Qiskit Lab Manual

QAMP Fall 21 – Final Showcase

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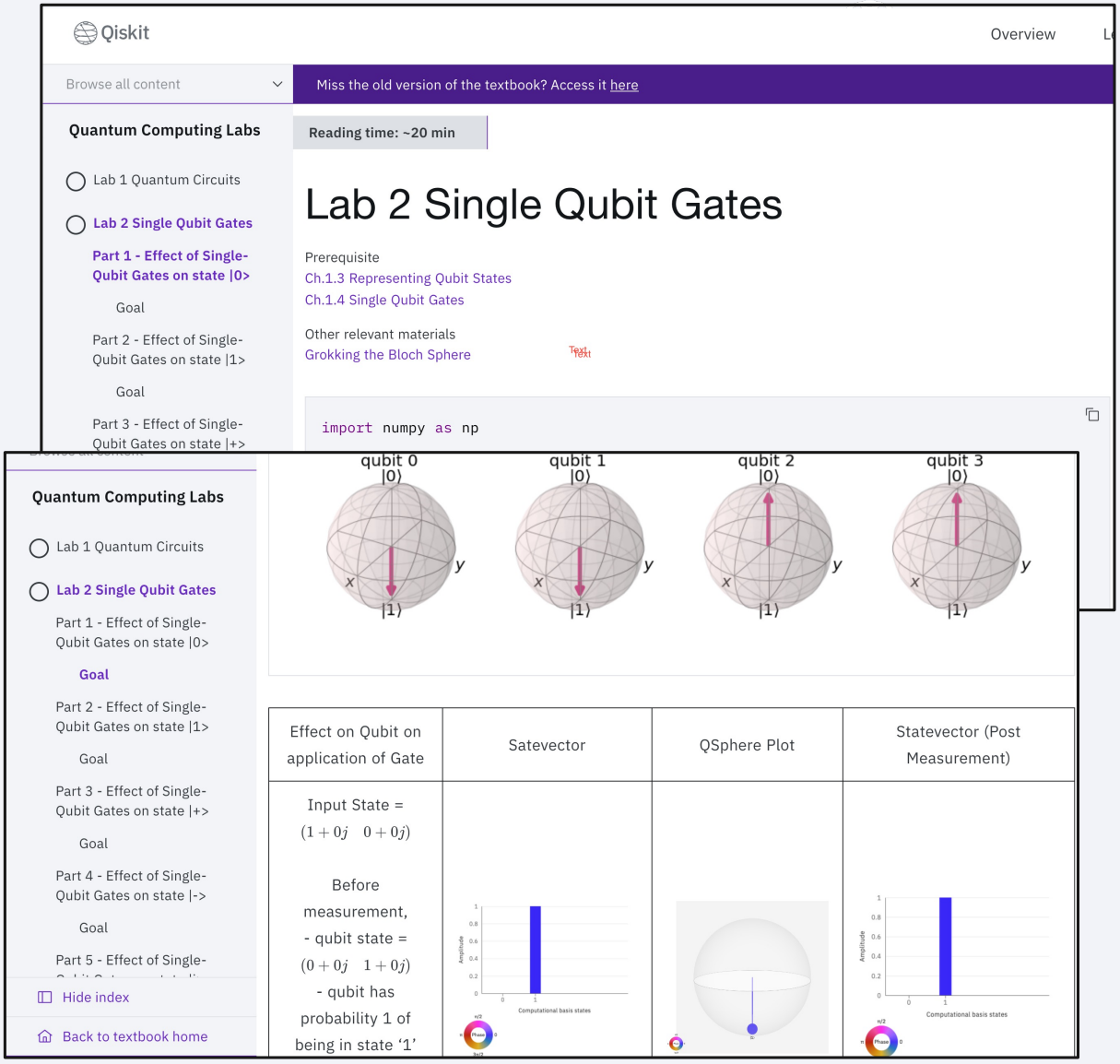
Qiskit

Lab 1 Completed

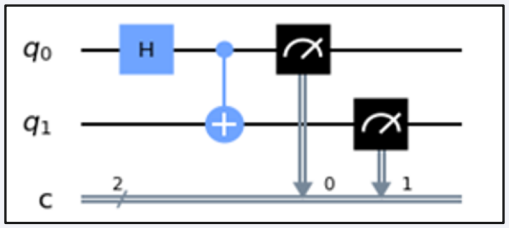
Lab on Single Qubit Gates has now been published on the Qiskit (Quantum Computing Labs) web page and is available for the users to consume.

