Compilation of Object-Oriented Programming Activities

In Partial fulfillment of the requirements in

IT 5/L: IT Elective 2

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```java
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

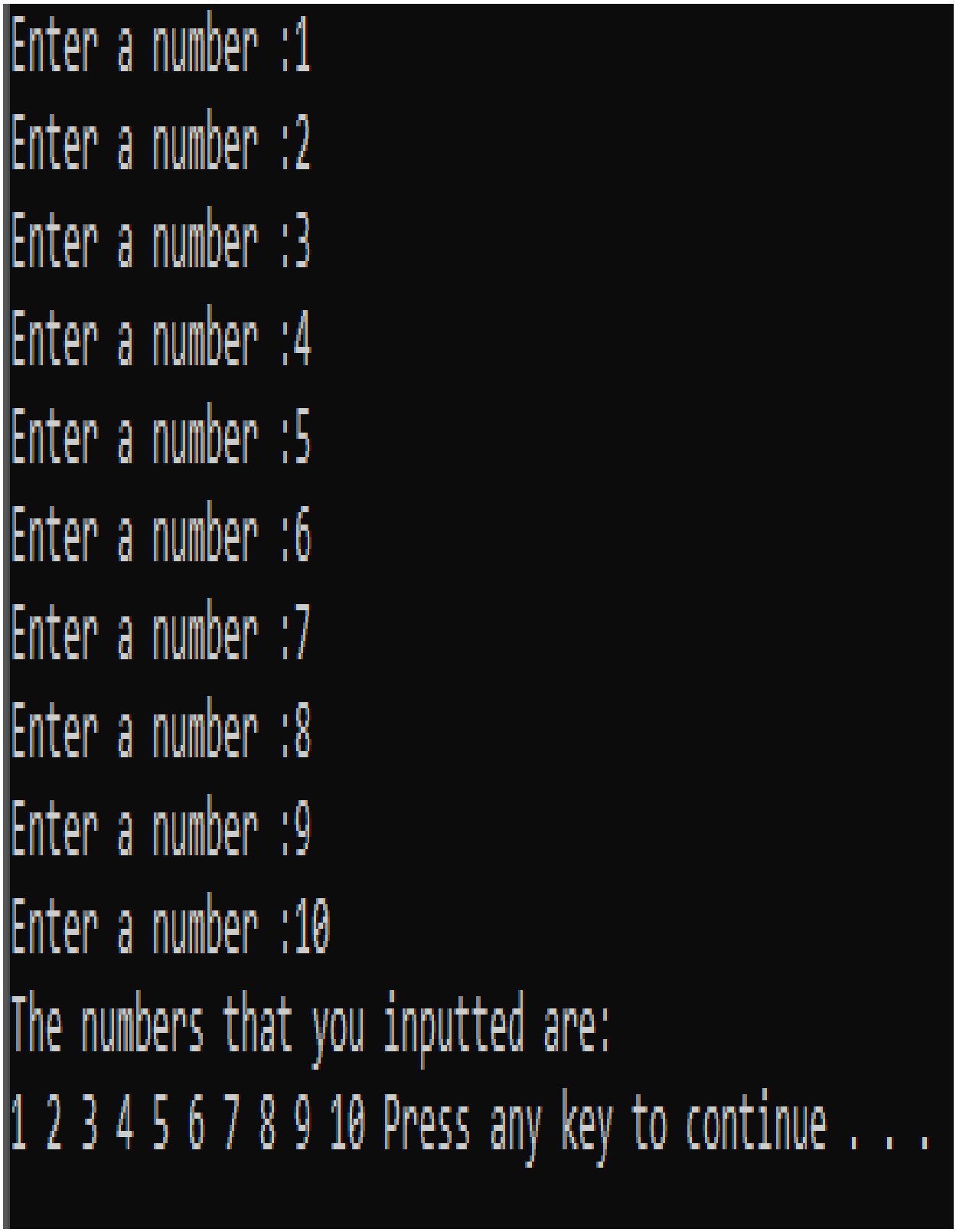

Figure 1.1. Java Array Code Sample Output

```java
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(x:"Default Value ");
        System.out.println(x:"-----------------------------------------");
        System.out.println("Brand: " + myObj.brand);
        System.out.println("Type: " + myObj.type);
        System.out.println("Color: " + myObj.color);
        System.out.println(x:"-----------------------------------------");

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


    }
}
```

