Ex. No.: 10b)
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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], ff[MAX];
    int i, j, nb, nf, temp;
    Printf("Enter the size of each memory block :\n");
    for (i=0; i<nb; i++)
    {
        Print ("Block %d": , i+1);
        Scanf ("%d ; & b[i] );
        bf [i] = 0;
        Printf("Enter the number of file processes:");
        scanf("%d ", &nf);
        Printf(" Enter the 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;
            bf[j] = 1;
            frag[i] = b[j] - f[i];
            break;
        }
    }
    if (j==nb){
        ff[i]=-1;
    }
}
Printf("\n Fib No \t File Size\t Block No\t Block Size);
for (i=0; i<nf; i++){
    Printf("%d\t\t%d\t\t", i+1, f[i]);
    if (ff[i]!=-1)
        Printf("%d \t\t %d\t\t, frag[i]);
    else
        Printf("Not allocated\t-\t\t-\n");
}
}
```

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               4
3               7               4               10              3
```

The fragment of blocks are
80
15
23
5
20

Process No	Process_Size	Block_No	Fragment
P_1	20	1	30
P_2	30	2	15
P_3	50	5	20
P_4	40	4	5
P_5	10	3	23

Result:

Using C program the first fit memory allocation algorithm is implemented.

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