QUANTUM COMPUTING GATES:

HADAMARD GATE

The first quantum logic gate we'll look at is the Hadamard gate, or the H-gate. The Hadamard gate is very important because it re-distributes the probability of the all the input lines so that the output lines have an equal chance of being a 0 and 1.

SWAP GATE

The SWAP gate is two-qubit operation. Expressed in basis states, the SWAP gate swaps the state of the two qubits involved in the operation.

CNOT GATE

The CNOT gate is two-qubit operation, where the first qubit is usually referred to as the control qubit and the second qubit as the target qubit.