FILE ALLOCATION STRATEGIES

A) SEQUENTIAL:

AIM: To write a C program for implementing sequential file allocation method

DESCRIPTION:
The most common form of file structure is the sequential file in this type of file,
a fixed format is used for records. All records (of the system) have the same length,
consisting of the same number of fixed length fields in a particular order because the
length and position of each field are known, only the values of fields need to be stored, the
field name and length for each field are attributes of the file structure.

ALGORITHM:
Step 1: Start the program.
Step 2: Get the number of files.
Step 3: Get the memory requirement of each file.
Step 4: Allocate the required locations to each in sequential order. (Randomly select a location
from available location s1= random (100); Check whether the required locations are free from the
selected location).
Step 5: Print the results file no, length, Blocks allocated.
Step 6: Stop the program.

```
Files Allocated are :
Enter the starting block: 4
Enter the length of the file: 10
4       1
5       1
6       1
7       1
8       1
9       1
10      1
11      1
12      1
13      1

The file is allocated to the disk

Do you want to enter more files?
Press 1 for YES, 0 for NO: 1
Enter the starting block: 1
Enter the length of the file: 3
1       1
2       1
3       1

The file is allocated to the disk
```

B) LINKED:

AIM: To implement linked file allocation technique.

DESCRIPTION:

In the chained method file allocation table contains a field which points to starting block of memory. From it for each bloc a pointer is kept to next successive block. Hence, there is no external fragmentation

ALGORTHIM:

Step 1: Start the program.

Step 2: Get the number of files.

Step 3: Get the memory requirement of each file.

Step 4: Allocate the required locations by selecting a location randomly q= random(100); (Check whether the selected location is free . If the location is free allocate and set flag=1 to the allocated locations.)

Step 5: Print the results file no, length, Blocks allocated.

Step 6: Stop the program

```
Enter the number of blocks already allocated: 3
Enter the 1 block already allocated: 4
Enter the 2 block already allocated: 7
Enter the 3 block already allocated: 9
Enter the index of the starting block: 1
Enter the length of the file: 7
1------>1
2------>1
3------>1
The block 4 is already allocated
5------>1
6------>1
The block 7 is already allocated
8------>1
The block 9 is already allocated
10------>1
```