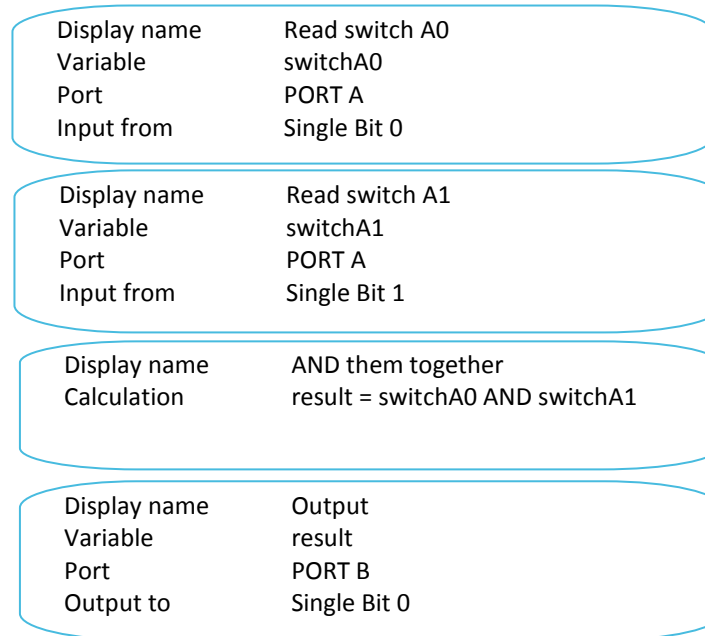


## 6 Set up an AND logic gate

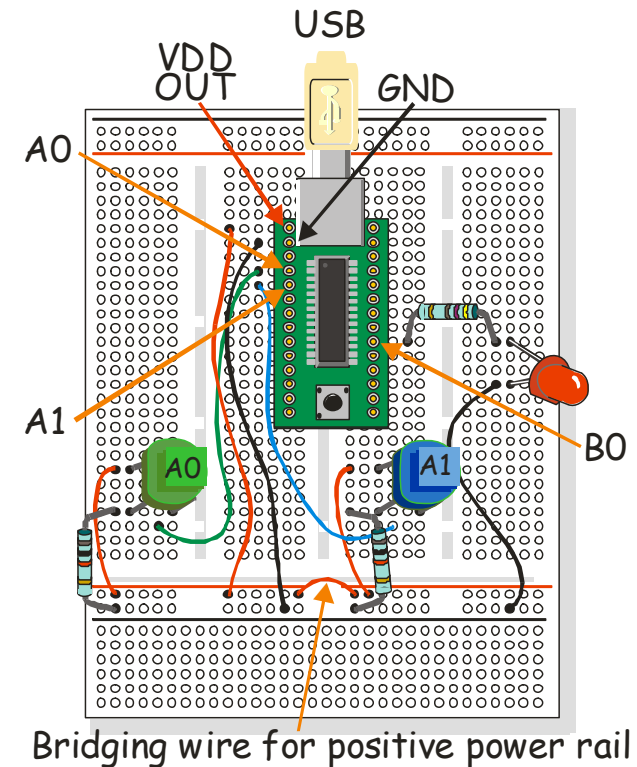
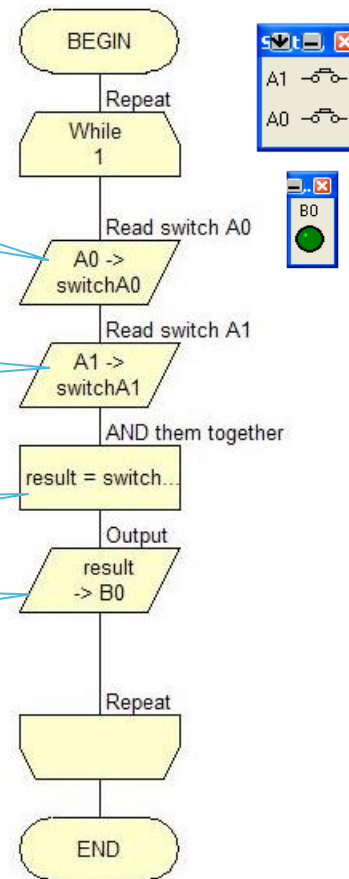
1. Build the Flowcode program.
2. Connect the Switch Unit to PORT A, and create a push-to-make switch, connected to Port A0, and a second one connected to A1.
3. Connect the LED Unit to PORT B, and create one LED, connected to Port B0.
4. Configure the Loop icon as in previous programs, and set up the other components as follows:



5. Save the Flowcode program, and then compile it to the chip.
6. Build the circuit, shown opposite, on the prototype board.
7. Test the circuit by observing the LED while pressing A0 alone, then A1 alone and finally pressing both switches.

Further work:

Modify the program to set up an OR gate, where the LED lights if either switch A0 OR A1 OR both is/are pressed.



Circuit notes:

- Make sure that the LED is plugged in the right way round!
- The LED is protected by a 470 $\Omega$  resistor.
- The switches form voltage dividers with the 1k $\Omega$  resistors.
- The flat edge of each switch is at the side on the diagram.