

# Gates

## THE HADAMARD GATE

It is crucial because it redistributes the probabilities of all the input lines, giving the output lines an equal chance of being either a 0 or 1.

## THE SWAP GATE

Swap gate operates on two qubits. The SWAP gate switches the states of the two qubits involved in the operation when expressed in basis states.

## THE CNOT GATE

CNOT Gate is a two-qubit operation in which the target qubit and control qubit are respectively referred to as the control qubit and first qubit in most cases.