Automatic:

```
package ccoew.it.i1.businesslogic;

public class Automatic extends Bus{

        private int tvm;

        public Automatic(String reg_no, int driver_no,int tvm) {
                super(reg_no, driver_no);
                this.tvm=tvm;
        }

        public int getTvm() {
                return tvm;
        }

        public void setTvm(int tvm) {
                this.tvm = tvm;
        }
}
```

....
Bus:

```
package ccoew.it.i1.businesslogic;

public class Bus {

        private String Reg_no;
        private int Driver_no;

        public String getReg_no() {
                return Reg_no;
        }
        public void setReg_no(String reg_no) {
                Reg_no = reg_no;
        }
        public int getDriver_no() {
                return Driver_no;
        }
        public void setDriver_no(int driver_no) {
                Driver_no = driver_no;
        }
        public Bus(String reg_no, int driver_no) {
                super();
                Reg_no = reg_no;
                Driver_no = driver_no;
        }
```

```
        }

        .................................................................
        Manual:

package ccoew.it.i1.businesslogic;

public class Manual extends Bus{
        int Conductor_no;

        public Manual(String reg_no, int driver_no,int Conductor_no)
        {
                super(reg_no, driver_no);
                this.Conductor_no=Conductor_no;
        }

        public int getConductor_no() {
                return Conductor_no;
        }

        public void setConductor_no(int conductor_no) {
                Conductor_no = conductor_no;
        }
}

        .................................................................
        Route:

package ccoew.it.i1.businesslogic;

import java.util.ArrayList;

public class Route {

        int route_no;
        Bus b;

        public int getRoute_no() {
                return route_no;
        }

        public Route(int route_no, Bus b) {
                super();
                this.route_no = route_no;
                this.b = b;
        }

        public void setRoute_no(int route_no) {
                this.route_no = route_no;
        }

        public Route(int route_no) {
```

```java
            super();
            this.route_no = route_no;
    }

    public Bus getB() {
            return b;
    }

    public void setB(Bus b) {
            this.b = b;
    }
}
```

....
TransportSystem:

```java
package ccoew.it.i1.businesslogic;

import java.util.ArrayList;

public class TransportSystem {

    ArrayList<Bus>bus=new ArrayList<Bus>();
    ArrayList<Route>route=new ArrayList<Route>();
    public ArrayList<Bus> getBus() {
            return bus;
    }
    public void setBus(ArrayList<Bus> bus) {
            this.bus = bus;
    }
    public ArrayList<Route> getRoute() {
            return route;
    }
    public void setRoute(ArrayList<Route> route) {
            this.route = route;
    }

    public void addBus(Bus b)
    {
            bus.add(b);
    }
    public void adddRoute(Route r)
    {
            route.add(r);
    }
}
```

....
Client:

```java
package ccoew.it.i1.Client;
import ccoew.it.i1.businesslogic.*;
```

```java
import java.util.*;
public class Test {

        public static void main(String[] args) {

        ArrayList<Bus>pbus=new ArrayList<Bus>();
        ArrayList<Route>proute=new ArrayList<Route>();
        ArrayList<Bus>pbus1=new ArrayList<Bus>();
        Automatic a1=new Automatic("MH 12 1234",001,999);
        Automatic a2=new Automatic("MH 12 1235",002,777);
        Automatic a3=new Automatic("MH 12 1222",003,778);

        Manual m1=new Manual("MH 12 4444",004,111);
        Manual m2=new Manual("MH 12 5555",005,222);

        Route r1=new Route(1,a1);
        Route r2=new Route(2,a2);
        Route r3=new Route(3,m1);
        Route r4=new Route(4,m2);
        Route r5=new Route(5,a3);

        TransportSystem ts=new TransportSystem();
        ts.adddRoute(r1);
        ts.adddRoute(r2);
        ts.adddRoute(r3);
        ts.adddRoute(r4);
        ts.adddRoute(r5);

        ts.addBus(a1);
        ts.addBus(a2);
        ts.addBus(a3);
        ts.addBus(m1);
        ts.addBus(m2);

        proute=ts.getRoute();
        pbus=ts.getBus();

        System.out.println("Total Buses");
        int i;
        for(i=0;i<pbus.size();i++)
        {
                System.out.println("Bus " +pbus.get(i).getReg_no());
                System.out.println("Driver on this bus is "+pbus.get(i).getDriver_no());

        }

        System.out.println("Routes on this Transport System are->");
        for(i=0;i<proute.size();i++)
        {
                System.out.println("Route "+proute.get(i).getRoute_no());
                System.out.println("Route has bus " +proute.get(i).getB().getReg_no());
```

```
                System.out.println();
        }
        }
}
```

....
OUTPUT:

Total Buses
Bus MH 12 1234
Driver on this bus is 1
Bus MH 12 1235
Driver on this bus is 2
Bus MH 12 1222
Driver on this bus is 3
Bus MH 12 4444
Driver on this bus is 4
Bus MH 12 5555
Driver on this bus is 5

Routes on this Transport System are->
Route 1
Route has bus MH 12 1234

Route 2
Route has bus MH 12 1235

Route 3
Route has bus MH 12 4444

Route 4
Route has bus MH 12 5555

Route 5
Route has bus MH 12 1222