

**Lab no: 2 Date: 2079/9/15**

**Title: Write a program to find ceiling and floor of real number.**

**Floor function**

In mathematics and computer science, the floor function is the function that takes as input a real number *x*, and gives as output the greatest integer less than or equal to *x*, denoted ⌊*x*⌋ or floor(*x*). Similarly, the ceilingfunction maps *x* to the least integer greater than or equal to *x*, denoted ⌈*x*⌉ or ceil(*x*).

For example, ⌊2.4⌋ = 2, ⌊−2.4⌋ = −3 and ⌈−2.4⌉ = −2.

**Ceiling function**

Ceiling function is a function in which the**smallest successive integer**is returned. In other words, the ceiling function of a real number x is the least integer that is greater than or equal to the given number x.

For example, ⌈3.7⌉ = 4 and ⌈4.7⌉ = 5

**IDE : Visual Studio Code**

**Language : C++**

#include <iostream>

#include <math.h>

using namespace std;

*// floor function is defined*

int floor\_function(float x)

{

int answer = floor(x);

*// floor value is returned*

return answer;

}

*//ceiling function is defined*

int ceiling\_function(float x)

{

int answer = ceil(x);

*// ceiling value is returned*

return answer;

}

int main()

{

int floor\_answer = floor(2.3);

*// floor value is printed*

cout<<"The floor value is "<<floor\_answer<<endl;

int ceiling\_answer = ceiling\_function(3.4);

*// ceiling value is printed*

cout<<"The ceiling value is "<<ceiling\_answer;

}

**Output**

