



SOFTWARE ENGINEERING LAB FILE



NATIONAL INSTITUTE OF TECHNOLOGY DELHI
Department of Computer Science & Engineering

COURSE : SOFTWARE ENGINEERING
[CSB-253]

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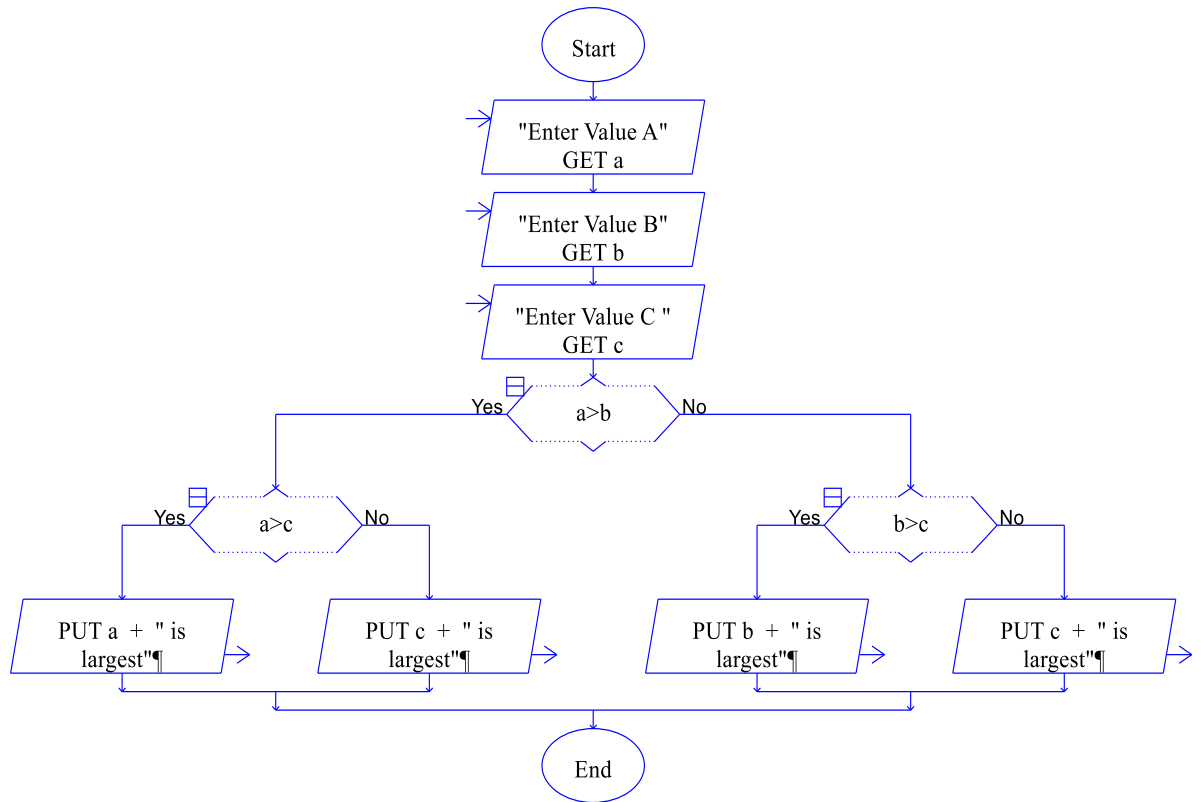
Branch : CSE

Semester : IVth

LAB 1

Experiment 1 : To find the largest of the given three numbers.

Flowchart :



Input :

a: 24
b: 10
c: 44

Output :

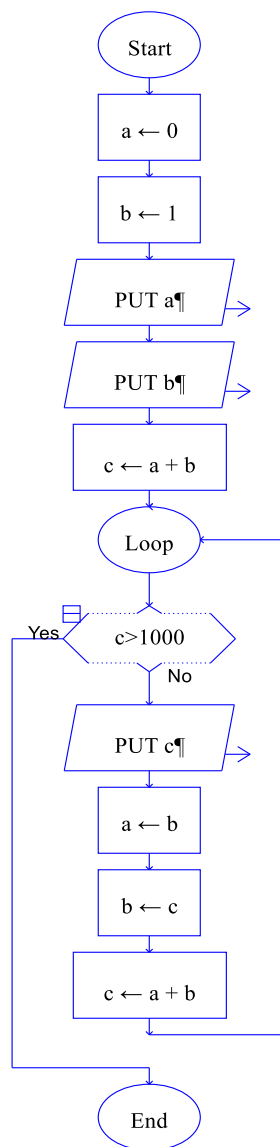
MasterConsole

Font Font Size Edit Help

44 is largest
----Run complete. 8 symbols evaluated.----

Experiment 2: To find Fibonacci Series up to 1000 .

Flowchart :



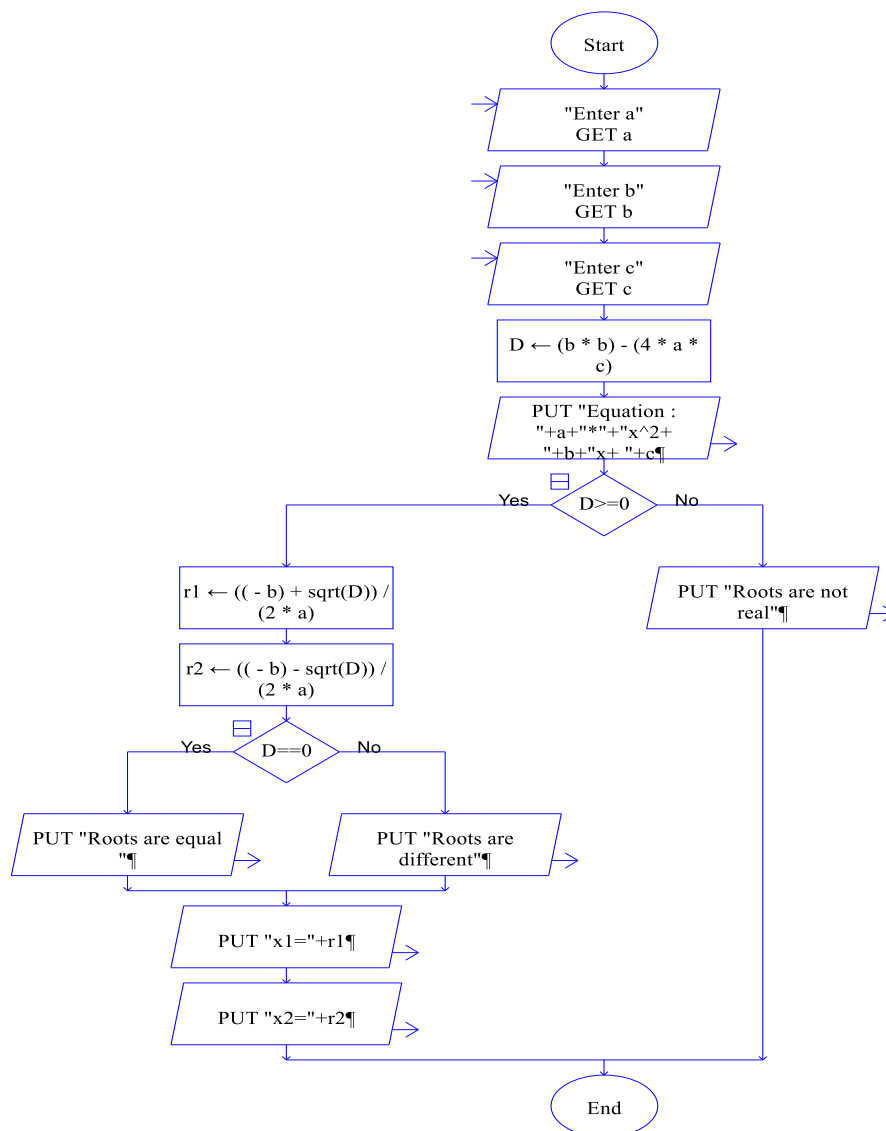
Output :

```
Font  Font Size  Edit  Help
5
8
13
21
34
55
89
144
233
377
610
987
----Run complete. 99 symbols evaluated.----
```

The screenshot shows a window titled 'MasterConsole' with a menu bar containing 'Font', 'Font Size', 'Edit', and 'Help'. The console displays the Fibonacci series terms: 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, and 987. At the bottom, it shows the message '----Run complete. 99 symbols evaluated.----'.

