Object Instances

This lesson teaches us how to create object instances using constructor functions by explaining the syntax and giving an example.

WE'LL COVER THE FOLLOWING

In the previous lesson, we learned how to create a *constructor function* and how all objects created using this will contain the properties defined inside the constructor. Now let's discuss how to create objects using the *constructor function*.

```
function Employee(_name, _age, _designation){
  this.name = _name
  this.age = _age
  this.designation = _designation
}
```

Constructor Function for Employee

Creating an Object Instance

Every time a *new object* is created, it is referred to as a new *instance*. As discussed earlier, multiple object instances can be generated using constructor functions.

Syntax

Let's take a look at the syntax for creating an object:

```
var ObjectName = new ConstructorFunction(argument1, argument2,....)
```

Syntax for creating an object instance

Explanation

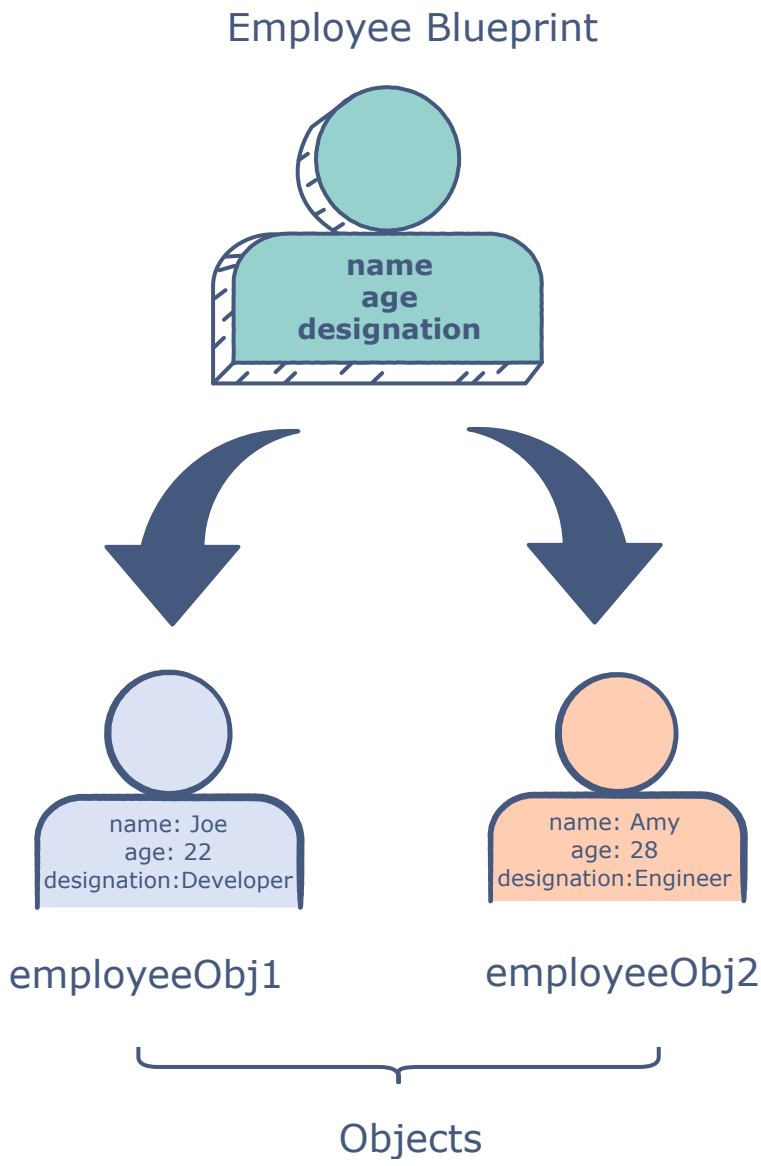
- The *keyword* `new` is used to create a new object.
- That is followed by the *constructor function* being called with the required *arguments* passed into it. This is why the code in the *constructor function* executes every time a new object is instantiated.
- An object will then be returned which will be stored inside a variable, that is, `ObjectName` in the above case.
- Each *new* object created will store the argument values passed into the constructor function.

Example

Now let's create new objects using the `Employee` constructor function:

```
//function constructor called Employee
function Employee(_name, _age, _designation){
  this.name = _name
  this.age = _age
  this.designation = _designation
}

//creating an object called employeeObj1
var employeeObj1 = new Employee('Joe', 22, 'Developer')

//displaying properties of employeeObj1
console.log("Name of employee:",employeeObj1.name)
console.log("Age of employee:",employeeObj1.age)
console.log("Designation of employee:",employeeObj1.designation)

//creating another object called employeeObj2
var employeeObj2 = new Employee('Amy', 28, 'Engineer')

//displaying properties of employeeObj2
console.log("Name of employee:",employeeObj2.name)
console.log("Age of employee:",employeeObj2.age)
console.log("Designation of employee:",employeeObj2.designation)
```

Creating Object Instances



Explanation

- In **line 9** and **line 17** two new objects are created.
- Specific arguments for both the objects are passed into the constructor function, `Employee`.
- In **line 9** `Joe`, `22` and `Developer` are being passed as `name`, `age` and `designation` for `employeeObj1`.
- In **line 17** `Amy`, `28` and `Engineer` are being passed as `name`, `age` and `designation` for `employeeObj2`.
- When the `Employee` *constructor* function executes the object properties for both `employeeObj1` and `employeeObj2`, store the arguments passed into the `Employee` constructor in **lines 9** and **17**.
- The *properties* of an object are accessed by making a call to the object

- The *properties* of an object are accessed by making a call to the object using that object's name, `employeeObj1` and `employeeObj2` in our example,

  followed by the property name. This can be seen in **lines 12-14** for `employeeObj1` and **lines 20-22** for `employeeObj2`.

Even though both `employeeObj1` and `employeeObj2` contain the same properties, both objects are created separately with their own specific arguments passed into the constructor, where `this` is used to assign them to the relevant properties. Hence, they are independent of each other, and upon access, they display their own property values, as discussed in the previous lesson.

In the next lesson, let's learn how to add new properties to a constructor function.