

# Lab Exercises on Flowcharts

## Topic: Conditions

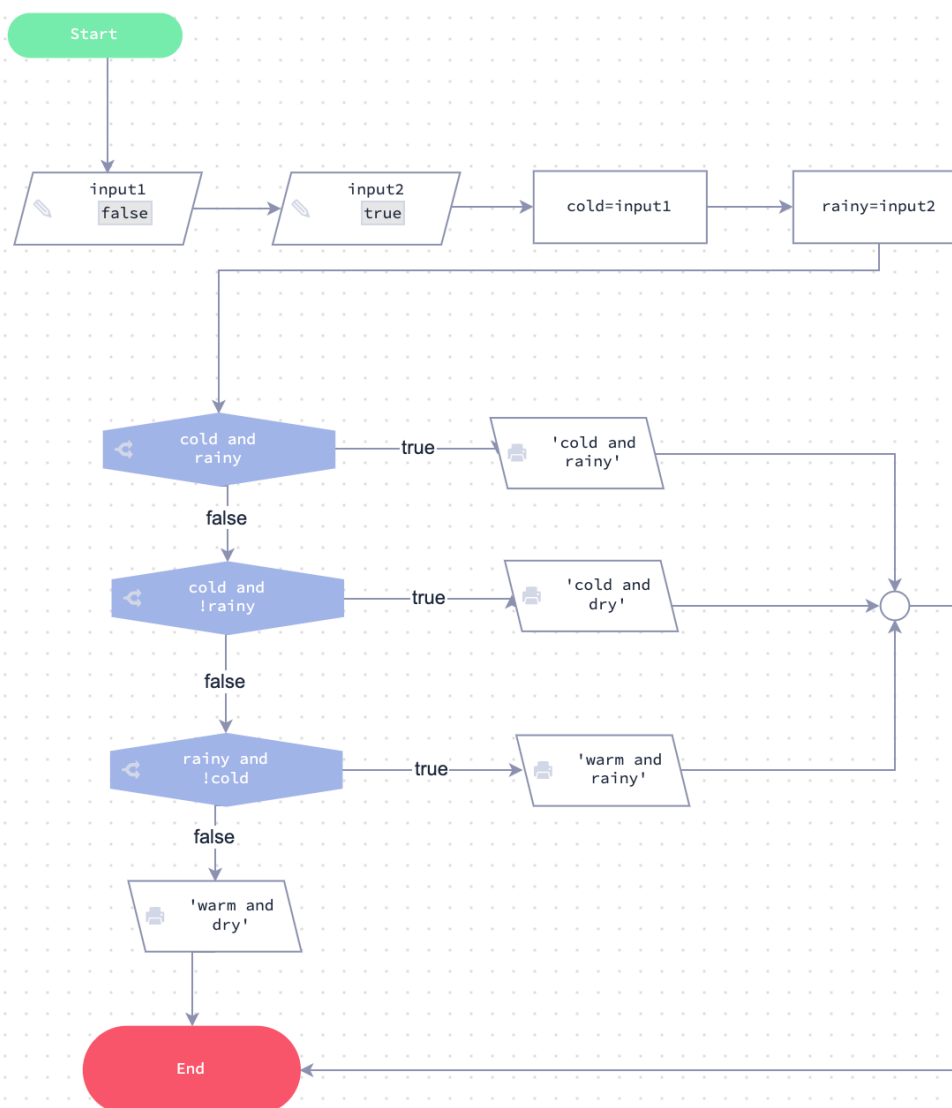
### Challenge:

We pass in 2 boolean inputs, cold and rainy.

You should output a single string 'cold|warm and rainy|dry' based on these inputs.

