Ex. No.: 10b)
Date: 12/4/25

FIRST FIT

Aim:

To write a C program for implementation memory allocation methods for fixed partition using first fit.

Algorithm:

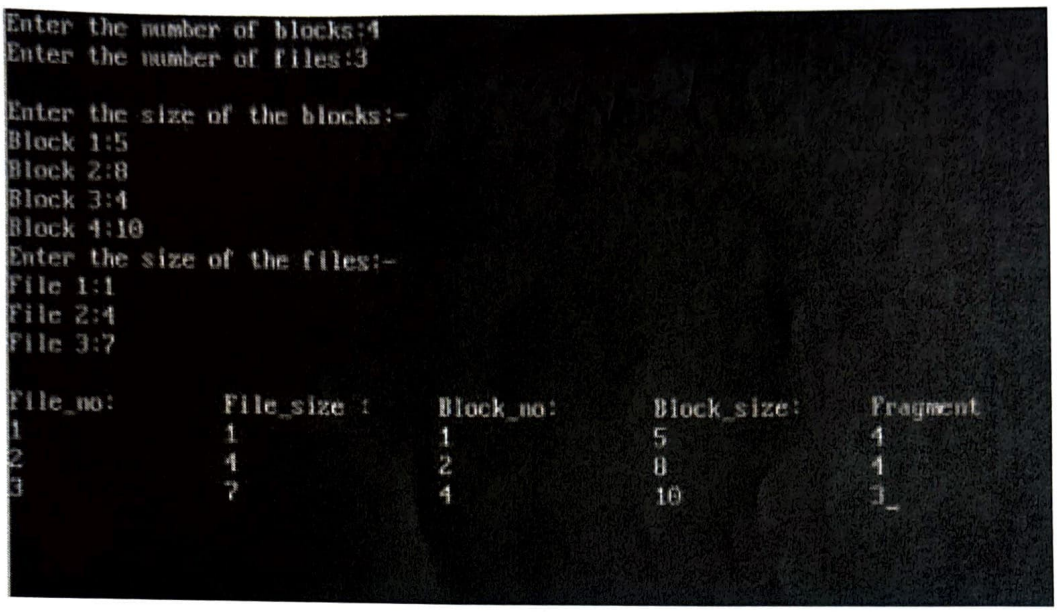
1. Define the max as 25.
2: Declare the variable frag[max],b[max],f[max],i,j,nb,nf,temp, highest=0, bf[max],ff[max]. 3: Get the number of blocks,files,size of the blocks using for loop.
4: In for loop check bf[j]!=1, if so temp=b[j]-f[i]
5: Check highest

Program Code:

```
#include<stdio.h>
#define max 25
int main(){
    int frag[max], b[max], f[max], i, j, nb, nf
    static int bf[max], ff[max];
    printf("Enter number of blocks: ");
    scanf("%d", &nb);
    printf("Enter number of files: ");
    scanf("%d", &nf);
    printf("\nEnter size of each block: \n");
    for(i=0; i<nb; i++){
        printf("Block %d: ", i+1);
        scanf("%d", &b[i]);
    }
    printf("\nEnter size of each file: \n");
    for(i=0; i<nf; i++){
        printf("File %d: ", i+1);
        scanf("%d", &f[i]);
    }
    for(i=0; i<nf; i++){
        for(j=0; j<nb; j++){
            if(bf[j]==0 && b[j]>=f[i]){
                ff[i]=j;
                frag[i]=b[j]-f[i];
                bf[j]=1;
                break;
            }
        }
        if(j==nb){
            ff[i]=-1;
            frag[i]=-1;
        }
    }
```

```
printf("\n File No \t File Size \t Block No \t Block Seize \t Fragment\n");
for(i=0; i<n; i++){
    if (ff[i] != -1){
        printf("%d \t %d \t %d \t %d \t %d \n",
i+1, f[i], ff[i]+1, bff[i], frag[i]);
    } else{
        printf("%d \t %d \t \t Not Allocated \t - \t - \n",
                                    i+1, f[i]);
    }
}
return 0;
}
```

Sample Output:



```
Enter the number of blocks:4
Enter the number of files:3

Enter the size of the blocks:-
Block 1:5
Block 2:8
Block 3:4
Block 4:10
Enter the size of the files:-
File 1:1
File 2:4
File 3:7

File_no:        File_size :     Block_no:       Block_size:     Fragment
1               1               1               5               4
2               4               2               8               1
3               7               4               10              3_
```

Result:

C program for implementation of First Fit Memory allocation has been executed successfully.