

1. Read and store 'n' no. of integer values to Array List object, sort the elements.

Find the frequency of a specific element inside the array list. (while storing element give duplicate entities)

E.g.:

12,1,45,12,56,-34,56,0,23,13,12,56

Frequency of 12: 3

```
package test.com;
import java.util.Scanner;
public class Search {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        int i,k;
        ArrayList al = new ArrayList();
        var obj = new Scanner(System.in);
        System.out.println("Enter number of elements: ");
        n = obj.nextInt();
        for(i=0;i<=k;i++) {
            System.out.println("Enter "+i+"element :");
            al.add(obj.nextInt());
        }
        System.out.println("Enter element for searching
duplicate: ");
        int k= obj.nextInt();
        int freq =0;
        int value;
        for(i=0;i<=k;i++) {
            Object key =al.get(i);
            value = (int)key;
            if(value==n) {
                freq++;
            }
        }
        System.out.print("element"+n+"is repeated"+freq);
    }
}
```

```
}
```

Output:

Enter number of elements:

4

Enter 0element :

1

Enter 1element :

3

Enter 2element :

2

Enter 3element :

1

Enter element for searching duplicate:

1

Repeated 2

2. Create a user defined class to store Books information

(bookid, title, author name, price)

Add 5 books record into vector and display the same information from vector.

```
package test.com;
import java.util.*;
public class vector1 {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Book obj[] = new Book[5];
        obj[0]= new Book(obj[0]= new Book("1","java
programming", "james", 340f);
        obj[1]= new Book("2","C progrmming",
"Dennis", 1340f);
        obj[2]= new Book("3","Mysql ", "william",
300f);
        obj[3]= new Book("4","AI", "Jegan", 99940f);
        obj[4]= new Book("5","java programming",
"Gosling", 2240f);

        Vector<Book> v = new Vector<Book>();

        v.add(obj[0]);
```

```

        v.add(obj[1]);
        v.add(obj[2]);
        v.add(obj[3]);
        v.add(obj[4]);

        for(Book obj: v) {

            System.out.println(obj1.bkid + " " + obj1.bktitle
+ " " +obj1.author + " " +obj1.price);
        }

    }
}

```

Output:

```

1,java programming, amen, 340
2,C progrmming, Dennis, 1340
3,Mysql , william, 300
4,AI, Jegan, 99940
5,java programming, Gosling, 2240

```

3. use Hastable to Store key and value pair of book title and category. Store 10 records and display the same.

```

package assessment;
import java.util.enumeration;
import java.util.Hashtable;
public class Hashtable1 {

    public static void main(String[] args) {
        Hashtable ht = new Hashtable();
        ht.put("BIPC", "Inter");
        ht.put("JAVA", "CSE");
        ht.put("C", "Coding");
        ht.put("Geetanjali", "Rabindra");
        ht.put("dalrice", "delicious");
        ht.put("Telugu", "MOTHER TONGUE");
        ht.put("Maths", "Tricky");
        ht.put("Biology", "Doctor");

        Enumeration keys = ht.keys();
    }
}

```

```
        while(keys.hasMoreElements()) {
            String key = (String)keys.nextElement();
            Object val= ht.get(key);
            System.out.println(key+"="+val);

        }
        Enumeration ele=ht.elements();
        while(ele.hasMoreElements()) {
            Object el= ele.nextElement();
            System.out.println(ele);
        }
    }
}
```

Output:

BIPC=Inter

JAVA=CSE

C=Coding

Geethanjali=Rabindra

dalrice=delicious

Biology=Doctor

Telugu=MOTHER TONGUE

Maths=Tricky