Pass it into a function?
Not copied - a **reference** is passed.

Stored Properties

```
let name: String  
var width: Int  
var height: Int
```

Stored Properties

```
class MyClass {  
  
    // properties  
    let name: String  
    var width: Int  
    var height: Int  
  
    // ...  
}
```

Stored Properties

```
struct MyStruct {  
  
    // properties  
    let name: String  
    var width: Int  
    var height: Int  
  
    // ...  
}
```

Stored Properties

```
enum MyEnum {  
    case one, two, three  
    // properties  
    let name: String  
    var width: Int  
    var height: Int  
  
    // ...  
}
```


Stored Properties

```
class MyClass {  
  
    // properties  
    let name: String  
    var width: Int  
    var height: Int  
  
    // ...  
}
```