

**Student Name:**

**Branch: CSE (BIG DATA)**

**Semester: 4th**

**Subject Name: DESIGN AND ANALYSIS OF ALGORITHMS LAB**

**UID:**

**Section/Group**

**Date of Performance:**

**Subject Code: 22E-20CSP-285**

### 1. Aim/Overview of the practical:

<b>WS1</b>	Write a program to implement binary search algorithm.
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### 2. Task to be done:

implement binary search algorithm in C++ language .

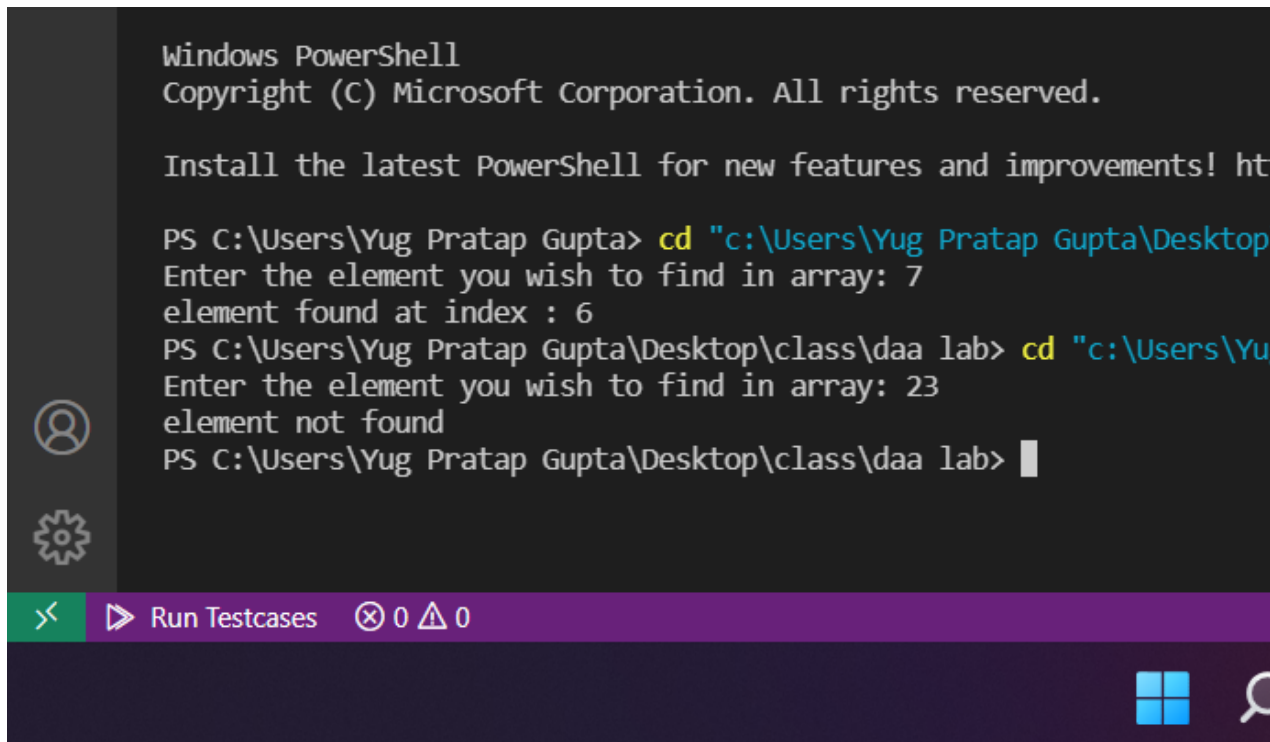
### 3. Algorithm/Flowchart (For programming based labs):

```
#include <iostream>
using namespace std;

int main()
{
    int key;
    cout << "Enter the element you wish to find in array: ";
    cin >> key;
    int arr[9] = {1, 2, 3, 4, 5, 6, 7, 8, 9};
    int n = 9;
    int s = 0, e = n;
    int cnt = 0;
    while (s <= e)
    {
        int mid = (s + e) / 2;
        if (arr[mid] == key)
        {
            cout << "element found at index : ";
            cout << mid << endl;
        }
    }
}
```

```
        cnt++;
        break;
    }
    else if (arr[mid] > key)
    {
        e = mid - 1;
    }
    else
    {
        s = mid + 1;
    }
}
if (cnt == 0)
{
    cout << "element not found";
}
}
```

#### 4. Result/Output/Writing Summary:



```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! ht

PS C:\Users\Yug Pratap Gupta> cd "c:\Users\Yug Pratap Gupta\Desktop
Enter the element you wish to find in array: 7
element found at index : 6
PS C:\Users\Yug Pratap Gupta\Desktop\class\daa lab> cd "c:\Users\Yu
Enter the element you wish to find in array: 23
element not found
PS C:\Users\Yug Pratap Gupta\Desktop\class\daa lab> |
```

**Learning outcomes (What I have learnt):**

- 1.
- 2.
- 3.
- 4.
- 5.

**Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):**

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			