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Ex.No.10b)First Fit

Aim:

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

Code:

```
#include <stdio.h>
int main() {
   int blockSize[10], processSize[10], blockCount, processCount;
   int allocation[10];
   // Input number of memory blocks and their sizes
   printf("Enter number of memory blocks: ");
   scanf("%d", &blockCount);
   printf("Enter sizes of %d memory blocks:\n", blockCount);
   for (int i = 0; i < blockCount; i++) {
      scanf("%d", &blockSize[i]);
   }
   // Input number of processes and their sizes
   printf("Enter number of processes: ");
   scanf("%d", &processCount);
   printf("Enter sizes of %d processes:\n", processCount);
   for (int i = 0; i < processCount; i++) {
      scanf("%d", &processSize[i]);
      allocation[i] = -1;  // Initially no allocation
   }
   // First Fit Allocation
   for (int i = 0; i < processCount; i++) {
      for (int j = 0; j < blockCount; j++) {
         if (blockSize[j] >= processSize[i]) {
            allocation[i] = j;
```

```
            blockSize[j] -= processSize[i];
            break;
        }
    }
  }
  // Display allocation result
  printf("\nProcess No.\tProcess Size\tBlock No.\n");
  for (int i = 0; i < processCount; i++) {
    printf("   %d\t\t   %d\t\t", i + 1, processSize[i]);
    if (allocation[i] != -1)
      printf("%d\n", allocation[i] + 1);
    else
      printf("Not Allocated\n");
  }
  return 0;
}
```

Output:

```
Enter number of memory blocks: 5
Enter sizes of 5 memory blocks:
100 500 200 300 600
Enter number of processes: 4
Enter sizes of 4 processes:
212 417 112 426

Process No.     Process Size    Block No.
  1               212             2
  2               417             5
  3               112             1
  4               426             Not Allocated
```