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

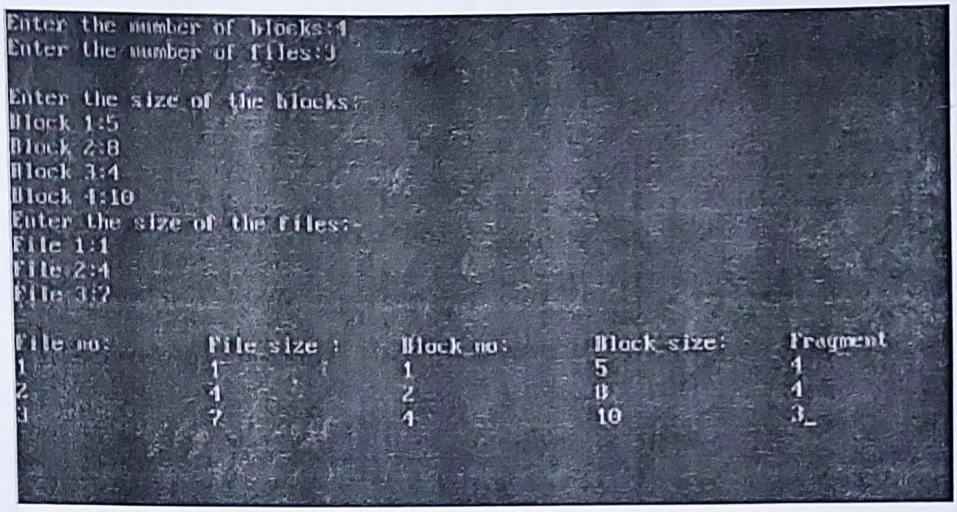
Program Code:

```
# include < stdio . h >
# define MAX 25

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

```
printf("\n Enter the size of the files :\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] != 1){
            temp = b[j] - f[i];
            if(temp >=0){
                ff[i] = j;
                bf[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\t %d \t\t", i+1, f[i]);
    if(ff[i] != -1){
        printf("%d \t\t\t %d \t\t %d", ff[i]+1, b[ff[i]], frag[i]);
    } else{
        printf("Not Allocated \t\t - \t\t -");
    }
}
return 0;
}
```

Sample Output:



Enter the no of blocks : 3
Enter the no of files : 2

Enter the size of the blocks:
Block 1 : 100
Block 2 : 200
Block 3 : 300

Enter the size of the files:
File 1 : 150
File 2 : 250

File no	File size	Block no	Block size	Fragmentation
1	150	2	200	50
2	250	3	300	50

Result:

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