**Exercise :1**

package OopsBasicTask;

public class Vehicle {

    void start() {

        System.*out*.println("Vehicle Started");

    }

    void stop() {

        System.*out*.println("Vehicle Stopped");

    }

}

class Truck extends Vehicle {

    void loadCargo() {

        System.*out*.println("Truck is loading cargo");

    }

}

class Bus extends Vehicle {

    void pickPassengers() {

        System.*out*.println("Bus is picking up passengers");

    }

}

class Car extends Vehicle {

    void playMusic() {

        System.*out*.println("playing music");

    }

}

class Road {

    public static void main(String[] args) {

        Truck truck = new Truck();

        Bus bus = new Bus();

        Car car = new Car();

        truck.start();

        truck.loadCargo();

        truck.stop();

        bus.start();

        bus.pickPassengers();

        bus.stop();

        car.start();

        car.playMusic();

        car.stop();

    }

}

***Exercise :2***

package OopsBasicTask;

class Animal {

void eat() {

System.*out*.println("Animal is Eating");

}

}

class Dog extends Animal {

void bark() {

System.*out*.println("Dog is Barking");

}

}

public class SingleInheritance {

public static void main(String[] args) {

Dog dog = new Dog();

dog.eat();

dog.bark();

}

}

**Exercise :3**

package OopsBasicTask;

class Animal1 {

    void eat() {

        System.*out*.println(" Animal is Eating...");

    }

}

class Mammal extends Animal1 {

    void walk() {

        System.*out*.println("Mamal ");

    }

}

class Dog1 extends Mammal {

    void bark() {

        System.*out*.println("Dog is Barking");

    }

}

public class MultilevelInheritance {

    public static void main(String[] args) {

        Dog1 dog = new Dog1();

        dog.eat();

        dog.walk();

        dog.bark();

    }

}

***Exercise No:4***

package OopsBasicTask;

class Member {

    String name;

    int age;

    String phoneNumber;

    String address;

    double salary;

    void printSalary() {

        System.*out*.println("Salary: " + salary);

    }

}

class Employee extends Member {

    String specialization;

}

class Manager extends Member {

    String department;

}

public class InheritanceExample {

    public static void main(String[] args) {

        Employee employee = new Employee();

        employee.name = "Vikas";

        employee.age = 24;

        employee.phoneNumber = "1234567891";

        employee.address = "Hyderabad";

        employee.salary = 60000;

        employee.specialization = "Pega";

        Manager manager = new Manager();

        manager.name = "Manager";

        manager.age = 37;

        manager.phoneNumber = "1234567891";

        manager.address = "Hyderabad";

        manager.salary = 80000;

        manager.department = "IT";

        System.*out*.println("Employee details:");

        System.*out*.println("Name: " + employee.name);

        System.*out*.println("Age: " + employee.age);

        System.*out*.println("Phone Number: " + employee.phoneNumber);

        System.*out*.println("Address: " + employee.address);

        employee.printSalary();

        System.*out*.println("Specialization: " + employee.specialization);

        System.*out*.println("\nManager details:");

        System.*out*.println("Name: " + manager.name);

        System.*out*.println("Age: " + manager.age);

        System.*out*.println("Phone Number: " + manager.phoneNumber);

        System.*out*.println("Address: " + manager.address);

        manager.printSalary();

        System.*out*.println("Department: " + manager.department);

    }

}