N. HARI PRASAD LAB (AF0313053)

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 store storing element give duplicate entities)

E.g.:

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

Frequency of 12 : 3

```
package collection.test;

import java.util.*;

public class Hari {

public static void main(String[] args) {

ArrayList a = new ArrayList();

int i, n;

Scanner sc = new Scanner (System.in);

System.out.println("How many elements ");

n=sc.nextInt();

for(i=0;i<n;i++)

{

System.out.println("Enter "+ i + " Element ");

a.add(sc.nextInt());

}

System.out.println("Array elements "+ a);

System.out.println("Enter an element to find frequency ");

int element = sc.nextInt();

int freq=0, value;
```

```
for(i=0;i<n;i++)
{
Object obj= a.get(i);
value= (int)obj;
if(value==element)
freq++;
}
System.out.println("Frequency of " + element + " is " + freq);
}
}
```

OUTPUT:

```
How many elements
12
Enter 0 Element
12
Enter 1 Element
1
Enter 2 Element
45
Enter 3 Element
12
Enter 4 Element
56
Enter 5 Element
-34
```

Enter 6 Element

56

Enter 7 Element

0

Enter 8 Element

23

Enter 9 Element

13

Enter 10 Element

12

Enter 11 Element

56

Array elements [12, 1, 45, 12, 56, -34, 56, 0, 23, 13, 12, 56]

Enter an element to find frequency

12

Frequency of 12 is 3

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 collection.test;

public class Book {

public String bookid, booktitle , author ;

public float price;

public Book( String bi, String bt,String an,float p) {

bookid=bi;

booktitle=bt;

author=an;

price=p;

}

}
```

```
package collection.test;

import java.util.*;

public class Vectors {

public static void main(String[] args) {

Book obj[] = new Book[5];

obj[0]= new Book("1","java", "james", 350f);

obj[1]= new Book("2","C", "Dennis Ritch", 500f);

obj[2]= new Book("3","python ", "Rossum", 300f);

obj[3]= new Book("4","AI", "Jegan", 800f);
```

```
obj[4]= new Book("5","Html", "Hari", 2000f);

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 b : v) {

System.out.println(b.bookid +" "+ b.booktitle + " "+b.author +"
"+b.price);

}

}

}
```

OUTPUT:

1 java james 350.0

2 C Dennis Ritch 500.0

3 python Rossum 300.0

4 AI Jegan 800.0

5 Html Hari 2000.0

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

```
package collection.test;

import java.util.*;

public class Hash_table {

public static void main(String[] args) {

Hashtable ht = new Hashtable();

ht.put("Harrypotter","Fantasy");

ht.put("Dracula","Horror");

ht.put("Two states","Romance");

ht.put("Vanguidorossum","python");

ht.put("Murder","Crime");

ht.put("The higgler","Romance");

ht.put("Valmiki","Ramayan");

ht.put("Hari","coding");

ht.put("Omrauth","Modern Ramayan");

ht.put("Rajamouli","RRR");

Enumeration e = ht.keys();

while (e.hasMoreElements())

{

String key = (String) e.nextElement();

Object value = ht.get(key);

System.out.println(key + "-" + value);
```

```
}
}
}
```

OUTPUT:

```
Vanguidorossum - python
Rajamouli - RRR
Hari - coding
Twostates - Romance
Dracula - Horror
Murder - Crime
Valmiki - Ramayan
Omrauth - Modern Ramayan
The higgler - Romance
Harrypotter - Fantasy
```