

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>
int main () {
    int n, m;
    scanf ("%d", &n);
    scanf ("%d", &m);
    int block [n];
    int process [m];
    int allocation [m];
    for (int i=0; i<m; i++) {
        allocation [i] = -1;
    }
    int occupied [n];
    for (int i=0; i<n; i++) {
        occupied [i] = 0;
    }
}
```

```
for(int i=0; i<n; i++){
    scanf ("%d", &block[i]);
```

```
}
```

```
for(int i=0; i<m; i++){
```

```
    scanf ("%d", &process[i]);
```

```
}
```

```
for(int i=0; i<m; i++){
```

```
{
```

```
    for(int j=0; j<n; j++){
```

```
    {
```

```
        if (!occupied[j] && blocks[j] >= process[i])
```

```
        {
```

```
            allocation[i]=j;
```

```
            occupied[j]=1;
```

```
            blocks[j] -= process[i];
```

```
            printf ("%d", blocks[j]);
```

```
            break;
```

```
        }
```

```
    }
```

```
}
```

```
printf (" \n Process No      Process size      Block No");
```

```
for(int i=0; i<m; i++){
```

```
{
```

```
    if (allocation[i] != -1)
```

```
    {
```

```
        printf (" \n %d it it %d it it %d", i+1, process[i], allocation[i]+1);
```

```
    } else {
```

```
        printf (" \n %d it it %d it it Not allocated", i+1, process[i]);
```

```
    }
```

```
}
```

```
}
```



## Output:

Enter no-of blocks : 4

Block size:

B1 - 100

B2 - 500

B3 - 150

B4 - 300

Enter no-of processes : 3

Process size:

P1 - 99

P2 - 211

P3 - 300

Process No

P1

P2

P3

Process size

99

211

300

Block No

B1

B2

B4

## 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:

Hence, first fit memory management has been successfully executed.