Experiment 3 : To find the real roots of a quadratic equation.

Flowchart :



Input :

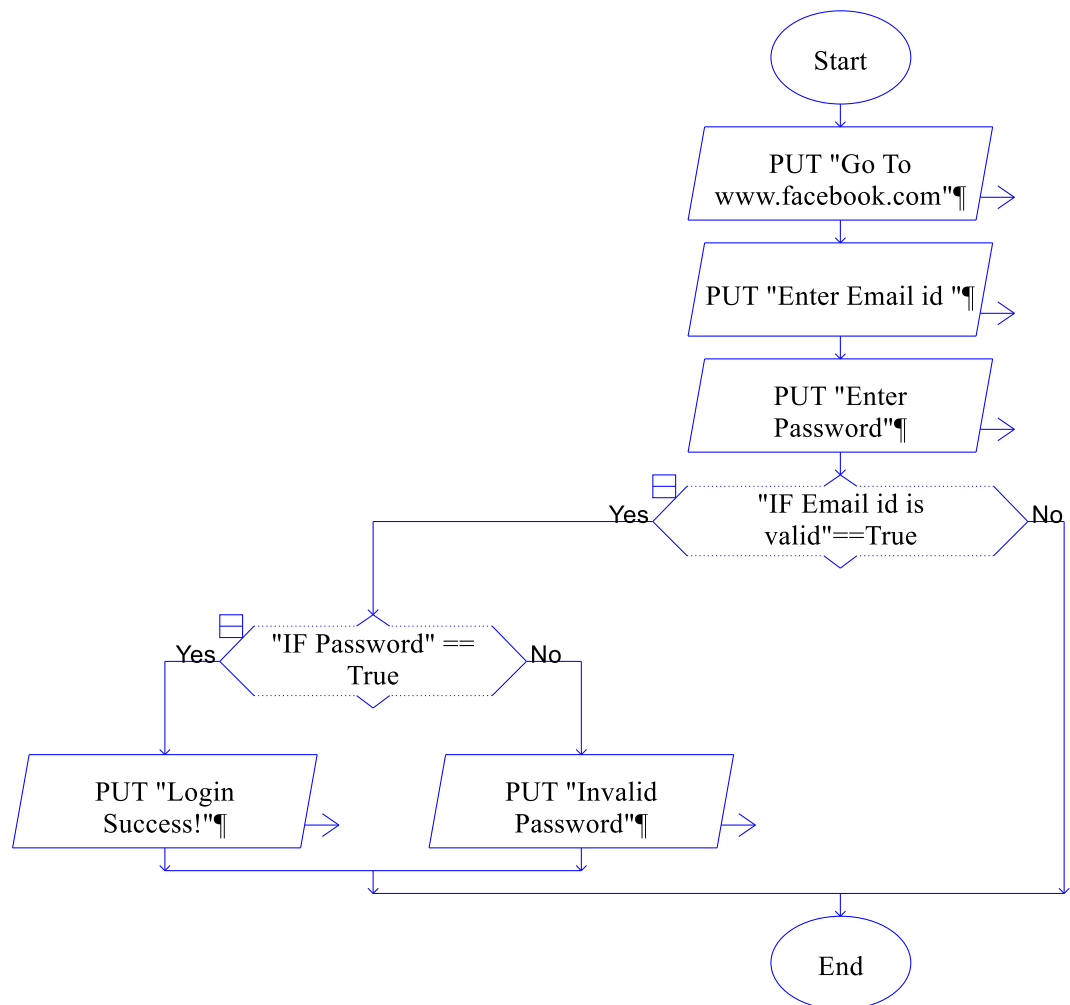
```
a: 1
b: 2
c: 1
```

Output:

```
MasterConsole
Font Font Size Edit Help
Equation : 1*x^2+ 2x+ 1
Roots are equal
x1=-1
x2=-1
----Run complete. 14 symbols evaluated.----
```

Experiment 4 : To implement Facebook login.

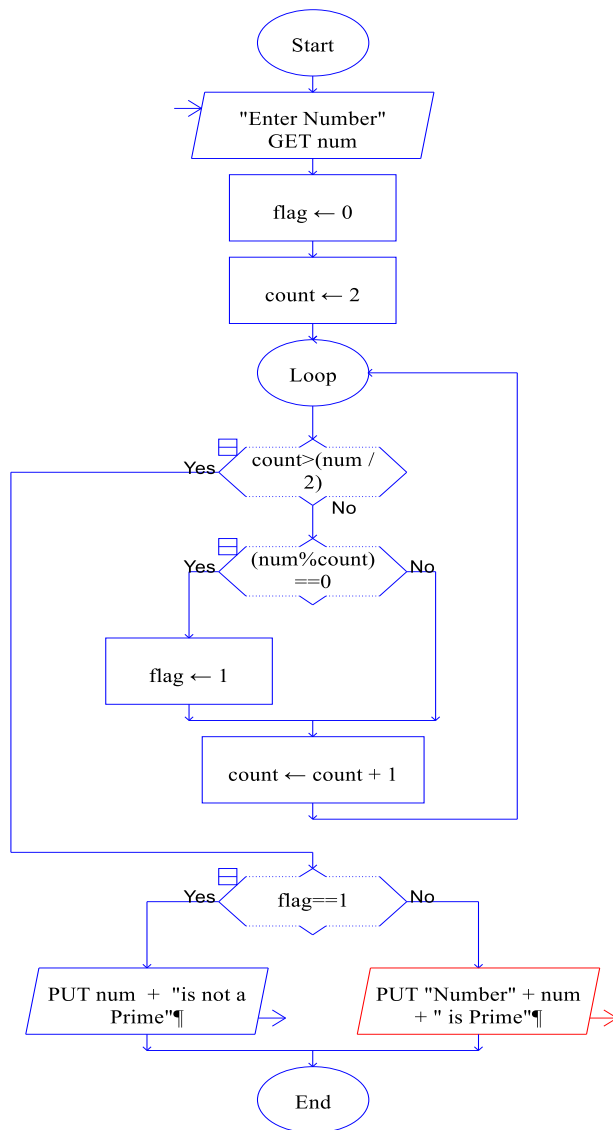
Flowchart :



LAB 2

Experiment 5 : To find whether a number is prime.

Flowchart :



Input :

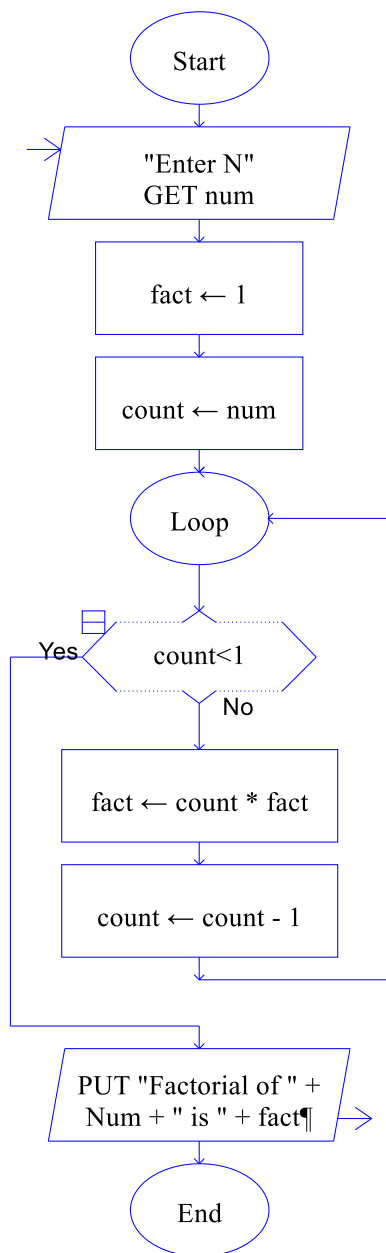
```
count: 13
flag: 1
num: 24
```

Output :

```
MasterConsole
Font Font Size Edit Help
24is not a Prime
----Run complete. 59 symbols evaluated.----
```

Experiment 6 : To find the factorial of a number.

Flowchart :



Input :

```
count: 0
fact: 720
num: 6
```

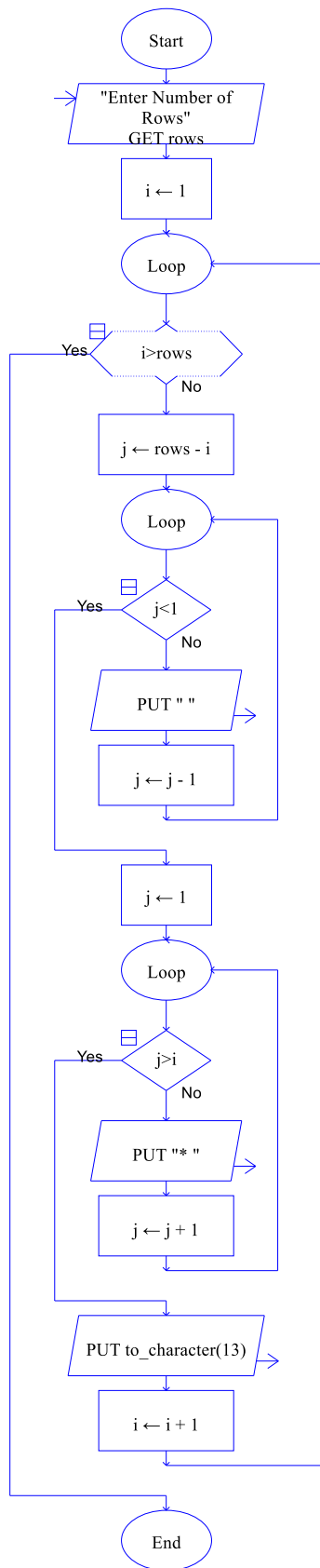
Output :

```
MasterConsole
Font Font Size Edit Help
Factorial of 6 is 720
----Run complete. 32 symbols evaluated.----
```

The screenshot shows a window titled 'MasterConsole' with a menu bar containing 'Font', 'Font Size', 'Edit', and 'Help'. The output text in the console is 'Factorial of 6 is 720' followed by a line '----Run complete. 32 symbols evaluated.----'.

Experiment 7: To print the pyramid pattern for 'n' rows.

Flowchart :



Input :

```
i: 6
j: 6
rows: 5
```

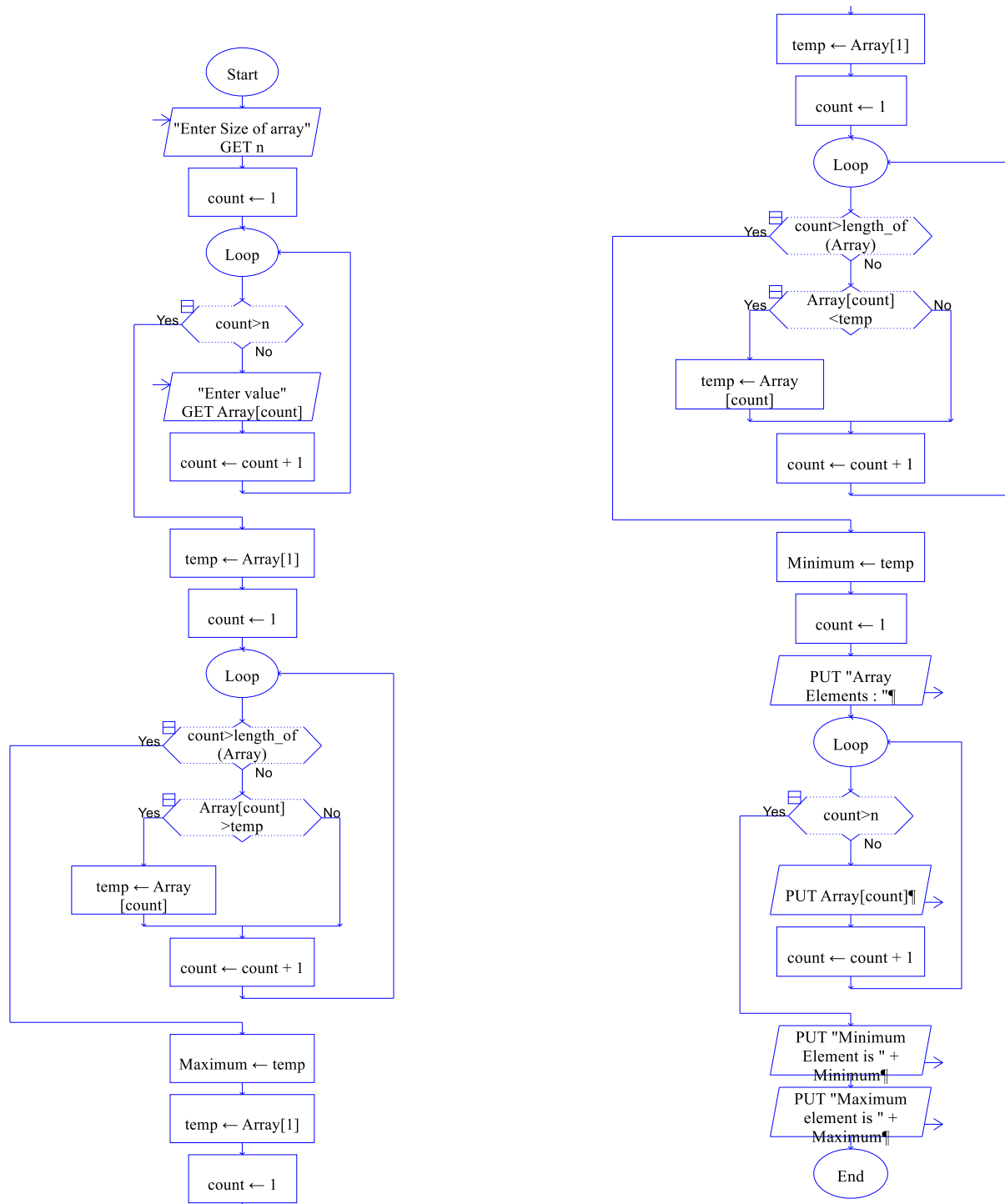
Output :

```
MasterConsole
Font Font Size Edit Help
*
**
***
****
*****

----Run complete. 156 symbols evaluated.----
```


Experiment 8 : To find maximum and minimum elements in an array.

