

Aim:

Write a C program to illustrate **Indexing of a file**.

Take an array of integers and find whether the given integer is present or not using **file indexing** method and print the output as shown in the sample output.

Source Code:fileIndexing.c

```
#include<stdio.h>
#define MAX 25
struct indexfile
{
    int indexId;
    int kIndex;
};
int main()
{
    int num[MAX];
    struct indexfile index[MAX];
    int i,j,low,high,br=4,n;
    printf("How many numbers do you want to enter:");
    scanf("%d",&n);
    printf("Enter %d numbers:",n);
    for(i=0;i<n;i++)
    {
        scanf("%d",&num[i]);
    }
    for(i=0;i<n;i++)
    {
        index[i].indexId=num[br];
        index[i].kIndex=br;
        br=br+5;
    }
    printf("Enter a number to search:");
    scanf("%d",&j);
    for(i=0;(i<n/5)&&(index[i].indexId<=j);i++)
    if(i!=0)
    low=index[i-1].kIndex;
    else
    low=0;
    if(index[i].kIndex!=0&&index[i].kIndex<=n)
    high=index[i].kIndex;
    else
    high=n;
    for(i=low;i<high;i++)
    {
        if(j==num[i])
        {
            printf("Number found at position:%d\n",i);
            return 0;
        }
    }
}
```

```
}  
}
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
How many numbers do you want to enter: 5
Enter 5 numbers: 1 5 6 9 12
Enter a number to search: 6
Number found at position:2

Test Case - 2
User Output
How many numbers do you want to enter: 7
Enter 7 numbers: 2 3 6 9 12 20 25
Enter a number to search: 20
Number found at position:5