

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

void main()
{
    int frag[max], b[max], f[max], i, j, nb, nf, temp;
    static int bf[max], ff[max];
    printf("\nEnter the number of blocks:");
    scanf("%d",&nb);

    printf("Enter the number of files:");
    scanf("%d",&nf);

    printf("\nEnter the size of the blocks:-\n");
    for(i = 1; i <= nb; i++){
        printf("Block %d:",i);
        scanf("%d",&b[i]);
    }

    printf("Enter the size of the files:-\n");
    for(i = 1; i <= nf; i++){
        printf("File %d:",i);
        scanf("%d",&f[i]);
    }

    for(i = 1; i <= nf; i++){
        for(j=1; j <nb; j++){
            if(bf[j] != 1){
                temp = b[j] - f[i];
```

```

        if(temp >= 0){
            ff[i] = j;
            break;
        }
    }
    frag[i] = temp;
    bf[ff[i]] = 1;
}
printf("\nFile_no:\tFile_size:\tBlock_no:\tBlock_size:\tFragment");
for(i = 1; i <= nf; i++)
{
    printf("\n%d\t%d\t%d\t%d\t%d", i, f[i], ff[i], b[ff[i]], frag[i]);
}
}

```

Output:

```

(shanthosh@kali)~/os_lab
$ vi first_fit.c

(shanthosh@kali)~/os_lab
$ gcc first_fit.c -o first_fit

(shanthosh@kali)~/os_lab
$ ./first_fit

Enter the number of blocks:4
Enter the number of files:4

Enter the size of the blocks:-
Block 1:2
Block 2:3
Block 3:4
Block 4:5
Enter the size of the files:-
File 1:1
File 2:2
File 3:3
File 4:4

File_no:      File_size:      Block_no:      Block_size:      Fragment
1             1             1             2             1
2             2             2             3             1
3             3             3             4             1
4             4             0             0             1

```

Results:

Hence the C program to implement memory allocation methods for fixed partition using first fit has been successfully completed.