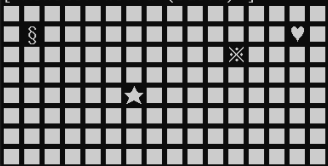


```
Canvas2.h  X Monster2.h  MonsterWorld2.h  MonsterWorldGame2.cpp
Week7_Homework2 (Global Scope)
1 #pragma once
2 #include <iostream>
3 #include <string>
4 #define MAXLINES 100
5 using namespace std;
6
7 class Canvas
8 {
9     string line[MAXLINES];
10    int xMax, yMax;
11 public:
12    Canvas(int nx = 10, int ny = 10) : xMax(nx), yMax(ny) {
13        for (int y = 0; y < yMax; y++)
14            line[y] = string(xMax * 2, ' ');
15    }
16    void draw(int x, int y, string val) {
17        if (x >= 0 && y >= 0 && x < xMax && y < yMax)
18            line[y].replace(x * 2, 2, val);
19    }
20    void clear(string val = " ") {
21        for (int y = 0; y < yMax; y++)
22            for (int x = 0; x < xMax; x++)
23                draw(x, y, val);
24    }
25    void print(const char* title = "My Canvas") {
26        system("cls");
27        cout << title << endl;
28        for (int y = 0; y < yMax; y++)
29            cout << line[y] << endl;
30        cout << endl;
31    }
32 };
33
```

C:\Users\User\source\repos\Week7\_Homework2\Week7\_Homework2.exe

[ Monster World (Basic) ]




전체 이동 횟수 = 0  
남은 아이템 수 = 128  
몬스터⌘:0 E: 100  
도깨비⌘:0 E: 100  
별그대★:0 E: 100  
고스트♡:0 E: 100  
엔터를 누르세요...

```
Canvas2.h  Monster2.h  MonsterWorld2.h  MonsterWorldGame2.cpp
Week7_Homework2 Monster
1 #pragma once
2 #include "Canvas2.h"
3 #define DIM 40
4 #define INIT_ENERGY 100
5 #define ITEM_ENERGY 8
6
7 class Monster
8 {
9     string name, icon;
10    int x, y, nItem;
11    int nEnergy;
12
13    void clip(int maxx, int maxy) {
14        if (x < 0) x = 0;
15        if (x >= maxx) x = maxx - 1;
16        if (y < 0) y = 0;
17        if (y >= maxy) y = maxy - 1;
18    }
19    void eat(int map[DIM][DIM]) {
20        if (map[y][x] == 1)
21        {
22            map[y][x] = 0;
23            nItem++;
24            nEnergy += ITEM_ENERGY;
25        }
26        else if (nEnergy > 0) nEnergy--;
27    }
28 public:
29    Monster(string n = "나괴물", string i = "⌘", int px = 0, int py = 0)
30        : name(n), icon(i), x(px), y(py), nItem(0), nEnergy(INIT_ENERGY) {}
31    ~Monster() { cout << "\t" << name << icon << "물러갑니다~\n"; }
32
33    void draw(Canvas& canvas) { canvas.draw(x, y, icon); }
34    void move(int map[DIM][DIM], int maxx, int maxy) {
35        switch (rand() % 8)
36        {
37            case 0: y--; break;
38            case 1: x++; y--; break;
39            case 2: x++; break;
40            case 3: x++; y++; break;
41            case 4: y++; break;
42            case 5: x--; y++; break;
43            case 6: x--; break;
44            case 7: x--; y--; break;
45        }
46        clip(maxx, maxy);
47        eat(map);
48    }
49    void print()
50    { cout << "\t" << name << icon << ": " << nItem << " E: " << nEnergy << endl; }
51 };

```

C:\Users\User\source\repos\Week7\_Homework2\Week7\_Homework2.exe

[ Monster World (Basic) ]




전체 이동 횟수 = 16  
남은 아이템 수 = 93  
몬스터⌘:6 E: 138  
도깨비⌘:8 E: 156  
별그대★:13 E: 201  
고스트♡:8 E: 156

```
Canvas2.h  Monster2.h  MonsterWorld2.h  MonsterWorldGame2.cpp
Week7_Homework2 Monster
34 void move(int map[DIM][DIM], int maxx, int maxy) {
35     switch (rand() % 8)
36     {
37         case 0: y--; break;
38         case 1: x++; y--; break;
39         case 2: x++; break;
40         case 3: x++; y++; break;
41         case 4: y++; break;
42         case 5: x--; y++; break;
43         case 6: x--; break;
44         case 7: x--; y--; break;
45     }
46     clip(maxx, maxy);
47     eat(map);
48 }
49 void print()
50 { cout << "\t" << name << icon << ": " << nItem << " E: " << nEnergy << endl; }
51 };

```

C:\Users\User\source\repos\Week7\_Homework2\Week7\_Homework2.exe

[ Monster World (Basic) ]



전체 이동 횟수 = 273  
남은 아이템 수 = 1  
몬스터⌘:20 E: 7  
도깨비⌘:27 E: 70  
별그대★:45 E: 232  
고스트♡:35 E: 142

