Name:____ StudentID:__________________

W2D4 Quiz

CS472 WAP October 2016 – Prof. Zijlstra

1. Explain the difference between `.__proto__` and `.prototype`:

.__proto__ is a property that every object has, and if we look for a property on that object and it is not found locally, the search is continued in .__proto__ this makes the inheritance chain

.prototype is a property that functions can have, only useful for constructor functions (functions used with new). When used with new, the object refered to by .prototype will become the .__proto__ of the newly created object

2. Write code to create a Car 'class' with the properties color and make, and two methods, one called drive, and one called stop.

   The drive() method uses console.log to say "The [color] [make] is driving", and the stop() method uses console.log to say "The [color] [make] has stopped".

   Then create two instances of Car, one red Honda, and another Silver Volvo, and make them both drive and then stop. If everything works correctly your output should be:

```
The red Honda is driving
The silver Volvo is driving
The red Honda has stopped
The silver Volvo has stopped
```

```
var Car = {
	"color": 'default',
	"make": 'default',
	"drive": function() {
		console.log("The " + this.color + " " + this.make +" is driving");
	},
	"stop": function() {
		console.log("The " + this.color + " " + this.make +" has stopped");
	}
};

var redH = Object.create(Car);
redH.color = 'red';
redH.make = 'Honda';
var silverV = Object.create(Car);
silverV.color = 'silver';
silverV.make = 'Volvo';
redH.drive();
silverV.drive();
redH.stop();
silverV.stop();
```

```
var Car = function(c, m){
        this.color = c || 'default';
        this.make = m || 'default';
        // can put functions here, but each instance will have its own functions then
};

// best practice so that these functions exist only once
car.prototype.drive = function() {
        console.log("The " + this.color + " " + this.make +" is driving");
};
car.prototype.stop = function() {
        console.log("The " + this.color + " " + this.make +" has stopped");
};


var redH = new Car("red", "Honda");
var silverV = new Car("silver", "Volvo");
redH.drive();
silverV.drive();
redH.stop();
silverV.stop();
```