Ex. No.: 10b)
Date: 10/04/25

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], b[MAX]={0},
                                    ff[MAX];
    int nb, nf, i, j, temp;
    printf("Enter no of blocks");
    scanf("%d", &nb);
    printf("Enter no of files");
    scanf("%d", &nf);
    printf("\n Enter size of blocks: \n");
    for(i=0; i<nb; i++) {
        printf("Block %d", i+1);
        forscanf("%d", &b[i]);
```

```
printf("\n Enter the size of 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(b[j]!=1){
            temp=b[j]-f[i];
            if(temp>=0){
                ff[i]=j;
                b[j]=1;
                frag[i]=temp;
                break;
            }
        }
    }
    if(j==nb){
        ff[i]=-1;
        frag[i]=-1;
    }
}
printf("\n File No\t File Size\t Block No\t Block
                    size\t Fragmentation");
for(i=0;i<nf;i++) {
    printf("\n%d\t%d\t\t",i+1,f[i]);
    if(ff[i]!=-1){
```

```
printf("%d\t\t%d\t\t%d", ff[i]+1, b[ff[i]], frag[i]);
}else{
    printf("Not Allocated\t\t\t-");
}
}
return 0;
}
```

Block

100	200	300

Files

150	250

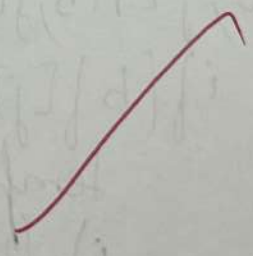
File	File size	Block No	Fragmentation
1	150	2	50
2	250	3	50

Enter the size of the Files:

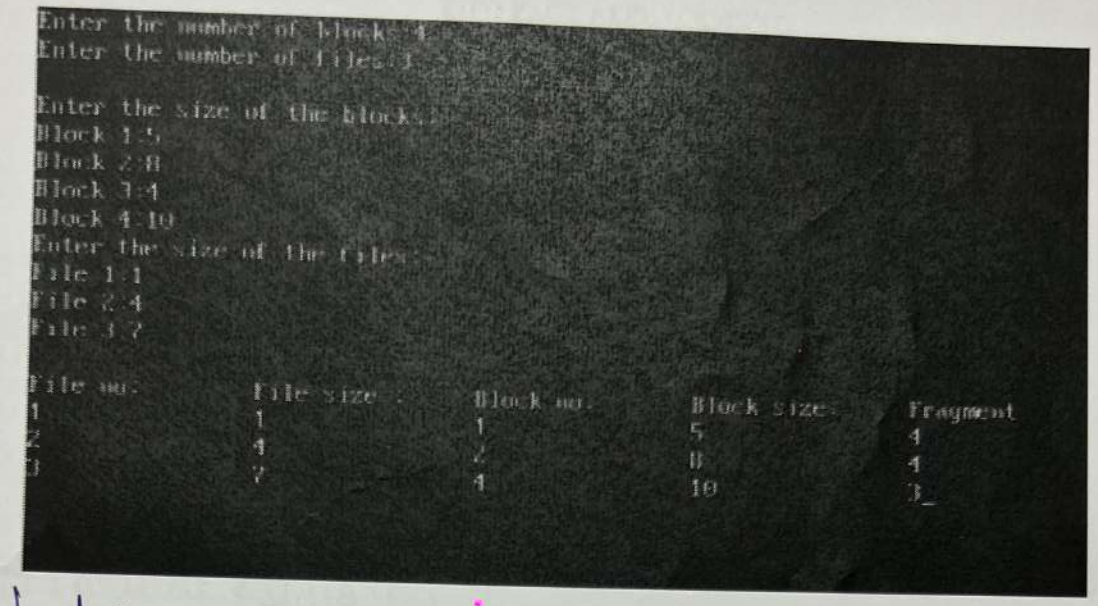
File 1: 150

File 2: 250

FileNO	FileSize	BlockNo	BlockSize	Fragmentation
1	150	2	200	50
2	250	3	300	50



Sample Output:



Output :

Enter the no of blocks : 3

Enter the no of files : 2

Block 1 : 100

Block 2 : 200

Block 3 : 300

Result:

Thus the program to implement First Fit memory allocation technique using C has been executed successfully