

Chapter 21: Prototypes, objects

In the conventional JS there are no class instead we have prototypes. Like the class, prototype inherits the properties including the methods and the variables declared in the class. We can create the new instance of the object whenever it is necessary by, `Object.create(PrototypeName)`; (we can give the value for the constructor as well)

Section 21.1: Creation and initialising Prototype

```
var Human = function() {
    this.canWalk = true;
    this.canSpeak = true; //
};

Person.prototype.greet = function() {
    if (this.canSpeak) { // checks whether this prototype has instance of speak
        this.name = "Steve"
        console.log('Hi, I am ' + this.name);
    } else{
        console.log('Sorry i can not speak');
    }
};
```

The prototype can be instantiated like this

```
obj = Object.create(Person.prototype);
obj.greet();
```

We can pass value for the constructor and make the boolean true and false based on the requirement.

Detailed Explanation

```
var Human = function() {
    this.canSpeak = true;
};
// Basic greet function which will greet based on the canSpeak flag
Human.prototype.greet = function() {
    if (this.canSpeak) {
        console.log('Hi, I am ' + this.name);
    }
};

var Student = function(name, title) {
    Human.call(this); // Instantiating the Human object and getting the members of the class
    this.name = name; // inheriting the name from the human class
    this.title = title; // getting the title from the called function
};

Student.prototype = Object.create(Human.prototype);
Student.prototype.constructor = Student;

Student.prototype.greet = function() {
    if (this.canSpeak) {
        console.log('Hi, I am ' + this.name + ', the ' + this.title);
    }
};
```

```
var Customer = function(name) {  
    Human.call(this); // inheriting from the base class  
    this.name = name;  
};  
  
Customer.prototype = Object.create(Human.prototype); // creating the object  
Customer.prototype.constructor = Customer;  
  
var bill = new Student('Billy', 'Teacher');  
var carter = new Customer('Carter');  
var andy = new Student('Andy', 'Bill');  
var virat = new Customer('Virat');  
  
bill.greet();  
// Hi, I am Bob, the Teacher  
  
carter.greet();  
// Hi, I am Carter  
  
andy.greet();  
// Hi, I am Andy, the Bill  
  
virat.greet();
```