

IBM PJP Mentor Session Question to demonstrate is-a, use-a, has-a relationship in Java and JS

JAVA:

// "is-a" relationship (Inheritance)

```
class Vehicle {  
    void run() {  
        System.out.println("Vehicle is running");  
    }  
}  
  
class Car extends Vehicle { // Car "is-a" Vehicle  
    int wheels = 4; // Car "has-a" property wheels  
}
```

// "uses-a" relationship (Association)

```
class Driver {  
    Car car; // Driver "uses-a" Car  
  
    Driver(Car car) {  
        this.car = car;  
    }  
  
    void drive() {  
        car.run();  
    }  
}
```

```
public class Main {  
    public static void main(String[] args) {  
        Car car = new Car();  
        Driver driver = new Driver(car);  
        driver.drive();  
    }  
}
```

```
}  
}
```

JAVASCRIPT:

// "is-a" relationship (Inheritance)

```
function Vehicle() {}
```

```
Vehicle.prototype.run = function() {  
    console.log("Vehicle is running");  
}
```

```
function Car() { // Car "is-a" Vehicle  
    this.wheels = 4; // Car "has-a" property wheels  
}
```

```
Car.prototype = Object.create(Vehicle.prototype);
```

// "uses-a" relationship (Association)

```
function Driver(car) { // Driver "uses-a" Car  
    this.car = car;  
}
```

```
Driver.prototype.drive = function() {  
    this.car.run();  
}
```

```
var car = new Car();
```

```
var driver = new Driver(car);
```

```
driver.drive();
```

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