

EXP 23: Construct a C program to implement first fit algorithm of memory management.

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#include <stdio.h>

#define MAX 25

void firstFit(int blockSize[], int m, int processSize[], int n) {
    int allocation[MAX];

    // Initialize all allocations to -1 (unallocated)
    for (int i = 0; i < n; i++)
        allocation[i] = -1;

    // Allocate each process
    for (int i = 0; i < n; i++) {
        for (int j = 0; j < m; j++) {
            if (blockSize[j] >= processSize[i]) {
                allocation[i] = j;
                blockSize[j] -= processSize[i];
                break;
            }
        }
    }

    // Display allocation results
    printf("\nProcess No.\tProcess Size\tBlock No.\n");
    for (int i = 0; i < n; i++) {
```

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        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");
    }
}

```

```

int main() {
    int blockSize[MAX], processSize[MAX];
    int m, n;

    printf("Enter number of memory blocks: ");
    scanf("%d", &m);
    printf("Enter size of each block:\n");
    for (int i = 0; i < m; i++)
        scanf("%d", &blockSize[i]);

    printf("Enter number of processes: ");
    scanf("%d", &n);
    printf("Enter size of each process:\n");
    for (int i = 0; i < n; i++)
        scanf("%d", &processSize[i]);

    firstFit(blockSize, m, processSize, n);

    return 0;
}

```

Sample Output

Enter number of memory blocks: 4

Enter size of each block:

10 22 34 45

Enter number of processes: 3

Enter size of each process:

22 34 56

Process No.	Process Size	Block No.
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1	22	2
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2	34	3
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3	56	Not Allocated
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