EXPERIMENT 2

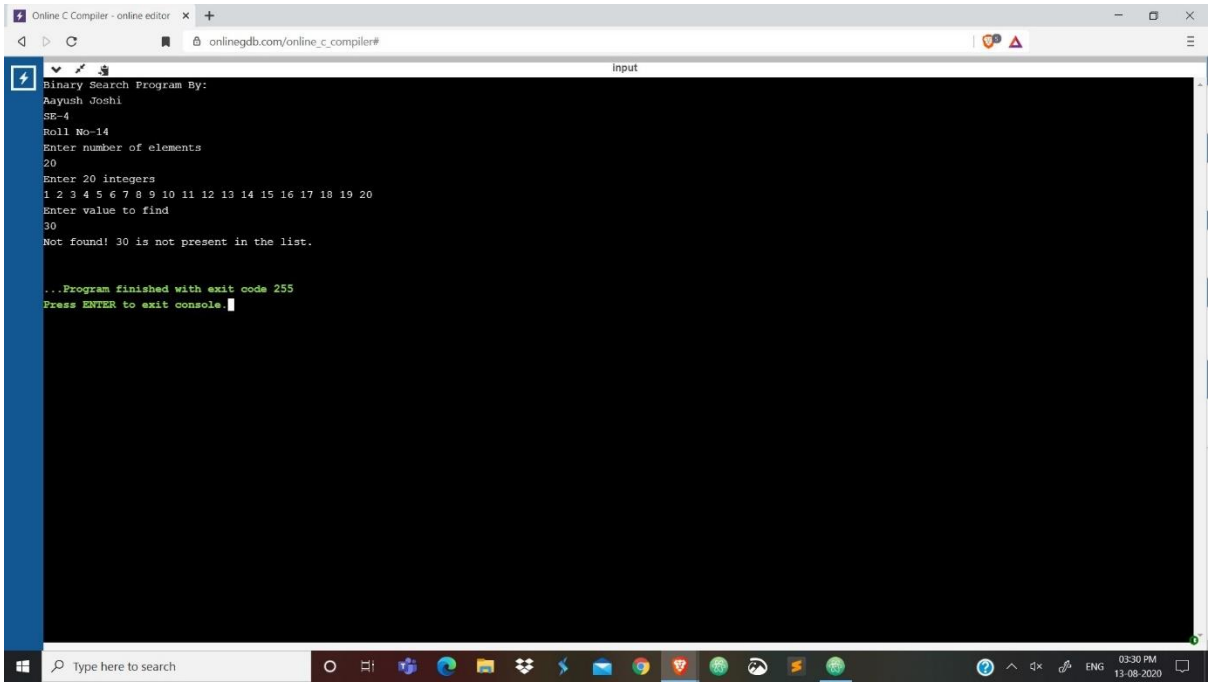
Binary Search

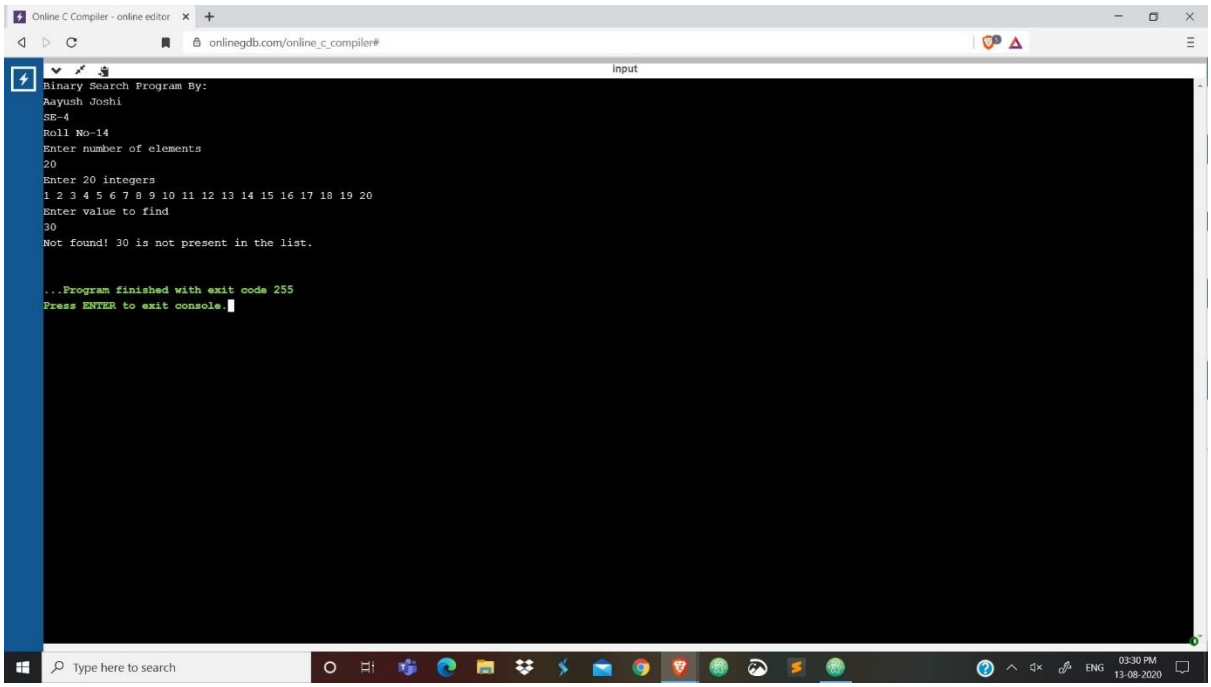
Program:

```
#include<stdio.h>
#include<conio.h>
void main()
{
  int i,n,first,last,middle,search;
  int array[50];
  printf("Binary Search Program By:\nAayush Joshi\nSE-4\nRoll No-14\n");
  printf("Enter number of elements\n");
  scanf("%d",&n);
  printf("Enter %d integers\n",n);
  for(i = 0;i < n;i++)
  {
    scanf("%d",&array[i]);
  }
  printf("Enter value to find\n");
  scanf("%d",&search);
  first = 0;
  last = n - 1;
  middle = (first+last)/2;
  while(first<=last)
```

```
  {
    if(array[middle]<search)
    {
      first = middle + 1;
    }
    else if(array[middle] == search)
    {
      printf("%d found at location %d.\n",search,middle+1);
      break;
    }
    else
    {
      last = middle + 1;
    }
    middle = (first+last)/2;
  }
  if(first>last)
  {
    printf("Not found! %d is not present in the list.\n",search);
  }
  getch();
}
```

Output:


Online C Compiler - online editor
onlinegdb.com/online_c_compiler#
input
Binary Search Program By:
Aayush Joshi
SE-4
Roll No-14
Enter number of elements
20
Enter 20 integers
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Enter value to find
30
Not found! 30 is not present in the list.
...Program finished with exit code 255
Press ENTER to exit console.
Type here to search
ENG
03:30 PM
13-08-2020


Online C Compiler - online editor
onlinegdb.com/online_c_compiler#
input
Binary Search Program By:
Aayush Joshi
SE-4
Roll No-14
Enter number of elements
20
Enter 20 integers
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Enter value to find
30
Not found! 30 is not present in the list.
...Program finished with exit code 255
Press ENTER to exit console.
Type here to search
ENG
03:30 PM
13-08-2020