17. Write a Prolog Program to Sum the Integers from 1 to n.

% Base case: sum from 1 to 1 is 1

sum\_to\_n(1, 1).

% Recursive case: sum from 1 to N = N + sum from 1 to (N-1)

sum\_to\_n(N, Sum) :-

N > 1,

N1 is N - 1,

sum\_to\_n(N1, Sum1),

Sum is N + Sum1.

?- sum\_to\_n(5, Result).

Result = 15.

?- sum\_to\_n(10, Result).

Result = 55.

Output:

