LINEAR & BINARY SEARCH

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SY Btech Comp eng.

Aim: To Write an algorithm for Linear Search and Binary Search.

Write a program to solve given problem using your algorithms. Apply coding style in your programs

Test Cases: OUTPUT FOR BINARY SEARCH:

1.

```
Output
/tmp/1LbmcQ0yt6.o
Enter how many numbers you want to put
5
Enter The Numbers
10
20
30
40
50
Enter the number you want to search
20
Element found at index 1


=== Code Execution Successful ===
```

2.

Output

```
/tmp/v9jj5TT9cj.o
Enter how many numbers you want to put
4
Enter The Numbers
1
9
18
27
Enter the number you want to search
27
Element found at index 3


=== Code Execution Successful ===
```

3>

Output

```
/tmp/ZRpnf31vJ1.o
Enter how many numbers you want to put
10
Enter The Numbers
1
2
3
4
5
6
7
8
9
10
Enter the number you want to search
6
Element found at index 5


=== Code Execution Successful ===
```

4.

Output

```
/tmp/5UAtSGcTxJ.o
Enter how many numbers you want to put
4
Enter The Numbers
1
6
8
10
Enter the number you want to search
5
Element not found in the array


=== Code Execution Successful ===
```

5.

Output

```
/tmp/uVw6OCgXcw.o
Enter how many numbers you want to put
0
Enter The Numbers
Enter the number you want to search
10
Element not found in the array


=== Code Execution Successful ===
```

TESTCASES FOR LINEAR SEARCH:

1.

Output

```
/tmp/yRGCVEZ9BI.o
Enter how many numbers you want to put
4
Enter The Numbers
10
20
40
20
Enter the number you want to search
20
The number was found at the index 1


=== Code Execution Successful ===
```

2.

Output

```
/tmp/VcFKW7DMey.o
Enter how many numbers you want to put
6
Enter The Numbers
1
6
5
8
10
16
Enter the number you want to search
5
The number was found at the index 2


=== Code Execution Successful ===
```

3.

Output

```
/tmp/99drOJ2NXy.o
Enter how many numbers you want to put
5
Enter The Numbers
1
2
1
3
4
Enter the number you want to search
1
The number was found at the index 0


=== Code Execution Successful ===
```

4.

Output

```
/tmp/Pq1nUEl2gE.o
Enter how many numbers you want to put
4
Enter The Numbers
1
2
3
4
Enter the number you want to search
5
The number was not found.


=== Code Execution Successful ===
```

5.

Output

```
/tmp/UCpwGyzN6L.o
Enter how many numbers you want to put
0
Enter The Numbers
Enter the number you want to search
1
The number was not found.


=== Code Execution Successful ===X
```

Conclusion:

Hence,We have written an iterative code with linearly searches for a no in a vector and recursive code for binary search in this laboratory.