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[i] && block[j] >= process [i] )
     {  allocation [i] = j;
        occupied [j] = 1;
        blocks[j] -= process[i];
        printf ("%d", block [j]);
        break;
     }
  }
}
printf ("\n Process No    Process size    Block No");
for(int i=0; i<m; i++)
{ if (allocation [i] ! = -1)
  { printf ("\n %d \t \t  %d \t \t %d", i+1,
                                process[i],
                        allocation[i] + 1);
  }
  else {
     printf ("\n %d \t \t %d \t \t Not allocated",
                                i+1,
                        process[i]);
  }
}
```

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_
```

Enter the number of process : 4
Enter the number of block : 5
Enter the sizes of process : 212 417 112 426
Enter the size of blocks : 100 500 200 300 600

Process no.	Process Size	Block no	Block size	Fragment
1	212	2	500	288
2	417	5	600	183
3	112	3	200	88
4	426	not allocated		

Result:

Thus the c program for first fit memory allocation has been executed successfully.