
EX NO: 12C	FILE ALLOCATION STRATEGIES – LINKED FILE ALLOCATION
DATE:	

AIM:

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

ALGORITHM:

- 1: Create a queue to hold all pages in memory
- 2: When the page is required replace the page at the head of the queue
- 3: Now the new page is inserted at the tail of the queue
- 4: Create a stack
- 5: When the page fault occurs replace page present at the bottom of the stack
- 6: Stop the allocation.

PROGRAM:

```
#include<stdio.h>
struct file
{
    char fname[10];
    int start,size,block[10];
}f[10];
main()
{
    int i,j,n;
    clrscr();
    printf("Enter no. of files:");
    scanf("%d",&n);
    for(i=0;i<n;i++)
    {
        printf("Enter file name:");
        scanf("%s",&f[i].fname);
        printf("Enter starting block:");
        scanf("%d",&f[i].start);
        f[i].block[0]=f[i].start;
        printf("Enter no.of blocks:");
        scanf("%d",&f[i].size);
        printf("Enter block numbers:");
        for(j=1;j<=f[i].size;j++)
        {
            scanf("%d",&f[i].block[j]);
        }
    }

    printf("File\tstart\tsize\tblock\n");
    for(i=0;i<n;i++)
    {
        printf("%s\t%d\t%d\t",f[i].fname,f[i].start,f[i].size);
        for(j=1;j<=f[i].size-1;j++)
            printf("%d--->",f[i].block[j]);
        printf("%d",f[i].block[j]);
        printf("\n");
    }
}
```

OUTPUT:

```
mohamedinam@Mohamed-Inam-PC: ~  
mohamedinam@Mohamed-Inam-PC:~$ ./linked  
Enter no. of files:2  
Enter file name:inam  
Enter starting block:20  
Enter no.of blocks:6  
Enter block numbers:4  
12  
15  
45  
32  
25  
Enter file name:ibrahim  
Enter starting block:12  
Enter no.of blocks:5  
Enter block numbers:6  
5  
4  
3  
2  
File      start   size   block  
inam      20        6      4--->12--->15--->45--->32--->25  
ibrahim   12        5      6--->5--->4--->3--->2  
mohamedinam@Mohamed-Inam-PC:~$
```

RESULT:

Thus the linked file allocation method is implemented successfully.