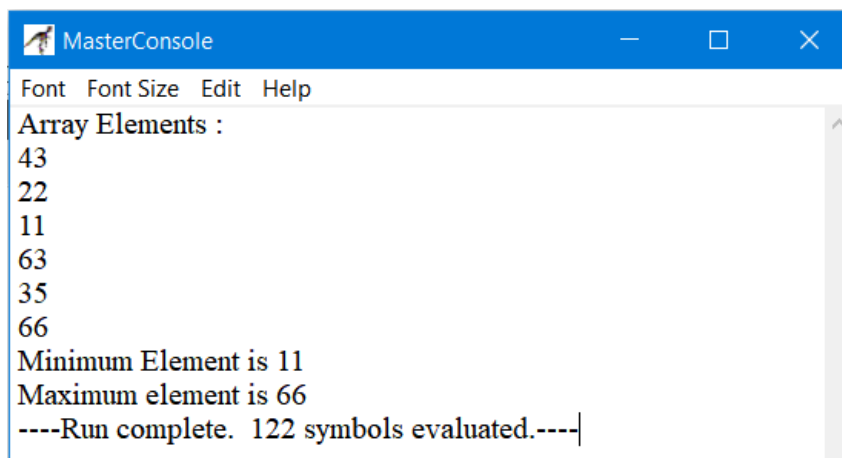
Flowchart :



Input :

```
[-] ARRAY[]  
    Size: 6  
    <1>: 43  
    <2>: 22  
    <3>: 11  
    <4>: 63  
    <5>: 35  
    <6>: 66
```

Output :



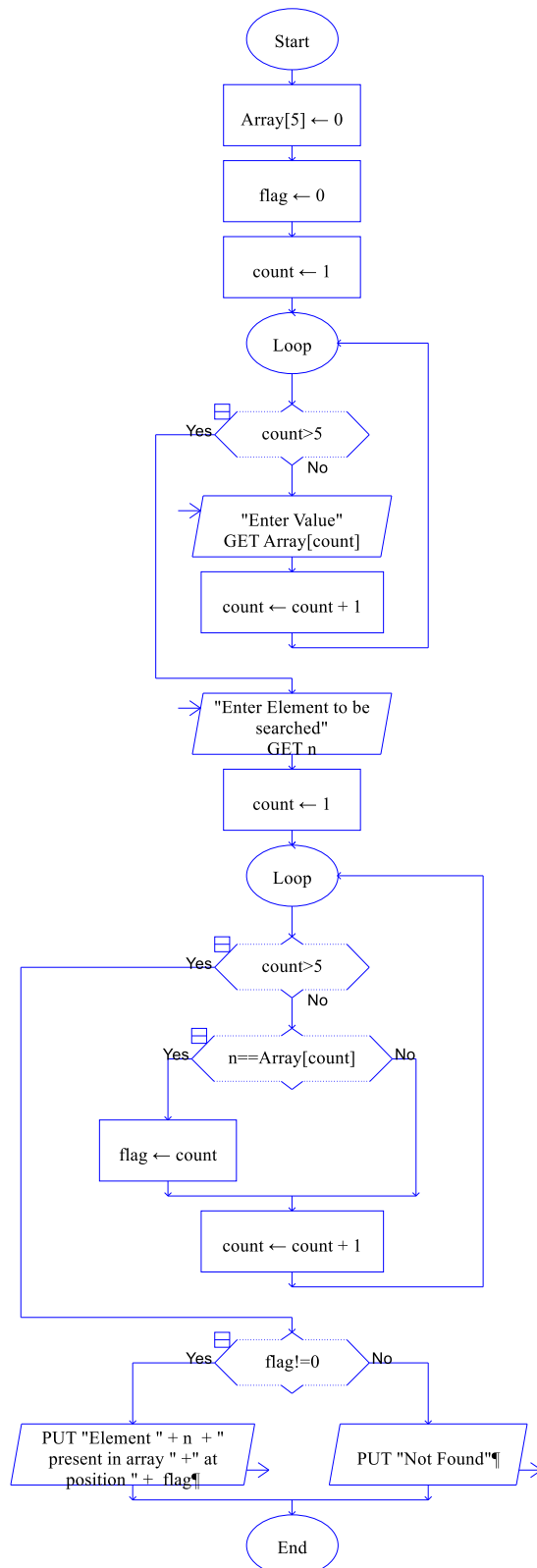
The screenshot shows a window titled "MasterConsole" with a menu bar containing "Font", "Font Size", "Edit", and "Help". The main text area displays the following output:

```
Array Elements :  
43  
22  
11  
63  
35  
66  
Minimum Element is 11  
Maximum element is 66  
----Run complete. 122 symbols evaluated.----
```

LAB 3

Experiment 9 : To implement linear search

Flowchart :



Input :

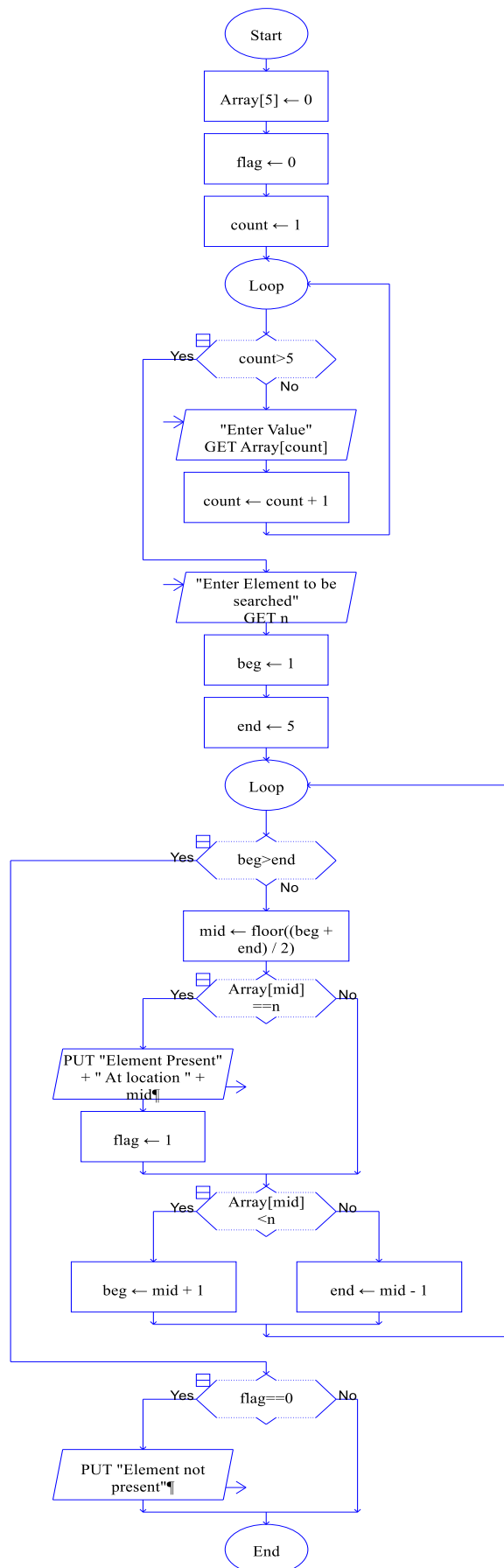
```
ARRAY[]
Size: 5
<1>: 412
<2>: 11
<3>: 242
<4>: 22
<5>: 1
count: 6
flag: 3
n: 242
```