Figure 2. Car Modification

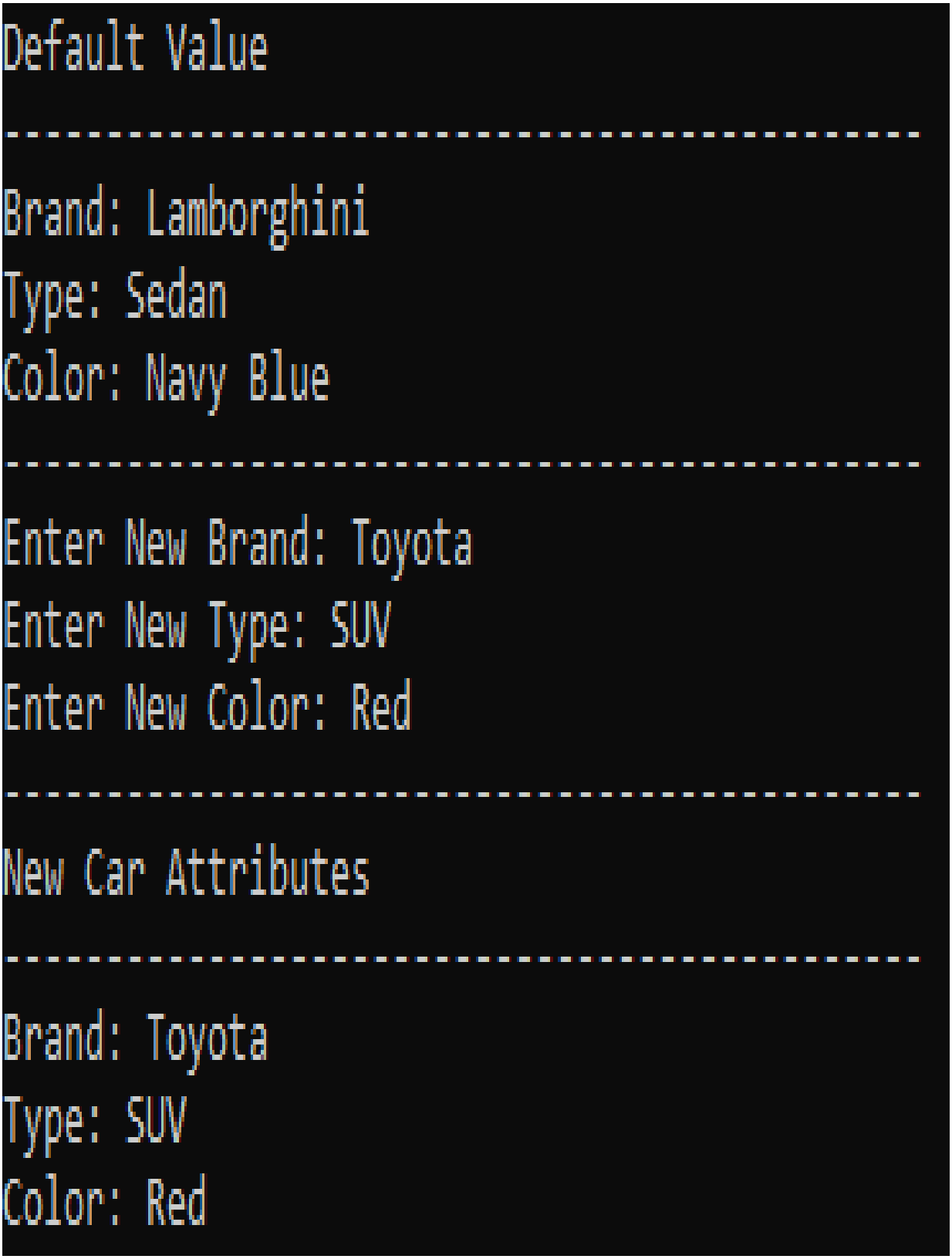

Figure 2.1. Car Modification Sample Output

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

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

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

