

Design Document for the SR-Latch

The SR latch works through two NOR gates, with 2 inputs, the S(Set) and R(Reset) values, and 2 outputs Q and Q', which also operate as inputs to the NOR gates. It implements the following truth table:

S	R	Q	\bar{Q}
0	0	1	0
		0	1
0	1	0	1
1	0	1	0
1	1	0	0

Our program will have 3 main classes: Identity, IdentityInput and Program.

IdentityInput will contain the input lines, S, R, Q and Q' which will be the various inputs which we will vary in our circuit. In the Identity class we will define our logic of the circuit itself, or how our circuit should respond to changes in the inputs.

In the program file, we will first open our text file, and read the inputs for the S, R, Q and Q' values and pass them to a method which will evaluate the appropriate logic values that should be set to the outputs. Then, we write our output to a text file.