Output :

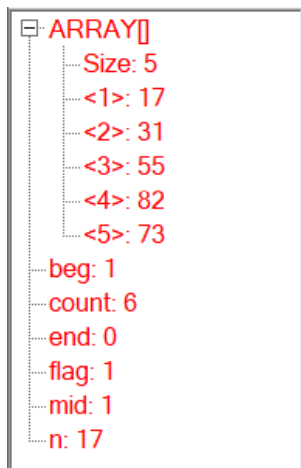
```
MasterConsole
Font Font Size Edit Help
Element 242 present in array at position 3
----Run complete. 54 symbols evaluated.----
```

Experiment 10 : To implement Binary Search

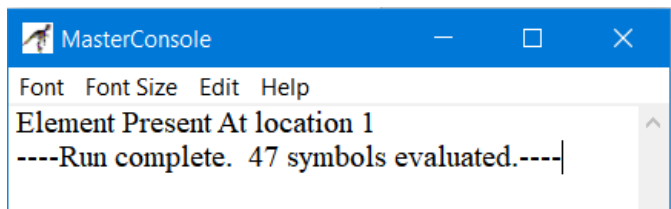
Flowchart :



Input :

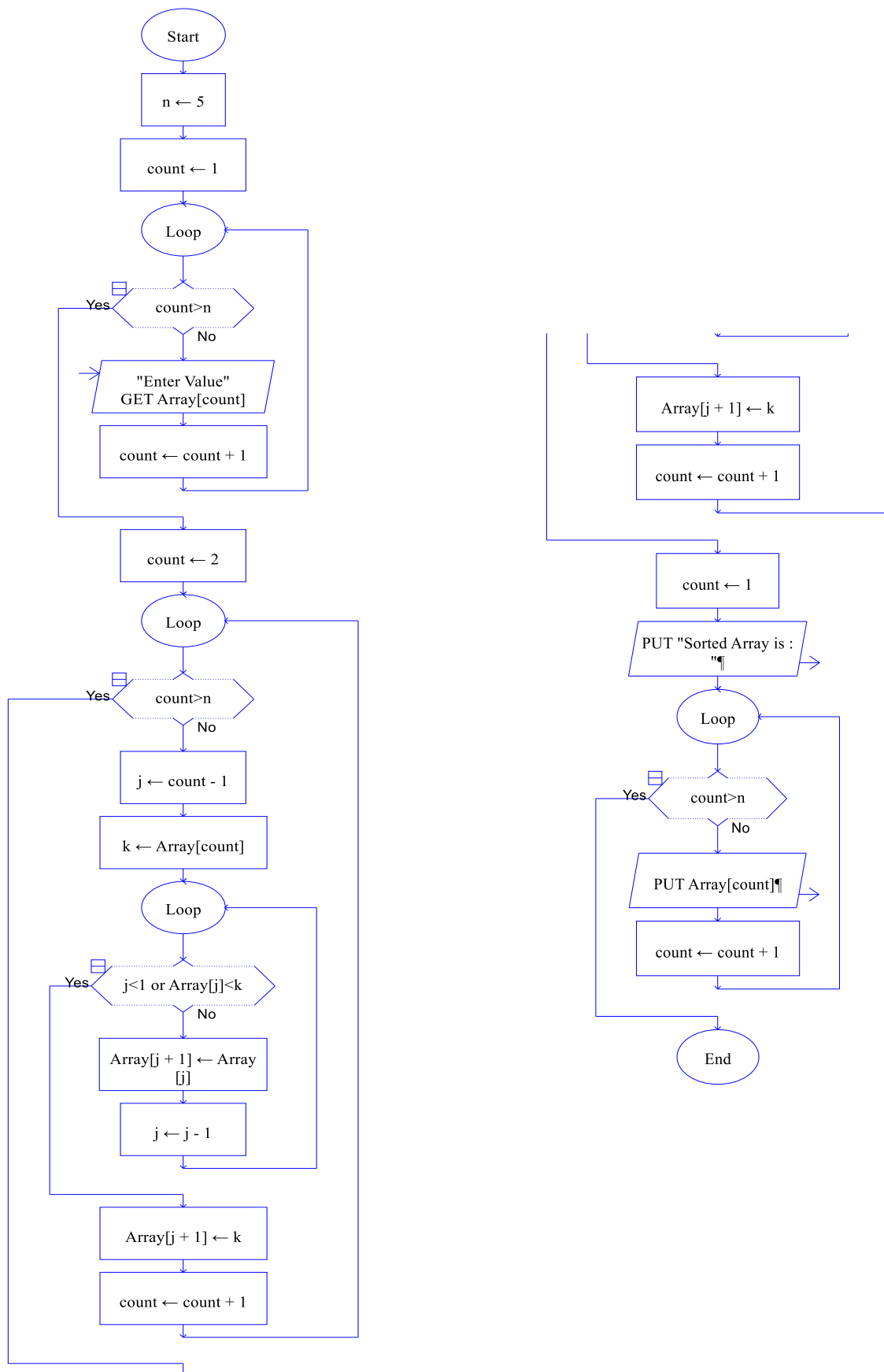


Output :

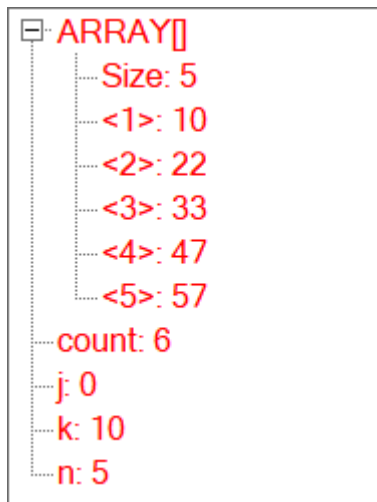


Experiment 11 : To implement Insertion Sort

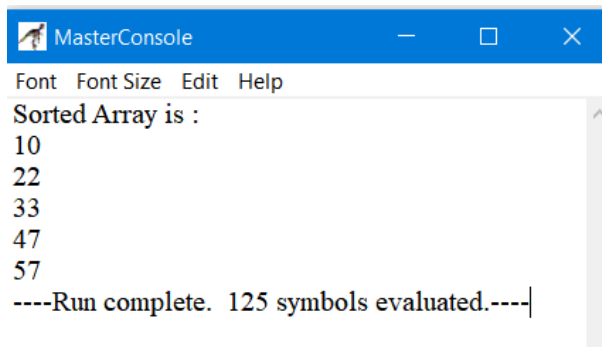
Flowchart :



Input :

