

Central university of Haryana

Department of computer science & engineering under SOET



ADA lab (BT CS 505a) Assignment-1

Submitted by :-

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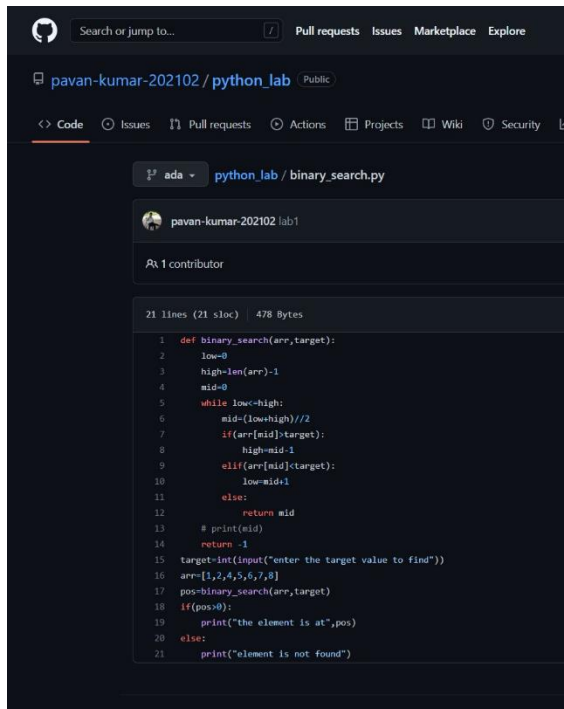
ROLL NO: 202102

submitted to :-

anant rajee bara

Implement binary search

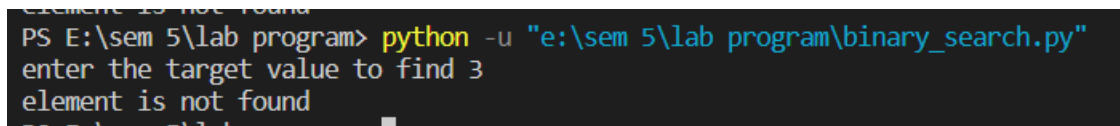
Github code ss:



The screenshot shows a GitHub repository page for 'pavan-kumar-202102 / python_lab'. The file 'binary_search.py' is selected, showing 21 lines of Python code. The code implements a binary search function that takes an array and a target value as input. It uses a while loop to repeatedly divide the search range in half until the target is found or the range is empty. The code is as follows:

```
1 def binary_search(arr, target):
2     low=0
3     high=len(arr)-1
4     mid=0
5     while low<high:
6         mid=(low+high)//2
7         if arr[mid]>target:
8             high=mid-1
9         elif arr[mid]<target:
10            low=mid+1
11        else:
12            return mid
13        # print(mid)
14    return -1
15 target=int(input("enter the target value to find"))
16 arr=[1,2,4,5,6,7,8]
17 pos=binary_search(arr,target)
18 if(pos>0):
19     print("the element is at",pos)
20 else:
21     print("element is not found")
```

Output:



The screenshot shows a terminal window with the following output:

```
PS E:\sem 5\lab program> python -u "e:\sem 5\lab program\binary_search.py"
enter the target value to find 3
element is not found
PS E:\sem 5\lab program>
```

Repository link:

https://github.com/pavan-kumar-202102/python_lab/blob/ada/binary_search.py