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<b>EX NO: 12B</b>	<b>FILE ALLOCATION STRATEGIES – INDEXED FILE ALLOCATION</b>
<b>DATE:</b>	

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**AIM:**

To Write a C Program to implement Indexed File Allocation method.

**ALGORITHM:**

- 1: Start.
  - 2: Let n be the size of the buffer
  - 3: check if there are any producer
  4. If yes check whether the buffer is full
  5. If no the producer item is stored in the buffer
  - 6: If the buffer is full the producer has to wait
  - 7: Check there is any consumer.If yes check whether the buffer is empty
  - 8: If no the consumer consumes them from the buffer 9:
- If the buffer is empty, the consumer has to wait.
- 10: Repeat checking for the producer and consumer till required
  - 11: Terminate the process.



**PROGRAM:**

```
#include<stdio.h>
main()
{
    int n,m[20],i,j,sb[20],s[20],b[20][20],x;
    clrscr();
    printf("Enter no. of files:");
    scanf("%d",&n);
    for(i=0;i<n;i++)
    {
        printf("Enter starting block and size of file%d:",i+1);
        scanf("%d%d",&sb[i],&s[i]);
        printf("Enter blocks occupied by file%d:",i+1);
        scanf("%d",&m[i]);
        printf("enter blocks of file%d:",i+1);
        for(j=0;j<m[i];j++)
            scanf("%d",&b[i][j]);
    }
    printf("\nFile\t index\t length\n");
    for(i=0;i<n;i++)
    {
        printf("%d\t%d\t%d\n",i+1,sb[i],m[i]);
    }
    printf("\nEnter file name:");
    scanf("%d",&x);
    printf("file name is:%d\n",x);
    i=x-1;
    printf("Index is:%d",sb[i]);
    printf("Block occupied are:");
    for(j=0;j<m[i];j++)
        printf("%3d",b[i][j]);
}
```

## OUTPUT:

```
mohamedinam@Mohamed-Inam-PC: ~  
mohamedinam@Mohamed-Inam-PC:~$ gcc indexed.c -o index  
mohamedinam@Mohamed-Inam-PC:~$ ./index  
Enter no. of files :2  
Enter starting block and size of file 1 :2 5  
Enter blocks occupied by file 1: 10  
enter blocks of file 1 :3 2 5 4 6 7 2 6 4 7  
Enter starting block and size of file 2 :3 4  
Enter blocks occupied by file 2: 5  
enter blocks of file 2 :2 3 4 5 6  
  
File      index  length  
1         2      10  
2         3       5  
  
Enter file name:mdinam  
file name is:12803  
  
Index is:0  
Block occupiedmohamedinam@Mohamed-Inam-PC:~$
```

## RESULT:

Thus the indexed file allocation method is implemented successfully

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