        } else if ((kmph >= 61 )&&(kmph<=120)){
            System.out.println(x:"Your Car Is Awesome");
        }else{
            System.out.println(x:"Your Car Is Too Fast");
        }
    }
    Run | Debug
    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(x:"Sample User Input: ");
      System.out.println(x:"----------------------------");
      System.out.println("Car Model: "+ model);
      System.out.println("track Distance : "+ dis);
      System.out.println("time Traveled: "+ trav);
      System.out.println(x:"----------------------------");
      myCar.fullThrottle();
    }
}
```

Figure 3. Car Performance

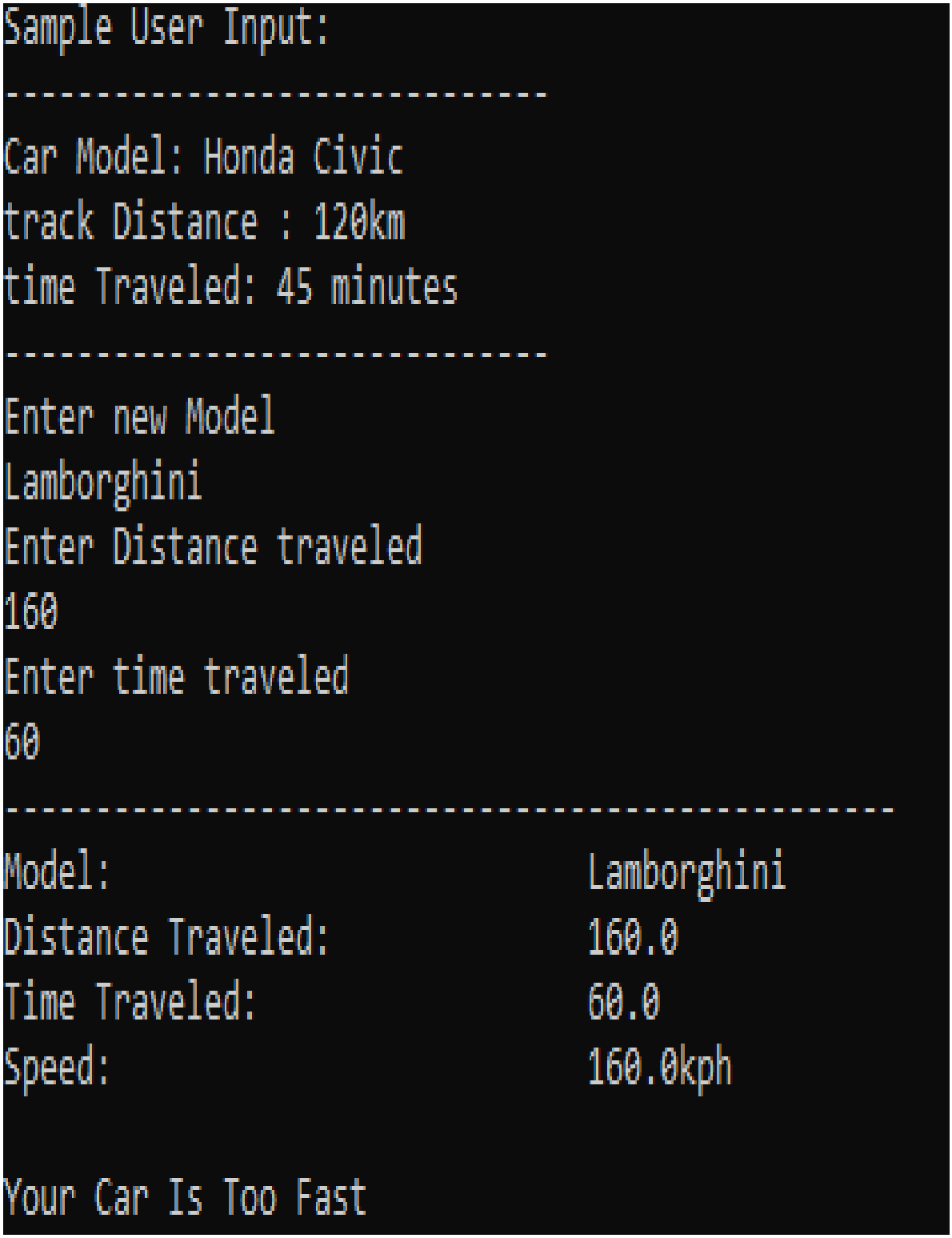

Figure 3.1. Car Performance Sample Output

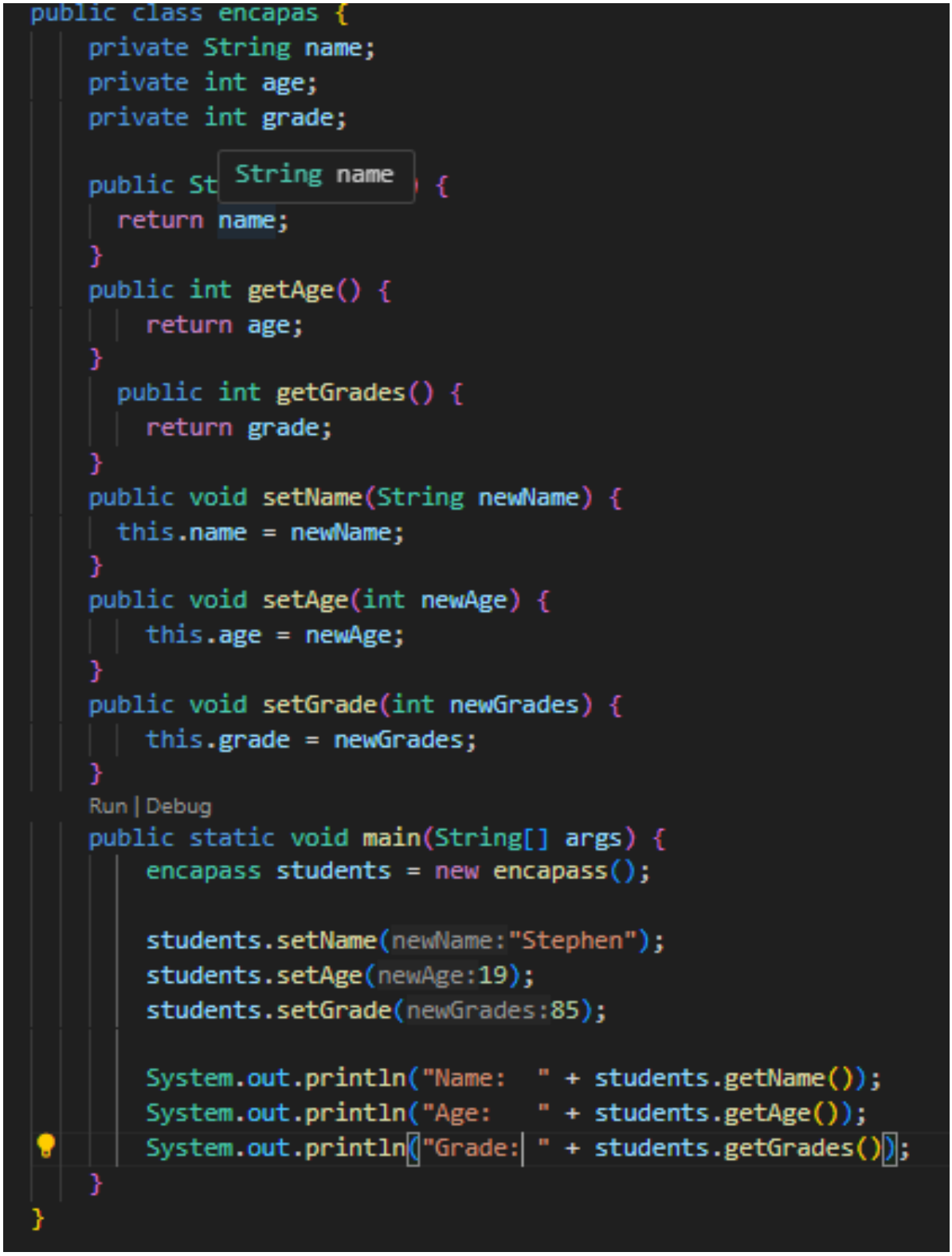

Figure 4. Encapsulation

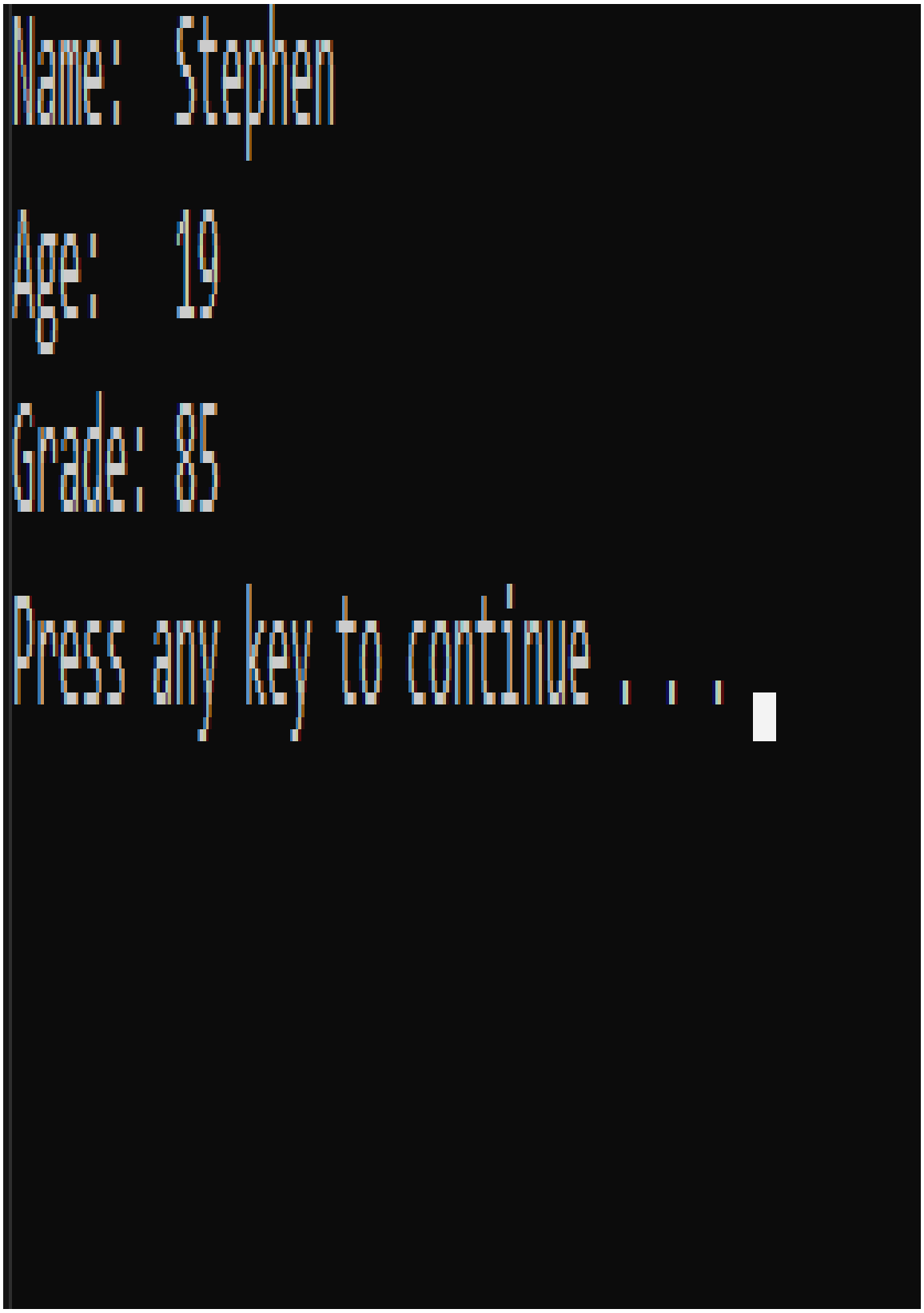

Figure 4.1 Encapsulation Sample Output