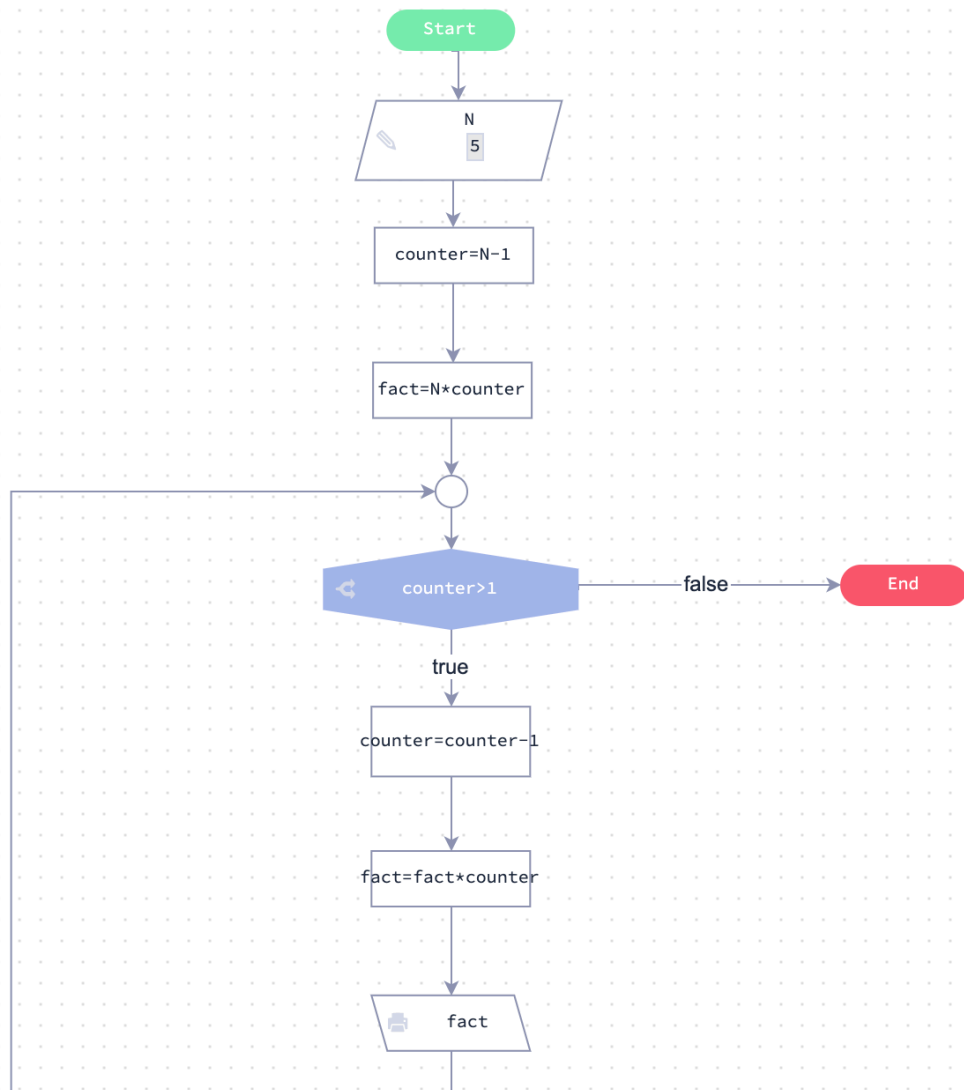
In programming, the `|` character is used to denote possible values. So 'cold|warm' means you should use one of the two words, depending on the input boolean value.

for example true = 'warm and rainy'



## Topic: Loops

We provide you with a value N. Calculate N! and output only the final result.

