

# Compilation of Object-Oriented Programming Activities



In Partial fulfillment of the requirements in  
IT 5/L: IT Elective 2

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## Table of Contents

Table of Contents .....	1
Array Java Code.....	2
Array Java Code Sample Output .....	3
Car Modification .....	4
Car Modification Sample Output .....	5
Car Performance .....	6
Car Performance Sample Output .....	7
Encapsulation .....	8
Encapsulation Sample Output .....	9
Enums Program .....	10
Enums Program Sample Output .....	11
Abstract Program .....	12
Abstract Program Sample Output .....	13

```
import java.util.*;
public class array {
    Run | Debug
    public static void main(String[] args) {
        Scanner scan = new Scanner(System.in);

        int arr[] = new int[10];
        for (int i= 0; i <= 9;i++){
            System.out.print(s:"Enter a number :");
            arr[i] = scan.nextInt();
        }
        System.out.println(x:"The numbers that you inputted are:" );
        for (int i = 0; i<= 9; i++){
            System.out.print(arr[i] + " ");
        }
    }
}
```

Figure 1. Java Array Code

```
Enter a number :1
Enter a number :2
Enter a number :3
Enter a number :4
Enter a number :5
Enter a number :6
Enter a number :7
Enter a number :8
Enter a number :9
Enter a number :10
The numbers that you inputted are:
1 2 3 4 5 6 7 8 9 10 Press any key to continue . . .
```

*Figure 1.1. Java Array Code Sample Output*

```
import java.util.*;
public class car {
    String brand = "Lamborghini";
    String type = "Sedan";
    String color = "Navy Blue";
    Run | Debug
    public static void main(String[] args) {
        car myObj = new car();
        Scanner scan = new Scanner(System.in);
        System.out.println("Default Value ");
        System.out.println("-----");
        System.out.println("Brand: " + myObj.brand);
        System.out.println("Type: " + myObj.type);
        System.out.println("Color: " + myObj.color);
        System.out.println("-----");

        System.out.print("Enter New Brand: ");
        myObj.brand = scan.nextLine();
        System.out.print("Enter New Type: ");
        myObj.type = scan.nextLine();
        System.out.print("Enter New Color: ");
        myObj.color = scan.nextLine();
        System.out.println("-----");
        System.out.println("New Car Attributes ");
        System.out.println("-----");
        System.out.println("Brand: " + myObj.brand);
        System.out.println("Type: " + myObj.type);
        System.out.println("Color: " + myObj.color);

    }
}
```

Figure 2. Car Modification

Default Value

---

Brand: Lamborghini

Type: Sedan

Color: Navy Blue

---

Enter New Brand: Toyota

Enter New Type: SUV

Enter New Color: Red

---

New Car Attributes

---

Brand: Toyota

Type: SUV

Color: Red

Figure 2.1. Car Modification Sample Output

```

import java.util.*;
public class carperformance {
    Scanner scan = new Scanner(System.in);

    public void fullThrottle() {
        String model = "";
        double distance;
        double time;
        System.out.println("Enter new Model");
        model = scan.nextLine();
        System.out.println("Enter Distance traveled");
        distance = scan.nextInt();
        System.out.println("Enter time traveled");
        time = scan.nextInt();

        double KPH = distance/time ;
        double kmph = KPH * 60;
        System.out.println("-----");
        System.out.println("Model:\t\t\t\t" + model);
        System.out.println("Distance Traveled:\t\t" + distance);
        System.out.println("Time Traveled:\t\t" + time);
        System.out.println("Speed:\t\t\t" + kmph + "kph");
        System.out.println("");
        if (kmph <= 60) {
            System.out.println("Your Car Is Too Slow");
        } else if ((kmph >= 61 )&&(kmph<=120)){
            System.out.println("Your Car Is Awesome");
        }else{
            System.out.println("Your Car Is Too Fast");
        }
    }

    public static void main(String[] args) {
        carperformance myCar = new carperformance();
        // Create a myCar object
        String model = "Honda Civic";
        String dis = "120km";
        String trav = "45 minutes";
        System.out.println("Sample User Input: ");
        System.out.println("-----");
        System.out.println("Car Model: " + model);
        System.out.println("track Distance : " + dis);
        System.out.println("time Traveled: " + trav);
        System.out.println("-----");
        myCar.fullThrottle();
    }
}