```java
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(x:"The light is red stop!");
                break;
            case YELLOW:
                System.out.println(x:"The light is yellow prepare to stop.");
                break;
            case GREEN:
                System.out.println(x:"THe light is green go!");
                break;
        }
    }
}
```

Figure 5. Enums

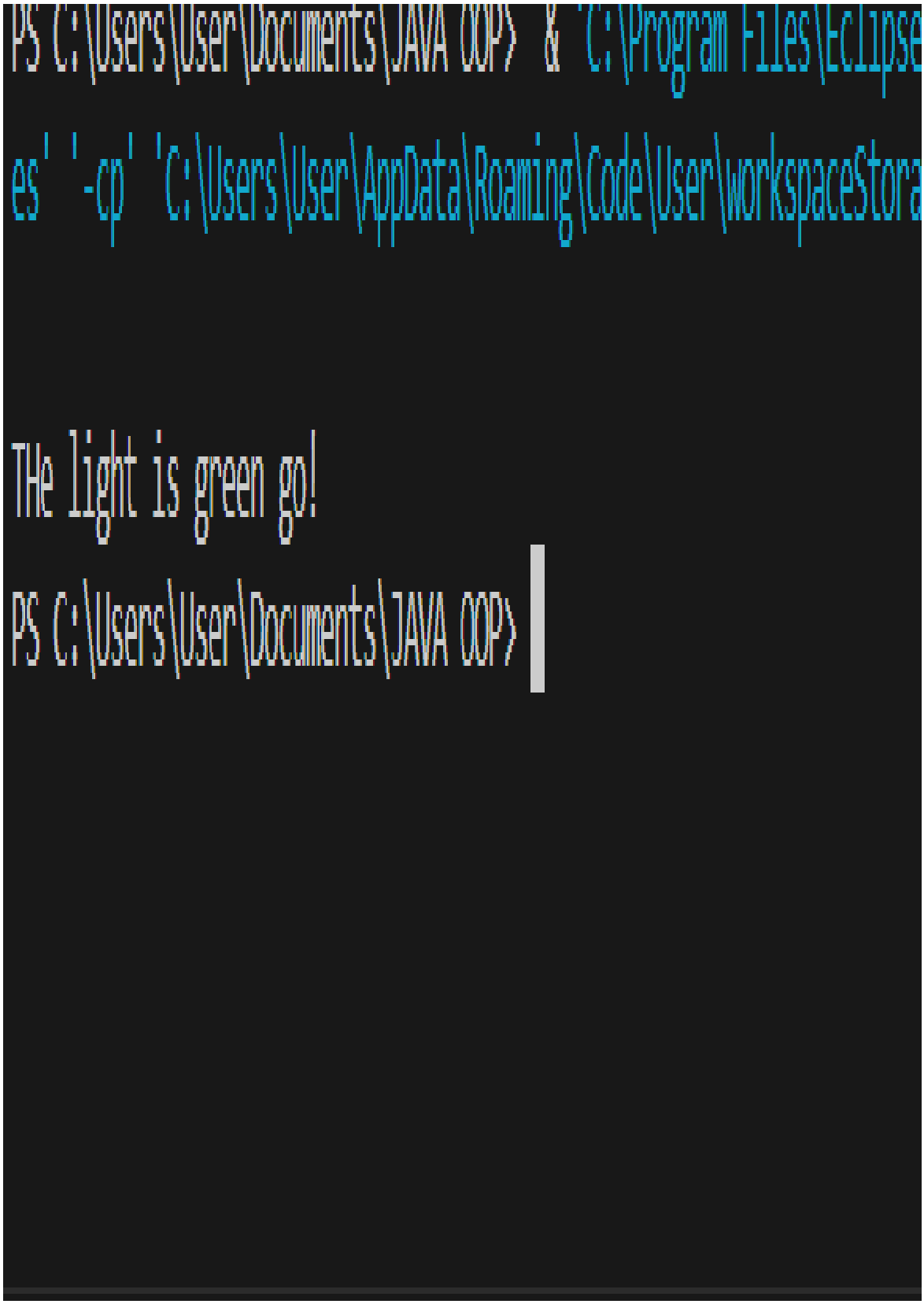

Figure 5.1. Enums Sample Output

