S.No: 37	Exp. Name: ***Indexing of a file***	Date:2023-05-03

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/5);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;
```

```
        }

    }
    printf("Number not found\n");
    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

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