Collections

Assignments

1.

Phone.java

```
1  package com.collections;
2
3  import java.util.TreeMap;
4  import java.util.Collections;
5   class Contact
6  {
7      String name;
8      String email;
9      long phonenumber;
10     String gender;
11     public Contact(long phonenumber,String gender,String name,Str
12     {
13         this.name=name;
14         this.email=email;
15         this.gender=gender;
16         this.phonenumber=phonenumber;
17
18     }
19 }
20
21 public class Phone {
22
23     public static void main(String[] args) {
24         TreeMap<Long,Contact> tree = new TreeMap<Long,Contact>(Cc
25         Contact obj1 = new Contact(9638527410L,"male","abc","abc@
26         Contact obj2 = new Contact(9638527411L,"male","xyz","xyz@
27         Contact obj3 = new Contact(9638527415L,"female","pqr","pq
28
29         tree.put(741852L,obj1);
30         tree.put(7418523L,obj2);
31         tree.put(741856L,obj3);
32
33        System.out.println("keys are:"+tree.keySet());
34        System.out.println("values are: "+tree.values());
35        System.out.println("keys and values are :"+tree);
36     }
37
38
39     }
40
```

Console

```
<terminated> Phone [Java Application] C:\Program Files\Java\jdk-16.0.2\bin\javaw.exe  (16-Nov-2021, 9:13:52 pm –
keys are:[7418523, 741856, 741852]
values are: [com.collections.Contact@3fee733d, com.collections.Contact@5acf9800, cc
keys and values are :{7418523=com.collections.Contact@3fee733d, 741856=com.collecti
```

2.

TreeSet1.java

```
1  package com.collections;
2  import java.util.*;
3  public class TreeSet1 {
4
5      public static void main(String[] args) {
6          TreeSet<Integer> test=new TreeSet<Integer>();
7          test.add(1);
8          test.add(2);
9          test.add(3);
10         test.add(4);
11         test.add(5);
12         test.add(6);
13         test.add(7);
14         test.add(8);
15         test.add(9);
16         test.add(10);
17         System.out.println(test);
18         System.out.println("Reverse Set:"+test.descendingSet());
19
20     }
21
22 }
```

Console

```
<terminated> TreeSet1 [Java Application] C:\Program Files\Java\j
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
Reverse Set:[10, 9, 8, 7, 6, 5, 4, 3, 2, 1]
```

3.

Emp.java

```java
package com.collections;
import java.util.*;

class Employee{
    int id;
    String name ;
    String department;
    double salary;
    public Employee(int id, String name, String department, doubl
    {
        this.id=id;
        this.name=name;
        this.department= department;
        this.salary= salary;

    }

    public int getId() {
        return id;
    }

    public void setId(int id) {
        this.id = id;
    }

    public String getName() {
        return name;
    }
    public String getDepartment() {
        return department;
    }

    public void setDepartment(String department) {
        this.department = department;
    }

    public double getSalary() {
        return salary;
    }

    public void setSalary(double salary) {
        this.salary = salary;
    }
```

Console

```
<terminated> Emp [Java Application] C:\Program
1 Chandan CSE 200000.26
2 Jayanth ECE 200100.58
3 Mani ME 22000.96
```

Emp.java

```java
    public double getSalary() {
        return salary;
    }

    public void setSalary(double salary) {
        this.salary = salary;
    }
}
class MynameComp implements Comparator<Employee>
{

    @Override
    public int compare(Employee o1, Employee o2) {

        return o1.getName().compareTo(o2.getName());
    }

}

public class Emp {

    public static void main(String[] args) {
TreeSet<Employee> e = new TreeSet<Employee>(new MynameComp());

        Employee e1 = new Employee(1,"Chandan","CSE",200000.26);
        Employee e2 = new Employee(2,"Jayanth","ECE",200100.58);
        Employee e3 = new Employee(3,"Mani","ME",22000.96);

        e.add(e1);
        e.add(e2);
        e.add(e3);

        for(Employee s : e)
        {
            System.out.println(s.id+" "+s.name+" "+s.department+"
        }

    }


    }
```

Console

```
<terminated> Emp [Java Application] C:\Prog
1 Chandan CSE 200000.26
2 Jayanth ECE 200100.58
3 Mani ME 22000.96
```

4.

LeapYearDemo.java

```
7
8  public class LeapYearDemo {
9
10     public static void main(String[] args) {
11
12
13         Dateex date = new Dateex("01/09/1999");
14             Dateex date1 = new Dateex("10/12/2000");
15             Dateex date2 = new Dateex("18/10/2003");
16
17
18             List<Dateex> dob = new LinkedList<>();
19             dob.add(date);
20             dob.add(date1);
21             dob.add(date2);
22
23
24             DateTimeFormatter df = DateTimeFormatter.ofPattern("dd/MM/yyyy");
25
26             for (int i = 0; i < dob.size(); i++) {
27
28                 LocalDate up = LocalDate.parse(dob.get(i).date,df);
29                 String s=(up).format(df);
30
31
32                 if(up.getYear() % 4 == 0) {
33                     System.out.println(s + " is an leap year");
34                 }else {
35                     System.out.println(s + " is not an leap year");
36                 }
37             }
38
39
40     }
41
42 }
43 class Dateex {
44
45     String date;
46
47     public Dateex(String date) {
48         super();
49         this.date = date;
```

Console

```
<terminated> LeapYearDemo [Java Application] C:\Program Files\Java\j
01/09/1999 is not an leap year
10/12/2000 is an leap year
18/10/2003 is not an leap year
```