Assignment-7

Generic

1. write a generic method to find the maximal element in the range [begin, end] of a list.

i/p: {2, 62, 4, 78, 6, 10, 49, 20, 59, 43, 29, 30, 56, 89}

out: 89

```
import java.io.*;
import java.util.*;
class newer
{
public static <T extends object & Comparable<? super T>> T getmax (List<? extends T> list, int begin, int end)
{
T maxelem = list.get(begin);
For(++begin; begin<end; ++begin)
if (maxelem.compareTO (list.get(begin)) <0)
maxelem = list.get(begin);
return maxelem;
}
public static void main (string args[])
{
List<Integer> arr = Arrays.asList(2, 62, 4, 78, 6, 10, 49, 20, 59, 43, 29, 30, 56, 89);
```

```
int x = newex . getmax (arr , 0, arr.
size ());
System.out.println("maximal number:"
                    +x);
    }
}
```

maximal number = 89

2. Write a generic method to count the number of elements in a collection that have a specific property (for example, odd integers, even number)

i/p : {2, 4, 6, 7, 8, 9, 90, 78, 41, 56, 79, 45, 65, 85}

output :

even : 7

odd : 7

```
import java.util.*;
pubiic class Evenodd
        {
```

```
public static void main (String [] args)
    {
int [] nums = { 2, 4, 6, 7, 8, 9, 90,
78, 41, 56, 79, 45, 65, 85 }
int ctr_even = 0, ctr_odd = 0;
System.out.println ("original Array:"
+ Arrays.toString (nums));

for(int i=0 ; i<nums.length ; i++)
    {
if (nums[i] % 2 == 0)
    {
ctr_even ++;
}
else
ctr_odd ++;
}
System.out.println ("\n Number of even
elements in the array: %d", ctr_even);
System.out.println ("\n Number of odd
elements in the array: %d", ctr_odd);
System.out.println ("\n");
    }
}
```

Output:

original Array: [2, 4, 6, 7, 8, 9, 90, 78, 41, 56, 79, 45, 65, 85]

Number of even elements in the array: 7

Number of odd elements in the array: 7