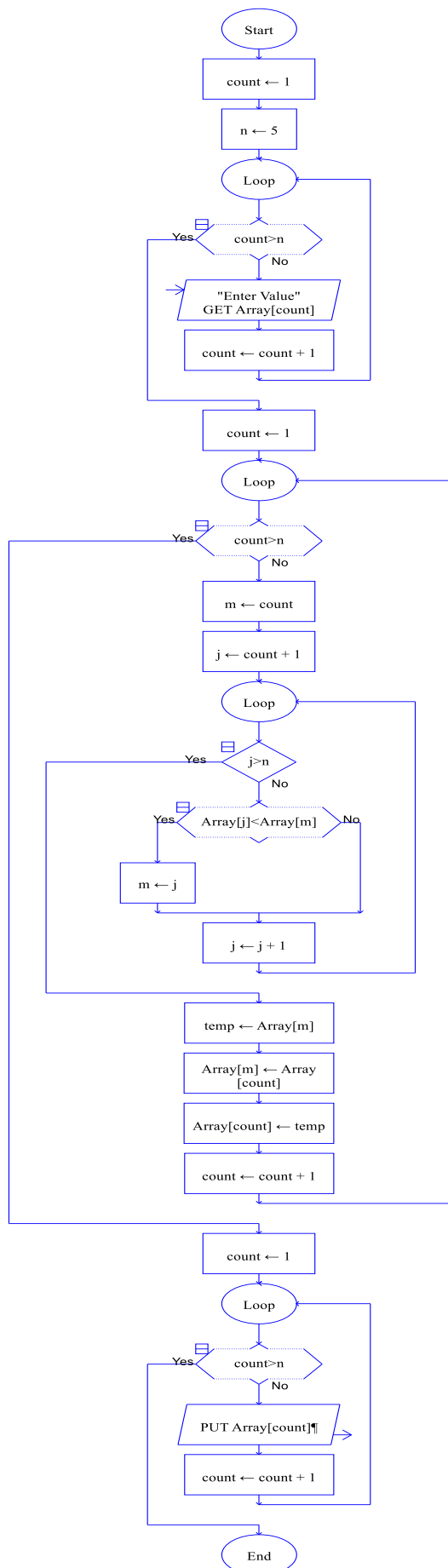


Output :



Experiment 12 : To implement Selection Sort.

Flowchart :



Input :

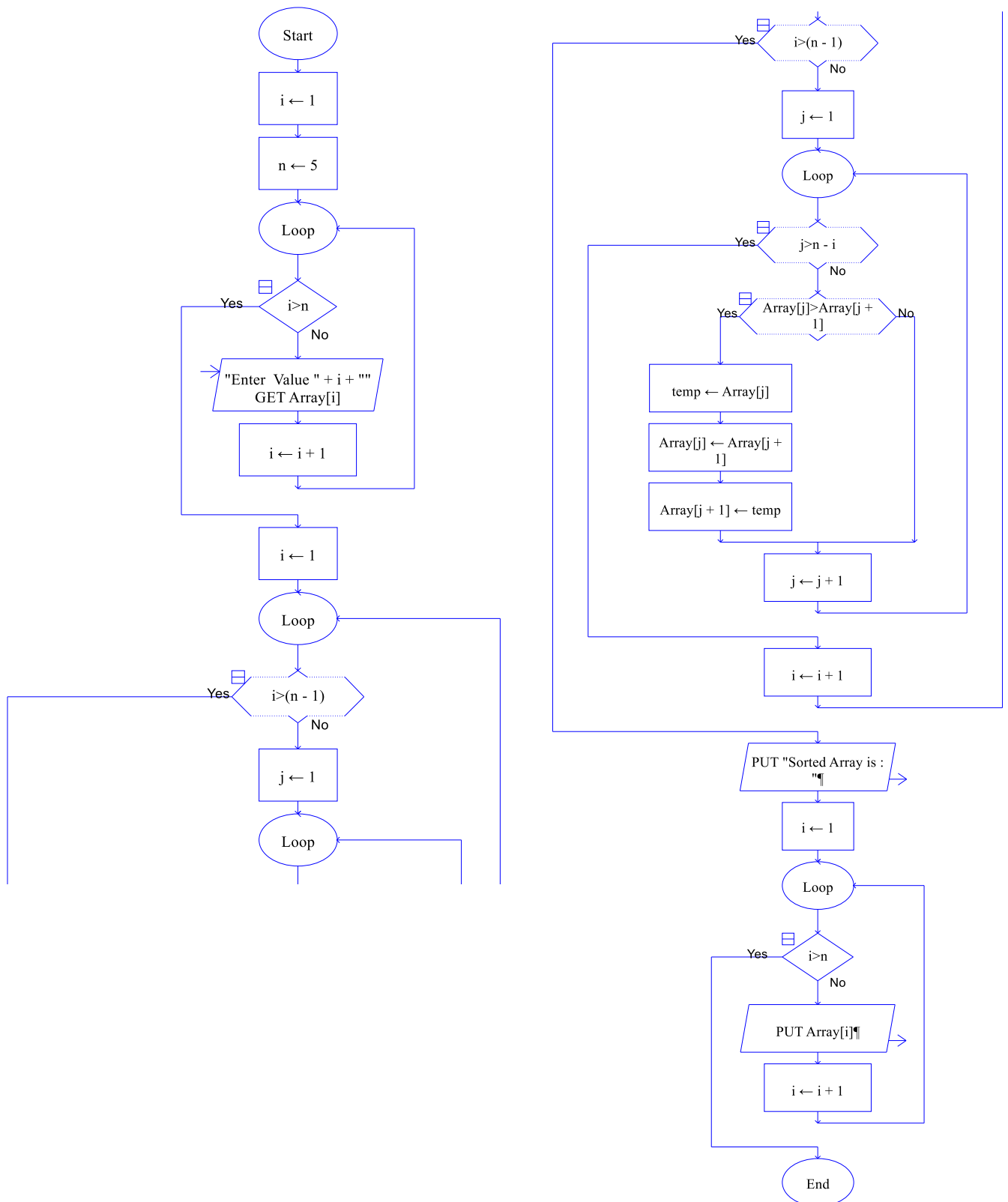
```
ARRAY[]
Size: 5
<1>: 32
<2>: -12
<3>: 0
<4>: 26
<5>: 8
count: 1
n: 5
```

Output :

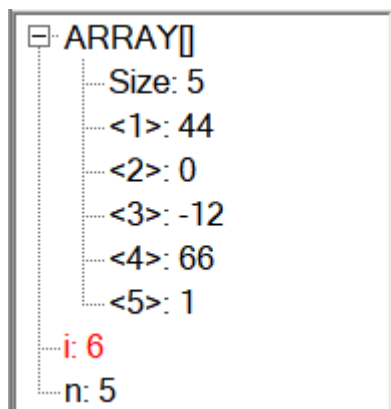
```
-12
0
8
26
32
----Run complete. 146 symbols evaluated.----
```


Experiment 13 : To implement Bubble Sort.