```java
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("Hoooonnddaaaaa!");
  }
  public String getCarModel() {
    return "Honda";
  }
}
class Suzuki extends Vehicle {
  public void carSound() {
    System.out.println("Suuuuzzzuuuukiiiii!");
  }
  public String getCarModel() {
    return "Suzuki";
  }
}
```

```java
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

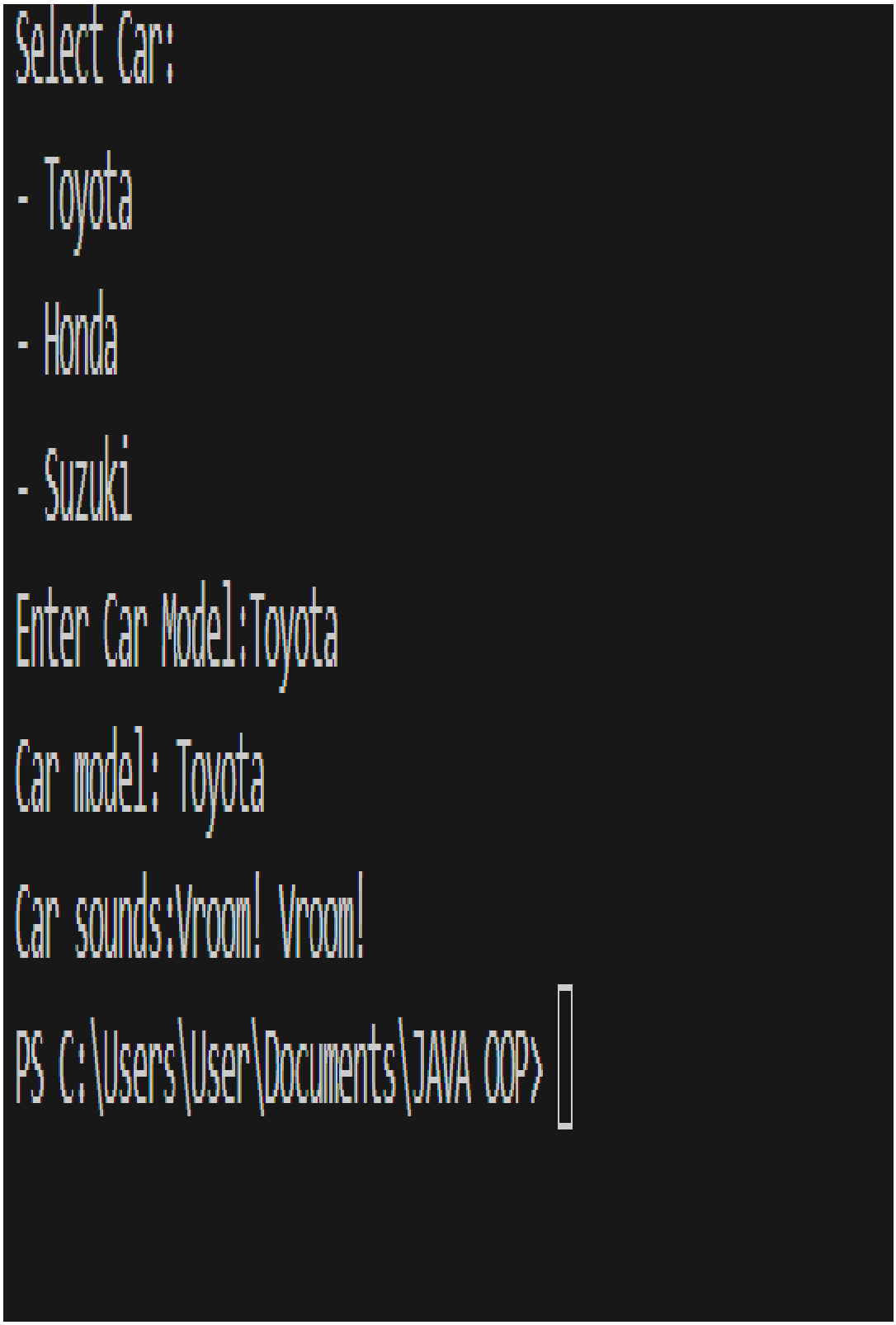

Figure 6.1. Abstract Program Sample Output