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Data structure Homework

Experiment Part

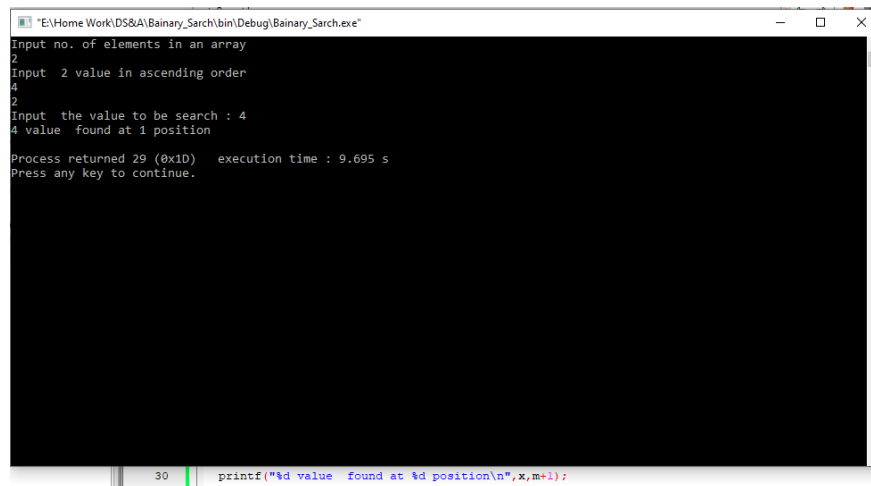
Session4-Part1

Write a program to implement Binary Search

```
2 void main()
3 {
4     int arra[100],i,n,x,f,l,m,flag=0;
5     printf("Input no. of elements in an array\n");
6     scanf("%d",&n);
7     printf("Input %d value in ascending order\n",n);
8     for(i=0;i<n;i++)
9         scanf("%d",&arra[i]);
10    printf("Input the value to be search : ");
11    scanf("%d",&x);
12    /* Binary Search logic */
13    f=0;l=n-1;
14    while(f<=l)
15    {
16        m=(f+l)/2;
17        if(x==arra[m])
18        {
19            flag=1;
20            break;
21        }
22        else if(x<arra[m])
23            l=m-1;
24        else
25            f=m+1;
26    }
27    if(flag==0)
28        printf("%d value not found\n",x);
29    else
30        printf("%d value found at %d position\n",x,m);
31 }
```

Result:

Output will be



```
E:\Home Work\DS&A\Bainary_Sarch\bin\Debug\Bainary_Sarch.exe
Input no. of elements in an array
2
Input 2 value in ascending order
4
2
Input the value to be search : 4
4 value found at 1 position

Process returned 29 (0x1D)   execution time : 9.695 s
Press any key to continue.
```