1. In a file called `lab3.circ` create a subcircuit called `full_adder` that implements the behaviour of a Full Adder. The subcircuit should have (1-bit) inputs `A`, `B`, `Cin` and (1-bit) outputs `S`, `Cout`.

Full adder Example (1011 + 0011 = 1110)

11 + 3 = 14

~~Carry in~~ Cin	0	1	1	0
~~Digit 1~~ A	1	0	1	1
~~Digit 2~~ B	0	0	1	1
~~Sum~~ S	1	1	1	0
~~Carry Out~~ Cout	0	0	1	1

Convert to Truth Table for all cases

Truth-Table:

~~Carry In~~ Cin	~~Input 1~~ A	~~Input 2~~ B	~~Carry Out~~ Cout	~~Sum~~ S
0	0	0	0	0
0	0	1	0	1
0	1	0	0	1
0	1	1	1	0
1	0	0	0	1
1	0	1	1	0
1	1	0	1	0
1	1	1	1	1

Input truth table into logisim, and get circuit