Ex. No. 10(a)	BEST FIT MEMORY ALLOCATION
Date: 03.04.2025	

Aim:

To implement Best Fit memory allocation technique using Python.

Program:

```
def best_fit(block_size, process_size):
   n = len(block_size)
m = len(process_size)
   allocation = [-1] * m

   for i in range(m):        best_idx = -1        for j in range(n):
if block_size[j] >= process_size[i]:              if best_idx == -1 or
block_size[j] < block_size[best_idx]:                    best_idx = j
if best_idx != -1:
          allocation[i] = best_idx + 1
          block_size[best_idx] -= process_size[i]

   print("Process No.\tProcess Size\tBlock No.")
for i in range(m):
      print(f"{i+1}\t\t{process_size[i]}\t\t", end="")
if allocation[i] != -1:
          print(f"{allocation[i]}")
else:
          print("Not Allocated")

# Sample input
block_size = [100, 500, 200, 300, 600]
process_size = [212, 417, 112, 426]

best_fit(block_size, process_size)
```

Output:

Process No.	Process Size	Block No.
1	212	4
2	417	2
3	112	3
4	426	5

Result:

The program for Best Fit memory allocation technique was executed successfully and the output was verified.

Ex. No. 10(b)	FIRST FIT MEMORY ALLOCATION
Date: 03.04.2025	

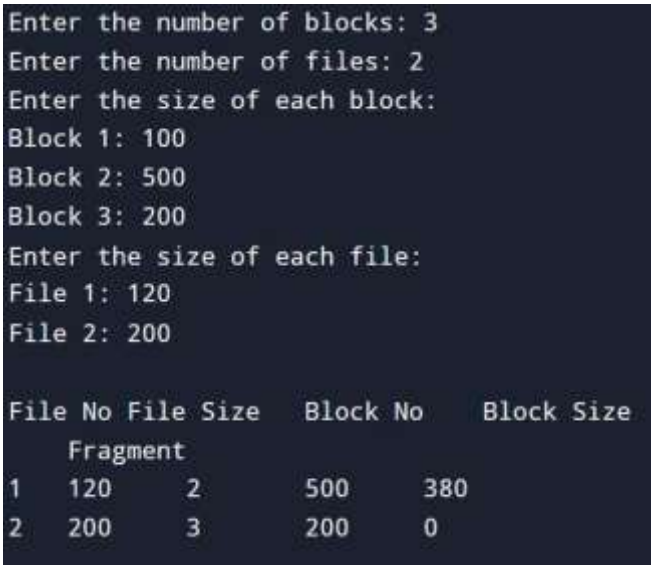
Aim:

To write a C program for implementation memory allocation methods for fixed partition using first fit.

Program:

```
#include <stdio.h> #define max 25 int main() {
int frag[max], b[max], f[max], i, j, nb, nf, temp;
static int bf[max], ff[max];    printf("Enter the
number of blocks: ");    scanf("%d", &nb);
printf("Enter the number of files: ");
scanf("%d", &nf);    printf("Enter the size of
the blocks:\n");
  for (i = 0; i < nb; i++)       scanf("%d",
&b[i]);    printf("Enter the size of the
files:\n");
  for (i = 0; i < nf; i++)
scanf("%d", &f[i]);    for (i = 0; i <
nf; i++) {       for (j = 0; j < nb; j++)
{          if (bf[j] != 1 && b[j] >=
f[i]) {
            ff[i] = j;
bf[j] = 1;              frag[i] =
b[j] - f[i];             break;
         }
     }
  }
  printf("\nFile No\tFile Size\tBlock No\tBlock Size\tFragment\n");
for (i = 0; i < nf; i++)
    printf("%d\t%d\t\t%d\t\t%d\t\t%d\n", i + 1, f[i], ff[i] + 1, b[ff[i]], frag[i]);
return 0;
}
```

Output:



Result:

Thus, the program for First Fit memory allocation technique was executed successfully and the output was verified.