Program for Best Fit algorithm in Memory Management

> 操作系统中内存管理算法之一：首次适应算法

```
#include <bits/stdc++.h>

using namespace std;


void bestFit(vector<int> &blockSize, vector<int> &processSize) {
    vector<int> allocation(processSize.size(), -1);
    for (int i = 0; i < processSize.size(); ++i) {
        int bestBlockNo = -1;
        for (int j = 0; j < blockSize.size(); ++j) {
            if (blockSize[j] >= processSize[i]) {
               if (bestBlockNo == -1) bestBlockNo = j;
               else if (blockSize[j] <= blockSize[bestBlockNo]) bestBlockNo = j;
            }
        }
        allocation[i] = bestBlockNo;
        blockSize[bestBlockNo] -= processSize[i];
    }
    for (int i = 0; i < allocation.size(); ++i) {
        allocation[i] != -1 ?
        printf("processId: %d, processSize: %d, blockNo: %d\n", i + 1, processSize[i], allocation[i] + 1) :
        printf("processId: %d, processSize: %d, blockNo: not found\n", i + 1, processSize[i]);
    }
}


int main() {
    vector<int> blockSize = {100, 500, 200, 300, 600};
    vector<int> processSize = {212, 417, 112, 426};
    bestFit(blockSize, processSize);
    return 0;
}
```