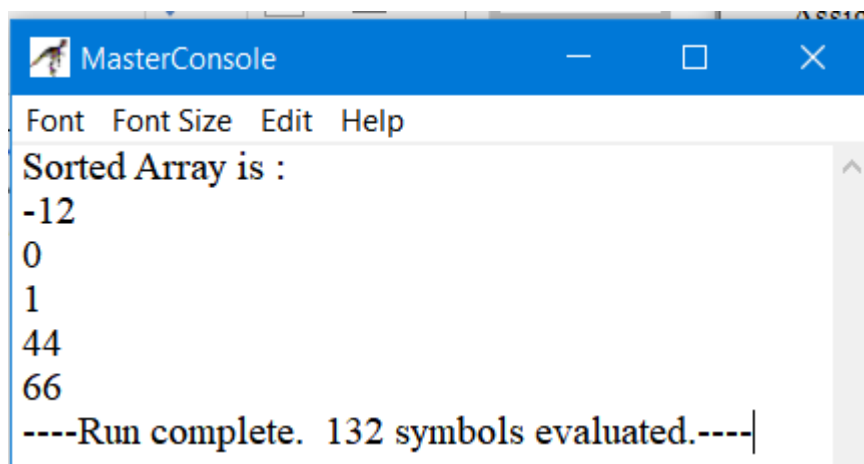
Flowchart :



Input :



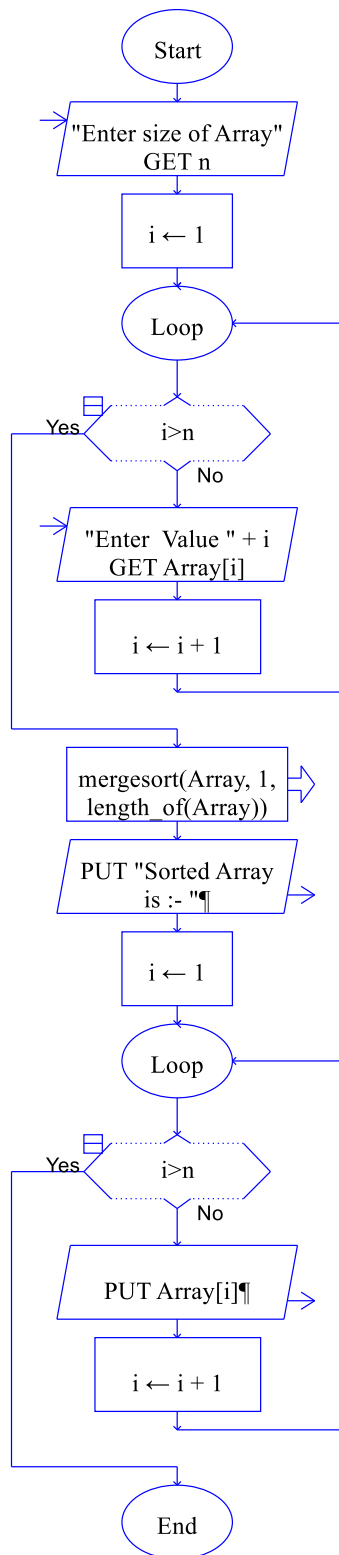
Output :



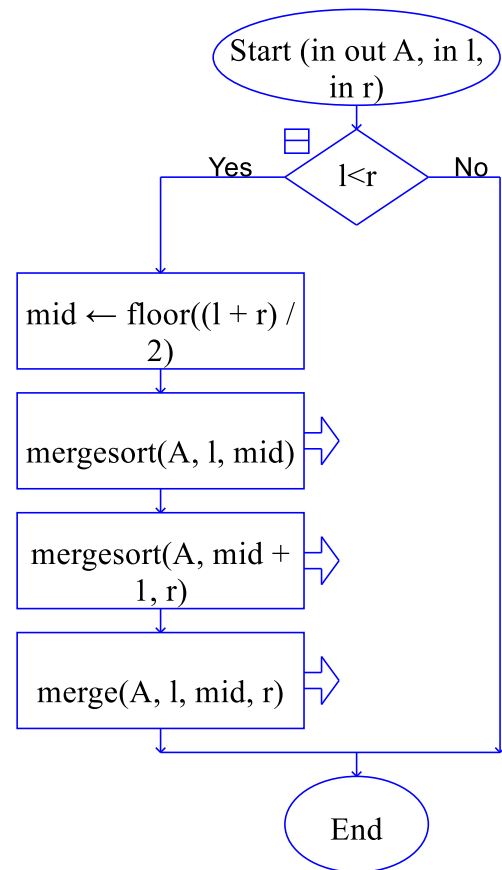
Experiment 14 : To implement Merge Sort.

Flowchart :

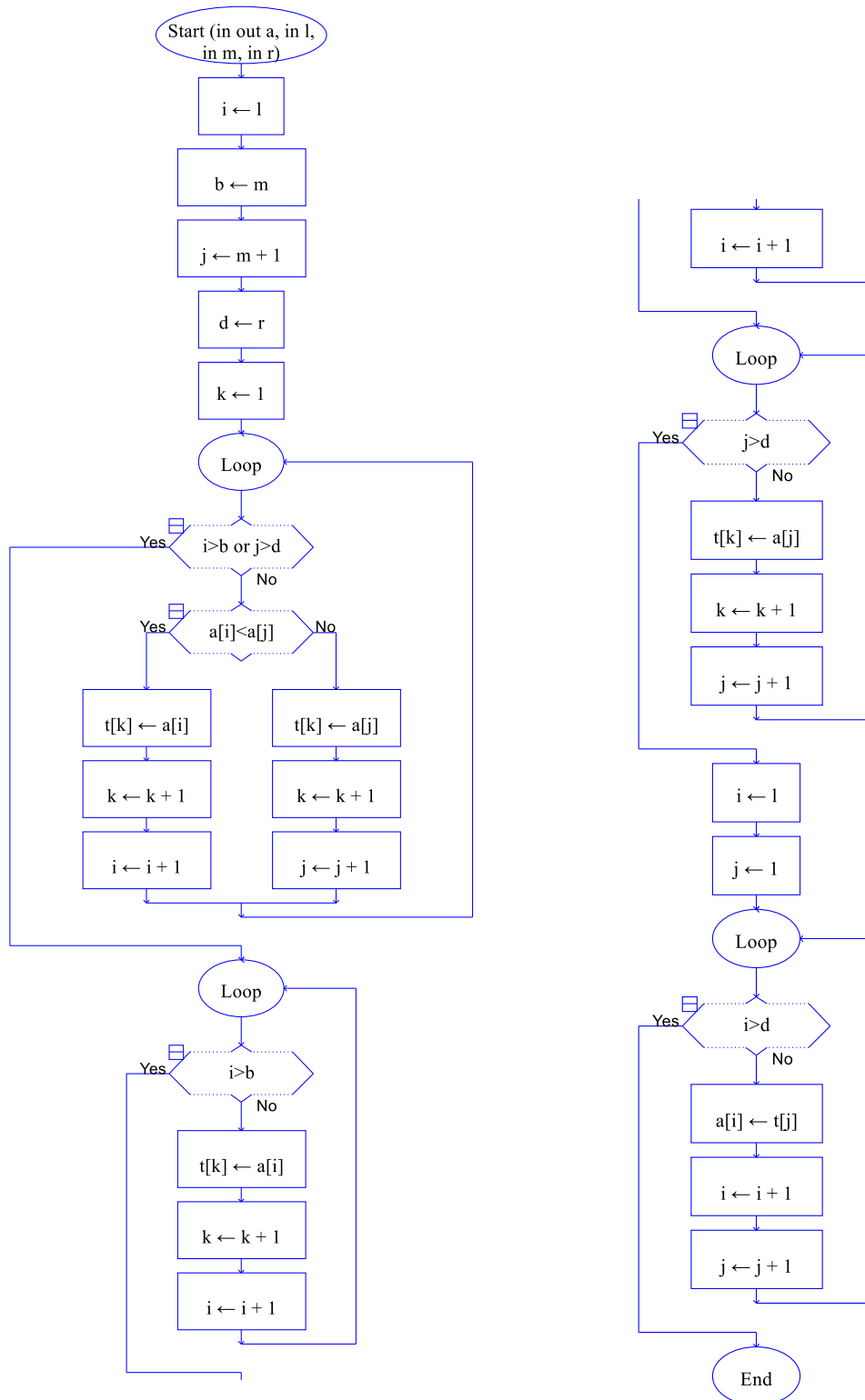
Main Function



mergesort Function



Merge Function



Input :

```
ARRAY[]
  Size: 6
  <1>: 99
  <2>: 11
  <3>: -4
  <4>: 6
  <5>: 21
  <6>: 0
  i: 7
  n: 6
```

