

Code:

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// Write a program to simulate the First Fit Memory Allocation Technique.
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#include <bits/stdc++.h>
using namespace std;

int main() {
    int num_blocks, num_processes;
    cout << "Enter the number of memory blocks: ";
    cin >> num_blocks;
    cout << "\nEnter the number of processes: ";
    cin >> num_processes;

    int mem_blocks[num_blocks];
    cout << "\nEnter the size of the memory blocks: ";
    for (int i = 0; i < num_blocks; i++) {
        cin >> mem_blocks[i];
    }

    string process_names[num_processes];
    int process_sizes[num_processes];
    cout << "\nEnter the names and sizes of the processes:" << endl;
    for (int i = 0; i < num_processes; i++) {
        cin >> process_names[i] >> process_sizes[i];
    }

    bool allocation_status[num_processes];
    memset(allocation_status, false, sizeof(allocation_status));

    for (int i = 0; i < num_processes; i++) {
        int process_size = process_sizes[i];
        bool allocated = false;

        for (int j = 0; j < num_blocks; j++) {
            if (mem_blocks[j] >= process_size) {
                allocation_status[i] = true;
                mem_blocks[j] -= process_size;
                allocated = true;
                break;
            }
        }
        if (!allocated) {
            cout << "\nCould not allocate memory for " << process_names[i] << endl;
        }
    }

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

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    if (allocation_status[i]) {
        cout << process_names[i] << " has been allocated memory" << endl;
    } else {
        cout << process_names[i] << " could not be allocated memory" << endl;
    }
}

return 0;
}

```

Sample Output:

Enter the number of memory blocks: 5

Enter the number of processes: 4

Enter the size of the memory blocks: 100 500 200 300 600

Enter the names and sizes of the processes:

P1 212

P2 417

P3 112

P4 426

Could not allocate memory for P4

P1 has been allocated memory

P2 has been allocated memory

P3 has been allocated memory

P4 could not be allocated memory