The lab enables the learners to understand the effects of single qubit gates like Pauli gates and Phase gate (S) on the eigenvectors of X, Y and Z.

The lab also provides a visual depiction of the circuit along with the plot on BlochSphere, QSphere and the input and output/state probability as Statevector.



Lab 2 Completed



Lab 2 was developed with a focus on Bell States

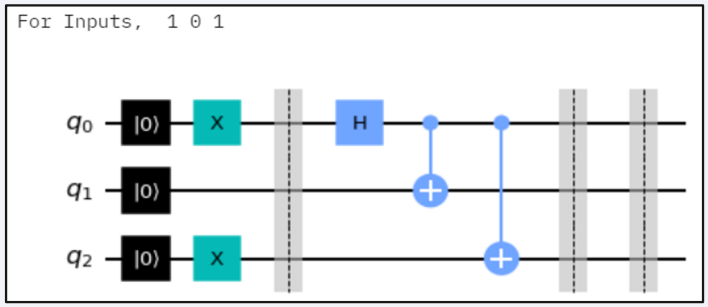
A basic bell circuit using CNOT gate to look closely at the representation of superposition states on:

- QSphere
- Histogram
- City Plot
- Paulivec
- Hinton Plot

Next Steps:

- Publish on Qiskit Lab

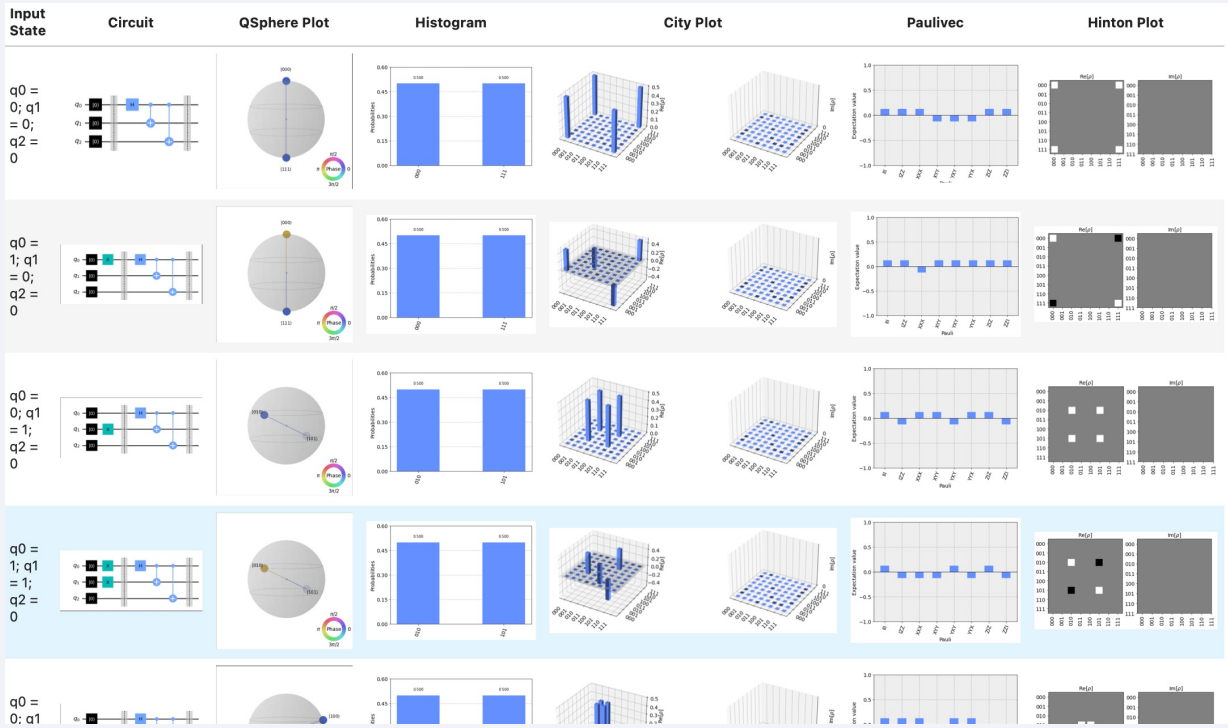
Lab 3 Completed



Lab 3 was developed to understand the GHZ circuit taking 3-qubit and 5-qubit circuits as examples

Representation of all the 8 superposition states of a 3-qubit GHZ circuit on:

- QSphere
- Histogram
- City Plot
- Paulivec
- Hinton Plot



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