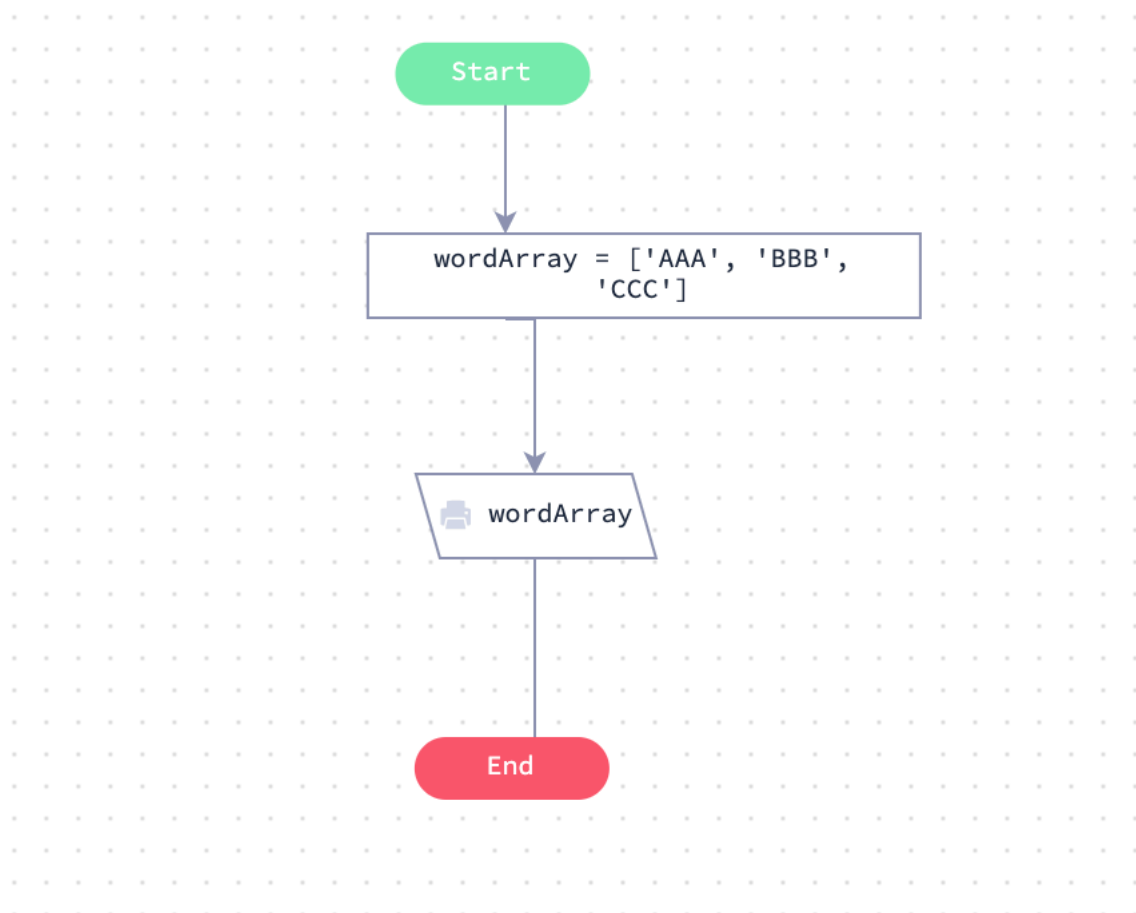


## Topic: Arrays

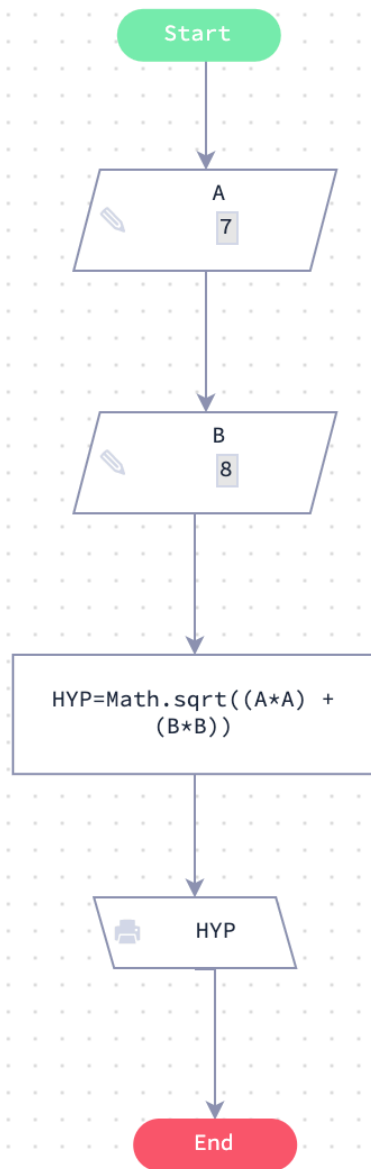
Create your own array of strings. Call the array anything you like as long as it is a valid variable name.

- The array should contain 3 elements
- The first element should contain 'AAA'
- The second element should contain 'BBB'
- The third element should contain 'CCC'

Output the array.



## Topic: Special Functions



We pass in the lengths of two sides of a right angled triangle, a and b.

Calculate and return the length of the hypotenuse, h, using Pythagoras' Theorem  
:  $h = \sqrt{a^2 + b^2}$