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#include <stdio.h>
#include <stdbool.h>
#define MAX_BLOCKS 10
int main() {
    int memory[MAX_BLOCKS] = {0};
    int n, start, length;
    char choice;
    printf("Sequential File Allocation Simulation\n");
    do {
        printf("Enter starting block (0 - %d): ", MAX_BLOCKS - 1);
        scanf("%d", &start);
        printf("Enter length of file: ");
        scanf("%d", &length);
        if (start < 0 || start + length > MAX_BLOCKS) {
            printf("Error: Out of memory bounds.\n");
        } else {
            bool canAllocate = true;
            for (int i = start; i < start + length; i++) {
                if (memory[i] == 1) {
                    canAllocate = false;
                    break;
                }
            }
            if (canAllocate) {
                for (int i = start; i < start + length; i++) {
                    memory[i] = 1;
                }
                printf("File %d from block %d to %d.\n", start, start + length - 1);
            } else {
                printf("Error: Blocks already allocated. Allocation failed.\n");
            }
        }
        printf("Do you want to allocate another file? (y/n): ");
        scanf(" %c", &choice);
    } while (choice == 'y' || choice == 'Y');
    printf("\nFinal Memory Allocation:\n");
    for (int i = 0; i < MAX_BLOCKS; i++) {
        printf("%d", memory[i]);
    }
    printf("\n");
    return 0;
}

```

Sequential File Allocation Simulation

Enter starting block (0 - 9): 8

Enter length of file: 2

File allocated from block 8 to 9.

Do you want to allocate another file? (y/n): y

Enter starting block (0 - 9): 5

Enter length of file: 1

File allocated from block 5 to 5.

Do you want to allocate another file? (y/n): n

Final Memory Allocation:

0000010011

Process returned 0 (0x0) execution time : 154.778 s

Press any key to continue.

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