

Assignment No: 01

Code:

```
class Vehicle {
    void start() {
        System.out.println("Vehicle started.");
    }
}
class Car extends Vehicle {
    @Override
    void start() {
        System.out.println("Car started.");
    }
}
class Motorcycle extends Vehicle {
    @Override
    void start() {
        System.out.println("Motorcycle started.");
    }
}
class Garage {
    void serviceVehicle(Vehicle vehicle) {
        vehicle.start(); // Polymorphic call
        System.out.println("Vehicle serviced.\n");
    }
}
public class inherit {
    public static void main(String[] args) {
        Car myCar = new Car();
        Motorcycle myBike = new Motorcycle();

        Garage myGarage = new Garage();

        System.out.println("Servicing the car:");
        myGarage.serviceVehicle(myCar);
        System.out.println("Servicing the motorcycle:");
        myGarage.serviceVehicle(myBike);
    }
}
```

Output:

```
W:\Tranning\lab codes>java inherit
Servicing the car:
Car started.
Vehicle serviced.

Servicing the motorcycle:
> Motorcycle started.
> Vehicle serviced.
```

Assignment No: 02

Code:

```
class Student {
    String name;
    int age;
    String department;

    Student() {
        name = "Unknown";
        age = 20;
        department = "Unassigned";
    }
    Student(String name, int age) {
        this.name = name;
        this.age = age;
        this.department = "IT";
    }
    Student(String name, int age, String department) {
        this.name = name;
        this.age = age;
        this.department = department;
    }
    void displayDetails() {
        System.out.println("Name: " + name);
        System.out.println("Age: " + age);
        System.out.println("Department: " + department);
        System.out.println();
    }
}

public class studmang {
    public static void main(String[] args) {
        Student student1 = new Student();
        Student student2 = new Student("Piyush", 21);
        Student student3 = new Student("Riya", 22, "Computer Engineering");

        System.out.println("Student 1 Details:");
        student1.displayDetails();

        System.out.println("Student 2 Details:");
        student2.displayDetails();

        System.out.println("Student 3 Details:");
        student3.displayDetails();
    }
}
```

Output:

```
W:\Tranning\lab codes>java studmang
Student 1 Details:
Name: Unknown
Age: 20
Department: Unassigned

Student 2 Details:
Name: Piyush
Age: 21
Department: IT

Student 3 Details:
Name: Riya
Age: 22
Department: Computer Engineering
```