Output :



MasterConsole

Font Font Size Edit Help

Sorted Array is :-

-4

0

6

11

21

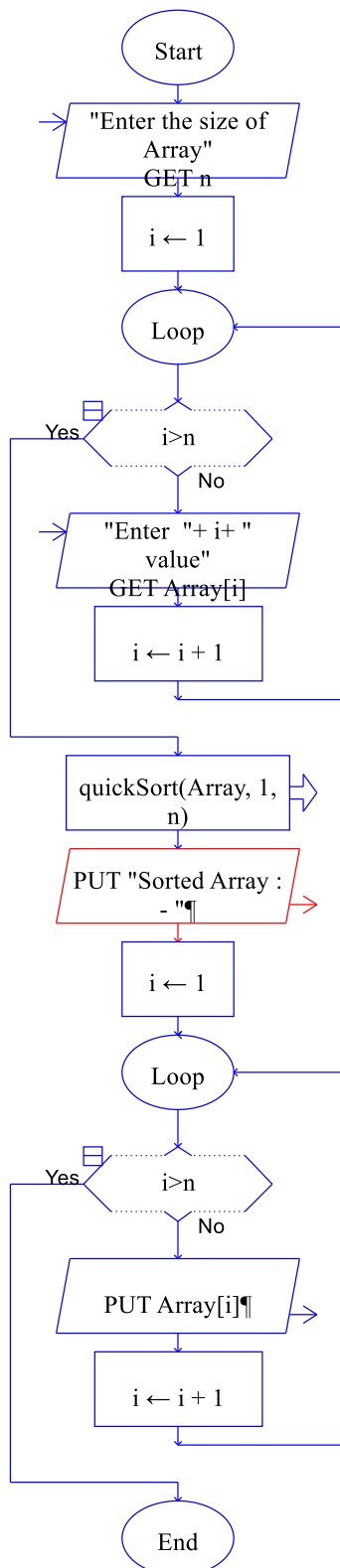
99

----Run complete. 366 symbols evaluated.----|

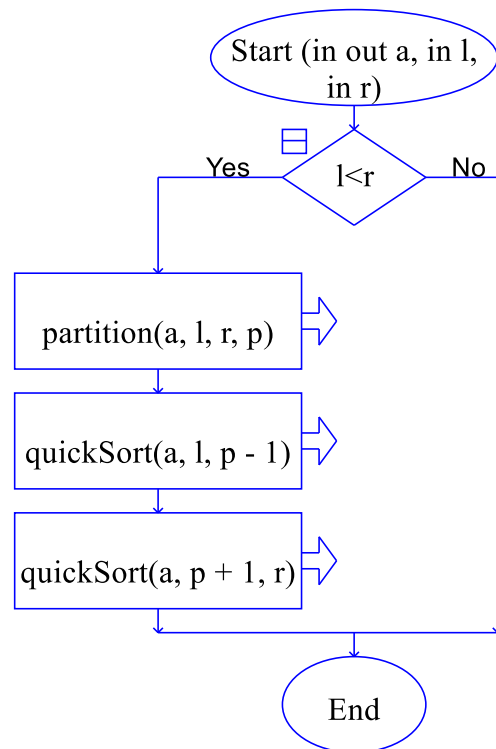
Experiment 15 : To implement Quick Sort.

Flowchart :

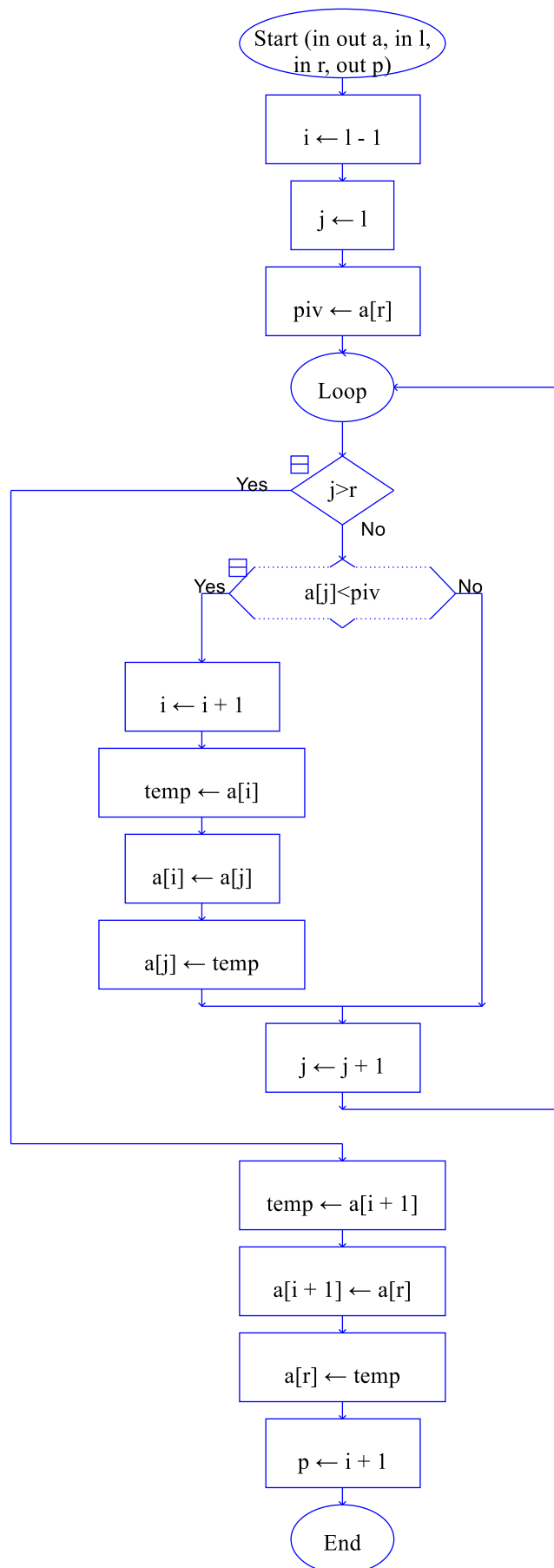
Main Function



quickSort Function



Partition Function :



Input :

```
--main--  
[ ] ARRAY[]  
    Size: 6  
    <1>: 24  
    <2>: 3  
    <3>: 58  
    <4>: 0  
    <5>: 11  
    <6>: 44  
i: 7  
n: 6
```

Output :

Sorted Array :-

0

3

11

24

44

58

----Run complete. 194 symbols evaluated.----