```

*Figure 3. Car Performance*

Sample User Input:

---

Car Model: Honda Civic  
track Distance : 120km  
time Traveled: 45 minutes

---

Enter new Model

Lamborghini

Enter Distance traveled

160

Enter time traveled

60

---

Model:

Lamborghini

Distance Traveled:

160.0

Time Traveled:

60.0

Speed:

160.0kph

Your Car Is Too Fast

*Figure 3.1. Car Performance Sample Output*

```
public class encapsas {
    private String name;
    private int age;
    private int grade;

    public String getName() {
        return name;
    }
    public int getAge() {
        return age;
    }
    public int getGrade() {
        return grade;
    }
    public void setName(String newName) {
        this.name = newName;
    }
    public void setAge(int newAge) {
        this.age = newAge;
    }
    public void setGrade(int newGrade) {
        this.grade = newGrade;
    }
    Run | Debug
    public static void main(String[] args) {
        encapsass students = new encapsass();

        students.setName(newName:"Stephen");
        students.setAge(newAge:19);
        students.setGrade(newGrade:85);

        System.out.println("Name: " + students.getName());
        System.out.println("Age: " + students.getAge());
        System.out.println("Grade: " + students.getGrade());
    }
}
```

Figure 4. Encapsulation

Name: Stephen

Age: 19

Grade: 85

Press any key to continue . . .

Figure 4.1 Encapsulation Sample Output

```
enum Level {  
    RED,  
    YELLOW,  
    GREEN  
}  
  
public class menu {  
    Run | Debug  
    public static void main(String[] args) {  
        Level myVar = Level.GREEN;  
  
        switch (myVar) {  
            case RED:  
                System.out.println("The light is red stop!");  
                break;  
            case YELLOW:  
                System.out.println("The light is yellow prepare to stop.");  
                break;  
            case GREEN:  
                System.out.println("The light is green go!");  
                break;  
        }  
    }  
}
```

*Figure 5. Enums*

```
PS C:\Users\User\Documents\JAVA OOP> & 'C:\Program Files\Eclipse  
es' '-cp' 'C:\Users\User\AppData\Roaming\Code\User\workspaceStora
```

The light is green go!

```
PS C:\Users\User\Documents\JAVA OOP>
```

*Figure 5.1. Enums Sample Output*

```

import java.util.Scanner;
abstract class Vehicle {
    public abstract void carSound();
    public abstract String getCarModel();
}
class Toyota extends Vehicle {
    public void carSound() {
        System.out.println("Vroom! Vroom!");
    }
    public String getCarModel() {
        return "Toyota";
    }
}
class Honda extends Vehicle {
    public void carSound() {
        System.out.println("Hoooonndaaaaa!");
    }
    public String getCarModel() {
        return "Honda";
    }
}
class Suzuki extends Vehicle {
    public void carSound() {
        System.out.println("Suuuzzuuukiiii!");
    }
    public String getCarModel() {
        return "Suzuki";
    }
}

```

```

class Main {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.println("Select Car:");
        System.out.println("- Toyota");
        System.out.println("- Honda");
        System.out.println("- Suzuki");
        System.out.print("Enter Car Model:");
        String carChoice = scanner.nextLine();
        Vehicle myCar = null;
        if (carChoice.equalsIgnoreCase("toyota")) {
            myCar = new Toyota();
        } else if (carChoice.equalsIgnoreCase("honda")) {
            myCar = new Honda();
        } else if (carChoice.equalsIgnoreCase("suzuki")) {
            myCar = new Suzuki();
        }

        if (myCar != null) {
            System.out.println("Car model: " + myCar.getCarModel());
            System.out.print("Car sounds: ");
            myCar.carSound();
        }
    }
}

```

*Figure 6. Abstract Program*

Select Car:

- Toyota

- Honda

- Suzuki

Enter Car Model: Toyota

Car model: Toyota

Car sounds: Vroom! Vroom!

PS C:\Users\User\Documents\JAVA OOP> [ ]

Figure 6.1. Abstract Program Sample Output