```
1  // Mobile_SIM_Mini_Project
2  // 1st_object Created:->
3  // -------------------------------
4
5   interface SIM {
6
7     void recharge(double amt);
8
9     void currentBalance();
10
11    String call(long MobileNumber);
12
13    String sms(long MobileNumber,String Message);
14 }
15
16
17 // 2nd_object Created:->
18 // -------------------------------
19
20  class Airtel implements SIM {
21
22      private double balance;
23
24      public void recharge(double amt) {
25                this.balance=this.balance + amt;
26                System.out.println("Airtel SIM is  recharged");
27      }
28
29          public void currentBalance() {
30          System.out.println("Existing balance: "+ balance);
31      }
32
33
34     public String call( long MobileNumber) {
35
36        return "Airtel: The number you are dailing is curretly busy please dail after some time
37     }
38
39     public String sms(long MobileNumber, String Message) {
40
41           return "Airtel: You message send Successfully";
42     }
43 }
44
45
46 // 3rd_object Created:->
```

```
47 // --------------------------------
48
49  class Idea implements SIM {
50
51     private double balance;
52
53     public void recharge(double amt) {
54               this.balance=this.balance + amt;
55               System.out.println("Idea SIM is  recharged");
56     }
57
58     public void currentBalance() {
59        System.out.println("Existing balance: "+ balance);
60     }
61
62
63    public String call( long MobileNumber) {
64
65       return "Idea: The number you are dailing is not reachable,please dail after some time'
66    }
67
68    public String sms(long MobileNumber, String Message) {
69
70          return "idea: You message send Successfully";
71    }
72 }
73
74
75 // 4th_object Created:->
76 // --------------------------------
77
78  class Vodafone implements SIM {
79
80     private double balance;
81
82     public void recharge(double amt) {
83               this.balance=this.balance + amt;
84               System.out.println("Vodafone SIM is  recharged");
85     }
86
87     public void currentBalance() {
88        System.out.println("Existing balance: "+ balance);
89     }
90
91
92    public String call(long MobileNumber) {
```

```
93
94          return "Vodafone: The number you are dailing is switched off please dail after Some t
95      }
96
97      public String sms(long MobileNumber, String Message) {
98
99              return "Vodafone: You messge send Successfully";
100     }
101 }
102
103 // 5th_object Created:->
104 // --------------------------------
105
106  class Uninor implements SIM {
107
108      private double balance;
109
110      public void recharge(double amt) {
111              this.balance=this.balance + amt;
112              System.out.println("Uninor SIM is  recharged");
113      }
114
115      public void currentBalance() {
116          System.out.println("Existing balance: "+ balance);
117      }
118
119
120      public String call( long MobileNumber) {
121
122          return  "Uninor: The number you are dailing is out of coverage area";
123      }
124
125      public String sms(long MobileNumber, String Message) {
126
127              return "Uninor: You message send Successfully";
128      }
129 }
130
131 // 6th_object Created:->
132 // --------------------------------
133
134  class Mobile {
135
136      private SIM sim;
137
138      public void InsertSIM(String simName) throws Exception {
```

```
139
140         // reflection API
141             Class cls = Class.forName(simName);
142             Object obj=cls.newInstance();
143
144             if(obj instanceof SIM) {
145                 this.sim = (SIM)obj;
146             }
147
148             else {
149                 throw new Exception("It is not SIM");
150             }
151     }
152
153     public String dail(long MobileNumber) {
154
155         return sim.call(MobileNumber);
156     }
157
158
159     public String sms(long MobileNumber, String Message) {
160
161             return sim.sms(MobileNumber, Message);
162    }
163 }
164
165 // Main_Method Created:->
166 // ----------------------------------
167
168 import java.util.Scanner;
169
170 class MobileScreen {
171
172     public static void main(String[] args) {
173
174         Mobile iPhone = new Mobile();
175
176         Scanner scn = new Scanner(System.in);
177
178             try
179             {
180                 System.out.println("Enter SIM: ");
181                 iPhone.InsertSIM(scn.nextLine());
182
183                 System.out.println("SIM is successfully activated ");
184                 System.out.println("Choose one option ");
```

```
185             System.out.println("Type 1 to make a call ");
186             System.out.println("Type 2 to send sms ");
187
188             System.out.println("Enter option: ");
189             int option= scn.nextInt();
190
191         switch (option) {
192
193          case 1:
194                     System.out.println("Enter Mobile Number: ");
195
196                      // System.out.println(iPhone.dail(scn.nextLong()));
197                       long MobileNumber=scn.nextLong();//scn.nextLine();
198
199                        if(MobileNumber>1000000000 && MobileNumber<9999999999l) {
200
201                         System.out.println(iPhone.dail(MobileNumber));
202                        }
203
204                     else {
205                         System.out.println("Invalid phone number");
206                       }
207
208                      break;
209
210          case 2:
211                     System.out.println("Enter Mobile Number: ");
212                     long MobileNumber1=scn.nextLong();//scn.nextLine();
213
214                       if(MobileNumber1>1000000000 && MobileNumber1<9999999999l) {
215
216                        System.out.println(iPhone.dail(MobileNumber1));
217                       }
218
219                     else {
220                         System.out.println("Invalid phone number");
221                       }
222
223                     System.out.println("Enter the Text Message: ");
224                     String MessageText = scn.nextLine();
225
226
227                    System.out.println(iPhone.sms(MobileNumber1,MessageText));
228                     break;
229
230           default :
```

```
231                         System.out.println("Are You mad");
232                         System.out.println("Choose either 1 to 2:");
233                     }
234                 }
235 
236                     catch(Exception e) {
237                     System.out.println(e.getMessage());
238                   }
239         }
240     }
241 
```