B.BHANUTEJA REDDY-192325016

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

AIM:

To construct a C program to implement the First Fit algorithm for memory management.

ALGORITHM:

1. Input the number of memory blocks and their sizes.
2. Input the number of processes and their sizes.
3. For each process, find the first memory block that can accommodate the process.
4. Allocate the process to the selected block and reduce the block size.
5. If no suitable block is found, mark the process as unallocated.
6. Display the allocation details.

PROCEDURE:

1. Input the number of memory blocks and their sizes.
2. Input the number of processes and their sizes.
3. Loop through each process to find the first block that can fit the process.
4. Allocate the process to the block and adjust the block's size.
5. Print the allocation results.

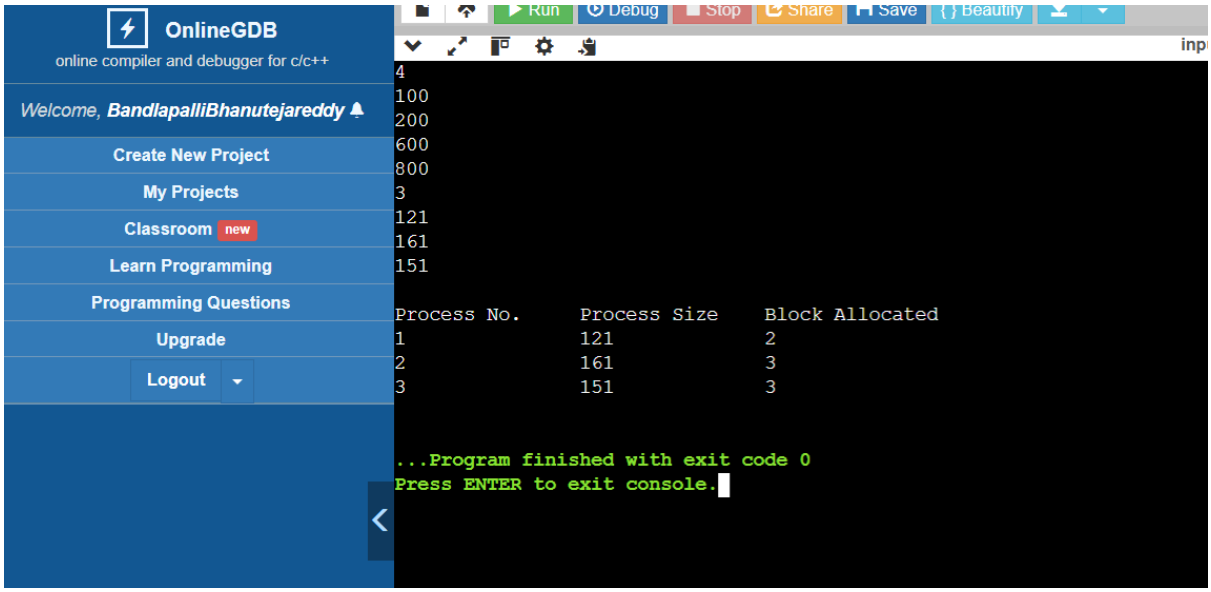
CODE:

```
#include <stdio.h>


int main() {
   int nb, np;
   scanf("%d", &nb);
   int blockSize[nb];
```

```
    for (int i = 0; i < nb; i++) {
        scanf("%d", &blockSize[i]);
    }
    scanf("%d", &np);
    int processSize[np], allocation[np];
    for (int i = 0; i < np; i++) {
        scanf("%d", &processSize[i]);
        allocation[i] = -1;
    }
    for (int i = 0; i < np; i++) {
        for (int j = 0; j < nb; j++) {
            if (blockSize[j] >= processSize[i]) {
                allocation[i] = j;
                blockSize[j] -= processSize[i];
                break;
            }
        }
    }
    printf("\nProcess No.\tProcess Size\tBlock Allocated\n");
    for (int i = 0; i < np; i++) {
        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");
    }
    return 0;
}
```

OUTPUT:


OnlineGDB
online compiler and debugger for c/c++
Welcome, BandlapalliBhanutejareddy
Create New Project
My Projects
Classroom new
Learn Programming
Programming Questions
Upgrade
Logout
Run
Debug
Stop
Share
Save
{ } Beautify
4
100
200
600
800
3
121
161
151
Process No. Process Size Block Allocated
1 121 2
2 161 3
3 151 3
...Program finished with exit code 0
Press ENTER to exit console.