//----------------------------------------------------------------Problem1------------------------------------------------

#include <iostream>

using namespace std;

void print\_spaces(int num\_spaces) {

if (num\_spaces <= 0) {

return;

}

cout << " ";

print\_spaces(num\_spaces - 1);

}

void print\_stars(int num\_stars) {

if (num\_stars <= 0) {

return;

}

cout << "\* ";

print\_stars(num\_stars - 1);

}

void print\_diamond(int n, int i) {

if (i <= 0) {

return;

}

print\_spaces(n - i);

print\_stars(i);

cout << endl;

print\_diamond(n, i - 1);

print\_spaces(n - i);

print\_stars(i);

cout << endl;

}

int main() {

int n = 5;

print\_diamond(n, n);

return 0;

}

//----------------------------------------------------------------Problem2-----------------------------------------------------

#include <iostream>

using namespace std;

void func1(int n) {

if (n < 0) {

return;

}

cout << n;

func1(n - 1);

cout << n;

}

int main() {

func1(9);

return 0;

}