

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, hb, nf, temp;

    printf("Enter the number of memory block: ");
    scanf("%d", &nb);
    printf("Enter the size of each memory block: ");
    for (i=0; i<nb; i++) {
        printf("Block %d", i+1);
        scanf("%d", &b[i]);
        printf("Enter the size of each file: ");
        for (j=0; j<nf; j++) {
            printf("File %d: ", i+1);
            scanf("%d", &f[j]);
        }
    }
}
```

```

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("In File No. It File size It Block No. It Block size It
Fragment In");

```

for (i=0; i < nf; i++){
    printf("%d    It    %d    It    ", i+1, ff[i]);
    if (ff[i] != -1)
        printf("%d    It    %d    It    %d\n", ff[i]+1,
            b[ff[i]], frag[i]);
    else
        printf("Not Allocated    It    It    It    It    It\n");
}
}

```

OUTPUT

The fragment of block are

80


15

23

5

20

Process	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



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_

Result:

Using C program the first fit memory allocation algorithm is implemented