Collection Lab

```
public static void main(String[] args) {
    List<Integer> value = new ArrayList<>(){{
          add(20);
         add(40);
         add(50);
         add(60);
     }};
    for (int i : value){
          System.out.println(i);
     }
}
       @Question: We have 10 students at class 9 as follows.
                                                                            Address
                                                                                                                                      Group
                            Noor Alom Siddiky
                                                                            Cashara, N.Gonj
                                                                                                                                     Science
                            Sakil Ahmed
                                                                            Jatrabari, Dhaka
         02
                                                                                                                                     Science
         03
                            Mohib Billah
                                                                            Banasree, Dhaka
                                                                                                                                     Arts
         04
                            Anowar Masum
                                                                            Polton, Dhaka
                                                                                                                                     Commerce
         05
                            Sved Nasrul Islam
                                                                            Jatrabari, Dhaka
                                                                                                                                     Commerce
         06
                            Asf Ud Doulah
                                                                            Shahjahanpur, Dhaka
                                                                                                                                     Arts
         07
                            Sohel Ahmed
                                                                            Banasree, Dhaka
                                                                                                                                     Science
                                                                           Banasree, Dhaka
                            Mafijur Rahman
         08
                                                                                                                                     Science
                            Sharif Ahmed Chow. Mirpur-6, Dhaka
         09
                                                                                                                                     Commerce
                                                                           Malibag, Dhaka
         10
                            Mohsena Akter
                                                                                                                                     Arts
         A new student admitted into class 9 and his/her information as follows.
         Name
                                                         Address
                                                                                                                  Group
         Thongya Murong
                                                         Dhanmondi, Dhaka
                                                                                                                  Commerce
         Now we need to provide him a roll number as 05.
          @Hints: Make Class Student
  * /
public class Problem1 {
          public static void main(String[] args) {
                   Student1[] s = {
                                      new Student1(1, "Noor Alom Siddiky", "Cashara, N.Gonj",
"Science"),
                     new Student1(2, "Noor Alom Siddiky", "Cashara, N.Gonj", "Science"), new Student1(3, "Noor Alom Siddiky", "Cashara, N.Gonj", "Science"), new Student1(4, "Noor Alom Siddiky", "Cashara, N.Gonj", "Science"), new Student1(5, "Noor Alom Siddiky", "Cashara, N.Gonj", "Science"),
                     new Student1(2, "Noor Alom Siddiky", "Cashara, N.Gonj", "Science"),
new Student1(4, "Noor Alom Siddiky", "Cashara, N.Gonj", "Science"),
new Student1(5, "Noor Alom Siddiky", "Cashara, N.Gonj", "Science"),
new Student1(6, "Noor Alom Siddiky", "Cashara, N.Gonj", "Science"),
new Student1(7, "Noor Alom Siddiky", "Cashara, N.Gonj", "Science"),
new Student1(8, "Noor Alom Siddiky", "Cashara, N.Gonj", "Science"),
new Student1(9, "Noor Alom Siddiky", "Cashara, N.Gonj", "Science"),
new Student1(10, "Noor Alom Siddiky", "Cashara, N.Gonj", "Science"),
                     new Student1(10, "Noor Alom Siddiky", "Cashara, N.Gonj", "Science")
                        List<Student1> list = new ArrayList<>();
//
class Student1{
         private int roll;
          private String name;
          private String address;
          private String group;
```

```
Student1(){};
    Student1(int r, String n, String a, String g){
         this.roll = r;
         this.name = n;
         this.address = a;
         this.group = g;
    }
}
import java.util.Vector;
import java.util.ArrayList;
public class Lab2 {
    public static void main(String[] args) {
         // create an empty Vector vec
         Vector<Integer> vec1 = new Vector<Integer>();
         Vector<Integer> vec2 = new Vector<Integer>();
         Vector<Integer> vec3 = new Vector<Integer>();
         Vector<Integer> vec4 = new Vector<Integer>();
         // use add() method to add elements in the vector
         vec1.add(14);
         vec2.add(1);
         vec2.add(1);
         vec2.add(1);
         vec2.add(1);
         vec2.add(1);
         vec2.add(1);
         vec2.add(1);
         vec2.add(1);
         vec2.add(1);
         vec2.add(10);
         vec2.add(11);
         vec3.add(1);
         vec3.add(15);
         vec3.add(16);
         vec4.add(1);
         vec4.add(1);
```

```
vec4.add(1):
         vec4.add(1):
         vec4.add(1):
         vec4.add(1):
         vec4.add(1);
         vec4.add(1);
         vec4.add(22);
         // let us print the capacity of the vector
         System.out.println("Capacity of the vector 1 is :"+vec1.capacity());
         System.out.println("Capacity of the vector 2 is :"+vec2.capacity());
         System.out.println("Capacity of the vector 3 is :"+vec3.capacity());
         System.out.println("Capacity of the vector 4 is :"+vec4.capacity());
    }
}
import java.util.*;
 * Created by noor on 12/31/17.
public class Lab4 {
    public static void main(String[] args) {
         HashMap<Integer, String> lhmap = new HashMap<Integer, String>();
         lhmap.put(22, "Abey");
lhmap.put(33, "Dawn");
         lhmap.put(1, "Sherry");
lhmap.put(2, "Karon");
         lhmap.put(100, "Jim");
         for(Map.Entry map: lhmap.entrySet()){
              System.out.print( map.getKey() +"\t"
              +map.getValue()+"\n");
         LinkedHashMap<Integer, String> lhmap2 = new LinkedHashMap<Integer, String>();
         lhmap2.put(22, "Abey");
         lhmap2.put(33, "Dawn");
         lhmap2.put(1, "Sherry");
         lhmap2.put(2, "Karon");
         lhmap2.put(100, "Jim");
         System.out.println();
         System.out.println("secound");
         System.out.println();
         for(Map.Entry map: lhmap2.entrySet()){
              System.out.print( map.getKey() +"\t"
                        +map.getValue()+"\n");
        TreeMap<Integer, String> lhmap3 = new TreeMap<Integer, String>();
         lhmap3.put(22, "Abey");
lhmap3.put(33, "Dawn");
         lhmap3.put(1, "Sherry");
lhmap3.put(2, "Karon");
         lhmap3.put(100, "Jim");
         System.out.println();
         System.out.println("Third");
         System.out.println();
         for(Map.Entry map: lhmap3.entrySet()){
              System.out.print( map.getKey() +"\t"
                        +map.getValue()+"\n");
         }
    }
}
```

```
* remove value more than 100 only using one line
* */
import java.util.*;
public class Labl extends ArrayList {
    public static void main(String[] args) {
         Lab1 arrlist = new Lab1();
         arrlist.add(10);
         arrlist.add(12);
         arrlist.add(4);
         arrlist.add(3);
         arrlist.add(31);
         arrlist.add(332);
         arrlist.add(121);
         arrlist.add(831);
         arrlist.add(81);
         arrlist.add(91);
         arrlist.removeRange(5,8);
         // print the list
         System.out.println("The list:" + arrlist);
    }
}
```