```
1
     =========TestStack.java============
 2
     package com.ameya.test;
 3
 4
     import java.util.Iterator;
5
     import java.util.Stack;
 6
 7
    public class TestStack {
8
9
         public static void main(String[] args) {
10
            Stack<Integer> stck=new Stack<Integer>();
11
            stck.push(10);
            stck.push(20);
13
            stck.push(30);
            stck.push(40);
15
            stck.push(50);
16
            System.out.println(stck);
17
            boolean isPresent=stck.contains(30);
18
            System.out.println("stck contains 30 :: "+isPresent);
19
             for(int i=0;i<stck.size();i++) {</pre>
20
                System.out.println(stck.elementAt(i));
21
            System.out.println("========");
23
            Iterator<Integer> itr=stck.iterator();
24
            while(itr.hasNext()) {
25
                int x = itr.next();
26
                System.out.println(x);
27
28
            /*stck.pop();
            System.out.println(stck);
29
            stck.pop();
31
            System.out.println(stck);
32
            stck.pop();
33
            System.out.println(stck);
34
            stck.pop();
35
            System.out.println(stck);
36
            stck.pop();
37
            System.out.println(stck);*/
38
39
        }
40
41
    }
42
    4.3
    package com.ameya.models;
44
45
    package com.ameya.models;
46
47
    public class Person {
48
        private int id;
        private String firstName;
49
        private String lastName;
51
        private int age;
52
        public Person() {
            firstName="N/A";
53
54
            lastName="N/A";
            id=-1;
56
            age=-1;
57
         }
58
        public Person(int id, String firstName, String lastName, int age) {
59
            super();
60
            this.id = id;
61
            this.firstName = firstName;
62
            this.lastName = lastName;
63
            this.age = age;
64
         }
65
         public int getId() {
66
            return id;
67
         }
        public void setId(int id) {
68
69
            this.id = id;
         }
71
        public String getFirstName() {
            return firstName;
73
```

```
74
        public void setFirstName(String firstName) {
75
            this.firstName = firstName;
76
77
        public String getLastName() {
78
            return lastName;
79
        }
80
        public void setLastName(String lastName) {
81
            this.lastName = lastName;
82
        }
83
        public int getAge() {
84
            return age;
85
        }
86
        public void setAge(int age) {
87
            this.age = age;
88
89
        @Override
90
        public String toString() {
            return "Person [id=" + id + ", firstName=" + firstName + ", lastName=" +
91
            lastName + ", age=" + age + "]\n";
92
        }
93
94
        @Override
95
        public int hashCode() {
            final int prime = 31;
96
            int result = 1;
97
            result = prime * result + id;
99
            return result;
100
101
        @Override
102
        public boolean equals(Object obj) {
103
            Person p=(Person)obj;
104
            return this.id==p.getId()?true:false;
105
        }
106
107
108
109
110
111
     112
     package com.ameya.test;
113
114
     import java.util.Iterator;
115
     import java.util.Stack;
116
117
     import com.ameya.models.Person;
118
119
     public class TestPersonStack {
120
121
        public static void main(String[] args) {
122
            Person p1=new Person();
123
            Person p2=new Person(007, "Ameya", "Joshi", 45);
124
            System.out.println("p1 FirstName :: "+p1.getFirstName());
125
            System.out.println("p1 LastName :: "+p1.getLastName());
126
                                         :: "+p1.getId());
127
            System.out.println("p1 Id
            System.out.println("p1 Age
                                         :: "+p1.getAge());
128
            129
130
            System.out.println("p2 FirstName :: "+p2.getFirstName());
131
            System.out.println("p2 LastName :: "+p2.getLastName());
132
            System.out.println("p2 Id
                                        :: "+p2.getId());
                                        :: "+p2.getAge());
133
            System.out.println("p2 Age
134
135
            p1.setId(006);
136
            p1.setFirstName("Kshiti");
137
            p1.setLastName("Joshi");
138
            p1.setAge(10);
            139
140
            System.out.println("p1 FirstName :: "+p1.getFirstName());
141
            System.out.println("p1 LastName :: "+p1.getLastName());
142
                                         :: "+p1.getId());
            System.out.println("p1 Id
143
            System.out.println("p1 Age
                                         :: "+p1.getAge());
144
145
```

```
System.out.println("p1 :: "+p1);
146
147
           System.out.println("p2 :: "+p2);
148
149
           Stack<Person> stck=new Stack<>();
150
           stck.push(p1);
151
           stck.push(p2);
152
           stck.push(new Person(100, "Avani", "Joshi", 40));
           stck.push(new Person(101, "Sanjay", "Kadam", 44));
153
154
           stck.push(new Person(102, "Amol", "Deshpande", 38));
155
           156
           System.out.println(stck);
157
158
           159
           for(int indx=0;indx<stck.size();indx++) {</pre>
160
              Person p=stck.elementAt(indx);
161
              System.out.println(p);
162
163
           164
165
           Iterator<Person> itr=stck.iterator();
166
           while(itr.hasNext()) {
167
              Person p=itr.next();
168
              System.out.println(p);
169
           }
170
171
           boolean isPresent=stck.contains(new Person(100, "Avani", "Joshi", 40));
172
           System.out.println("Object is Found :: "+isPresent);
173
        }
174
175
    }
176
```