Prototype design

1) Student class

```
package prototype;
 public class student {
private int sid;
private String sname;
public int getsid()
    {
        return sid;
    }
    public void setsid(int s)
    {
        this.sid=s;
    }
    public String getsname()
    {
        return sname;
    }
    public void setsname(String n)
    {
        this.sname=n;
    }
    public String toString()
    {
        return "Student [sid = "+sid+", sname="+sname+"]";
    }
}
```

2) Division class

```
package prototype; import
java.util.ArrayList; import
java.util.List;

public class division implements Cloneable{
private String dname;
    List<student> students = new ArrayList<>();
public String getdname()
    {
        return dname;
    }
    public void setdname(String s)
    {
        this.dname=s;
    }
    public List<student> getStudents()
    {
        return students;
    }
    public void setStudents(List<student> s)
    {
        this.students=s;
    }
```

```
    public String toString() {
        return "Division [division name= " + dname + ",students=" +
students+ "]";     }
    public void loaddata()
    {
        for(int i=1;i<=10;i++)
        {
            student s = new student();
            s.setsid(i);
            s.setsname("student: "+i);
getStudents().add(s);
        }
    }
    public division clone() throws CloneNotSupportedException
    {
        division d1 = new division();
for(student s1 : this.getStudents())
        {
            d1.getStudents().add(s1);
        }
return d1;
    }
}
```

3). Main class

```
import prototype.division;

public class demo {
    public static void main(String[] args) throws
CloneNotSupportedException {         division ds
= new division();         ds.setdname("DIV1");
ds.loaddata();
          division ds1 =
ds.clone();
ds1.setdname("DIV2");
ds.getStudents().remove(3);

        System.out.println(ds);
        System.out.println(ds1);
    }
}
```

Output:

```
name is:Harshit
dob is:null
mobile no. is: 0
attendance is: 83
cpi is: 9.86

Process finished with exit code 0
```