

FIRST FIT:

```
#include <stdio.h>
```

```
#define MAX_BLOCKS 10
```

```
#define MAX_PROCESSES 5
```

```
// Function to implement the First Fit memory allocation algorithm
```

```
void firstFit(int blockSize[], int m, int processSize[], int n) {
```

```
    int allocation[n]; // To store the allocation of processes
```

```
    // Initially, no process is allocated any block
```

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

```
        allocation[i] = -1;
```

```
    }
```

```
    // Find first fit for each process
```

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

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

```
            // If the block is big enough and not yet allocated
```

```
            if (blockSize[j] >= processSize[i]) {
```

```
                allocation[i] = j; // Allocate the block to the process
```

```
                blockSize[j] -= processSize[i]; // Reduce the block size
```

```
                break;
```

```
            }
```

```
        }
```

```
    }
```

```
    // Print the allocation result
```

```
    printf("\nProcess No.\tProcess Size\tBlock No.\tBlock Size\n");
```

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

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

```
            printf("%d\t\t%d\t\t%d\t\t%d\n", i+1, processSize[i], allocation[i]+1,
```

```
blockSize[allocation[i]]);
```

```
        } else {
```

```
            printf("%d\t\t%d\t\t\tNot Allocated\n", i+1, processSize[i]);
```

```
        }
```

```
    }
```

```
}
```

```
int main() {
```

```
    int blockSize[MAX_BLOCKS], processSize[MAX_PROCESSES];
```

```
    int m, n;
```

```
    // Get the number of blocks and processes
```

```

printf("Enter number of blocks: ");
scanf("%d", &m);
printf("Enter number of processes: ");
scanf("%d", &n);

// Get the block sizes
printf("\nEnter block sizes:\n");
for (int i = 0; i < m; i++) {
    printf("Block %d size: ", i+1);
    scanf("%d", &blockSize[i]);
}

// Get the process sizes
printf("\nEnter process sizes:\n");
for (int i = 0; i < n; i++) {
    printf("Process %d size: ", i+1);
    scanf("%d", &processSize[i]);
}

// Call firstFit to allocate blocks to processes
firstFit(blockSize, m, processSize, n);

return 0;
}

```

```

Enter number of blocks: 3
Enter number of processes:
2

Enter block sizes:
Block 1 size: 4
Block 2 size: 6
Block 3 size: 1

Enter process sizes:
Process 1 size: 7
Process 2 size: 4

Process No. Process Size   Block No.  Block Size
1           7           Not Allocated
2           4             1           0

```