

```
#include <stdio.h>

#include <stdbool.h>

#define NUM_BLOCKS 5
#define NUM_PROCESSES 4

int memory_blocks[NUM_BLOCKS] = {100, 500, 200, 300, 600};
int processes[NUM_PROCESSES] = {212, 417, 112, 426};

int allocate_memory(int process_size) {
    int index = -1;
    int min_difference = 999999;

    for (int i = 0; i < NUM_BLOCKS; i++) {
        if (memory_blocks[i] >= process_size) {
            int difference = memory_blocks[i] - process_size;
            if (difference < min_difference) {
                min_difference = difference;
                index = i;
            }
        }
    }

    if (index != -1) {
        memory_blocks[index] -= process_size;
        return index;
    }

    return -1;
}
```

```
int main() {  
    for (int i = 0; i < NUM_PROCESSES; i++) {  
        int block_index = allocate_memory(processes[i]);  
        if (block_index != -1) {  
            printf("Allocated memory to process %d in block %d\n", i + 1, block_index + 1);  
        } else {  
            printf("Could not allocate memory to process %d\n", i + 1);  
        }  
    }  
}  
  
return 0;
```

wasm

```
Allocated memory to process 1 in block 2  
Allocated memory to process 2 in block 5  
Allocated memory to process 3 in block 1  
Allocated memory to process 4 in block 4
```

}