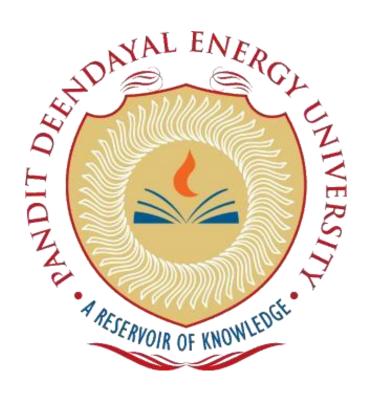
Design Pattern Lab (20CP210P) Assignment 9



Name: Kartikey Vaghasiya

RollNum: 21BCP141

Interface Bus

```
interface Bus {
    void getLocation();
}
```

Interface Train

```
public interface Train {
    void getLocationLocal();
    void getLocationExpress();
}
```

Class Adapter

```
import java.util.Scanner;

public class Adapter implements Bus {
    Train TrainTracker;

    public Adapter ( String TrainType ) {
        if ( TrainType.equalsIgnoreCase("local")) {
            TrainTracker = new LocalTracking();
        }else if ( TrainType.equalsIgnoreCase("express")) {
            TrainTracker = new ExpressTracking();
        }else {
            System.out.println("Enter Valid Train type");
        }
    }

    @Override
    public void getLocation() {

        String train_type;
        System.out.println("Enter the type of train : ");
        Scanner sc = new Scanner(System.in);
        train_type = sc.nextLine();

        if ( train_type.equalsIgnoreCase("local")) {
            TrainTracker.getLocationLocal();
        }else if ( train_type.equalsIgnoreCase("express")) {
            TrainTracker.getLocationExpress();
        }else {
            System.out.println("Enter Valid Train type");
        }
    }
}
```

Class BusTracing

```
import java.util.Scanner;

public class BusTracking implements Bus {

    String location = "Bus:Rajkot";
    void setLocation(String loc) {
        this.location = loc;
    }

    @Override
    public void getLocation() {
        System.out.println("Your Bus is currently at location : " + location );
    }
}
```

Class LocalTracking

```
public class LocalTracking implements Train {
    String location = "LocTrain:Rajkot";
    void setLocation(String loc) {
        this.location = loc;
    }
    @Override
    public void getLocationLocal() {
        System.out.println("Your Local Train is currently at location : " + location );
    }
    @Override
    public void getLocationExpress() {
        //
    }
}
```

Class ExpressTracking

```
public class ExpressTracking implements Train {
    String location = "ExpTrain:Rajkot";
    void setLocation(String loc) {
        this.location = loc;
    }
    @Override
    public void getLocationLocal() {
        //
    }
    @Override
    public void getLocationExpress() {
        System.out.println("Your Express Train is currently at location: "
        + location );
    }
}
```

Class Tracker

```
import java.util.Scanner;

public class Tracker implements Bus{

   Adapter adapter;
   @Override
   public void getLocation() {
        System.out.println("Input Bus or Train For Tracking: ");
        String bus_or_train;
        Scanner sc = new Scanner(System.in);
        bus_or_train = sc.nextLine();

        if( bus_or_train.equalsIgnoreCase("bus")) {
            BusTracking bt = new BusTracking();
            bt.getLocation();
        }

        else if ( bus_or_train.equalsIgnoreCase("localtrain")) {
            LocalTracking lt = new LocalTracking();
            lt.getLocationLocal();
        }

        else if ( bus_or_train.equalsIgnoreCase("expresstrain")) {
            ExpressTracking et = new ExpressTracking();
            et.getLocationExpress();
        }

        else {
            System.out.println("Enter Valid Bus or Train type ");
        }
    }
}
```

Class Main

```
public class Main {
    public static void main(String[] args) {
        Tracker tracker = new Tracker();
        tracker.getLocation();
        tracker.getLocation();
        tracker.getLocation();
    }
}
```

Output:

```
Input Bus or Train For Tracking:

**Tracking:**

**
```