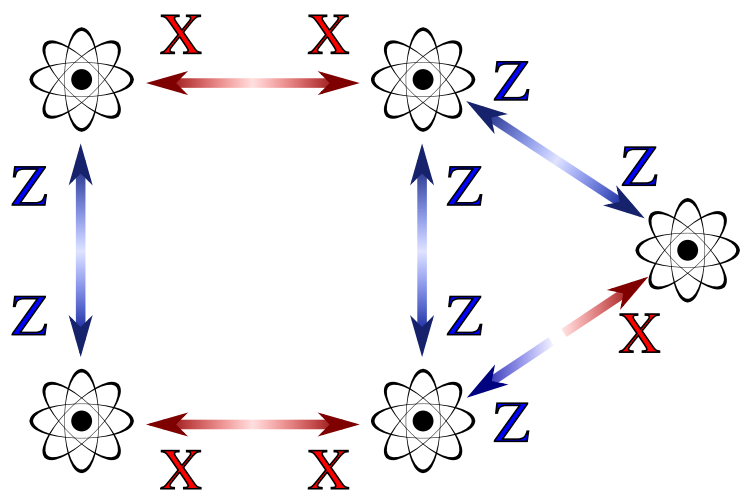
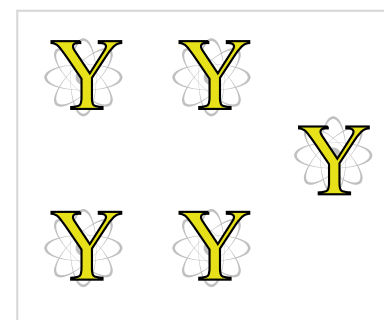
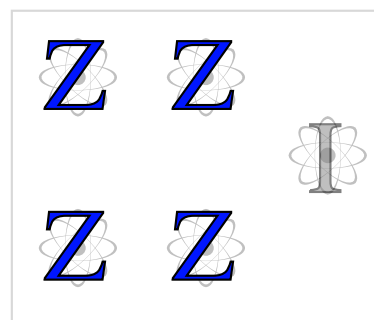


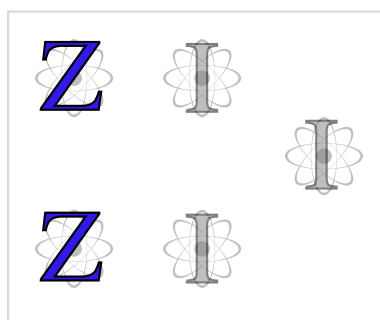
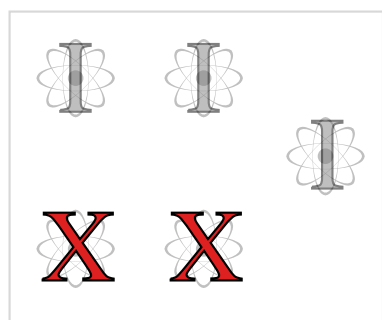
The 5-Qubit Error-Detecting Code



Stabilizers



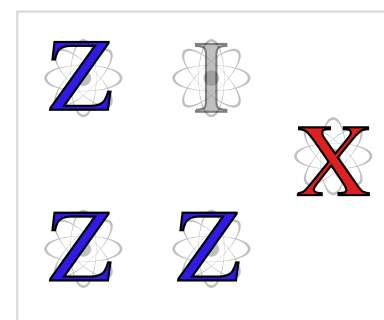
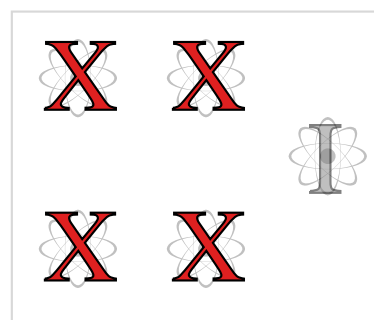
Gauge Qubit 1



\overline{X}_{G_1}

\overline{Z}_{G_1}

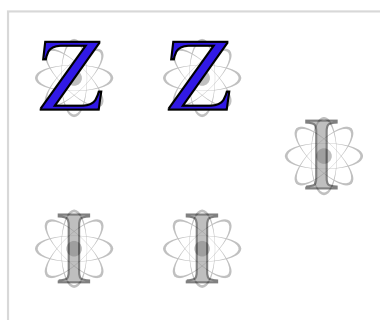
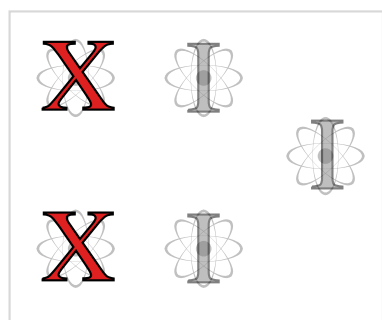
Gauge Qubit 2



\overline{X}_{G_2}

\overline{Z}_{G_2}

Logical Qubit



\overline{X}_L

\overline{Z}_L

By exhaustive search, we have shown that this code is the *only* 5-qubit Ising graph code that has error-detecting properties!

We have found many others, including a large number of error-correcting codes in systems of 9 through 13 physical qubits.