Sorting circuit for Quantum Computing

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Presentation

National University Of
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Quantum Computer

- Quantum bits (Qbits)
- Quantum Computing
- Quantum Gates

Quantum Bit

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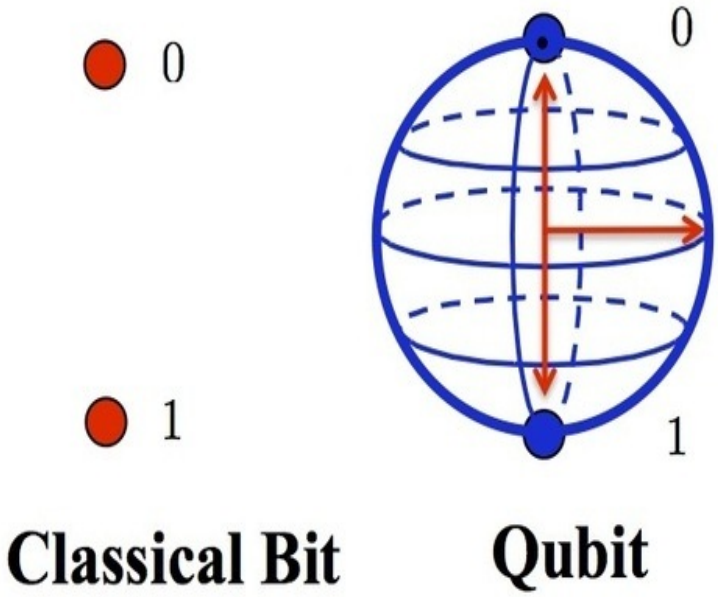
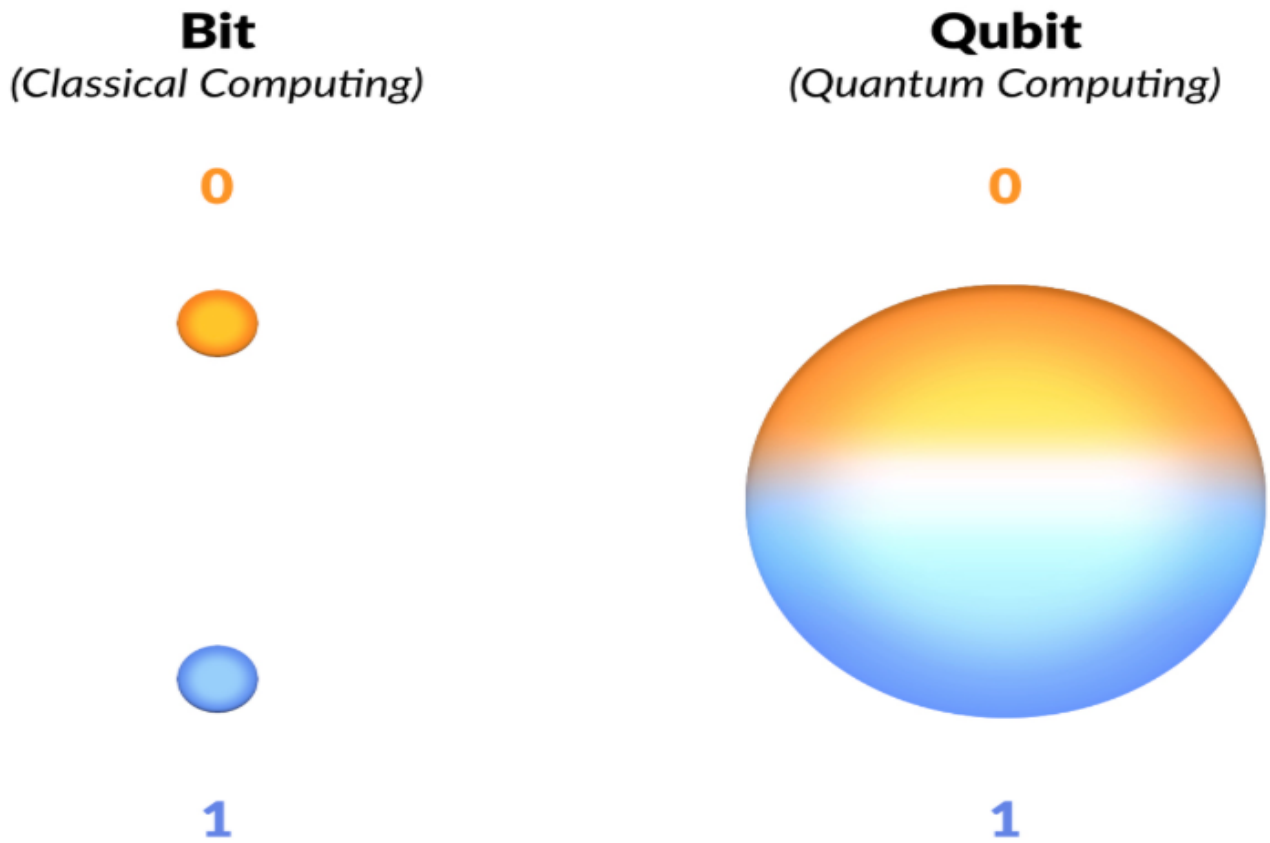
- What is Quantum bit?
- What is Qbit made off?
- Temperature
- Super Conductor



Quantum Phenomenon

- Super Position
- Entanglement



Quantum Gates

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- Hadamard Gate

- ID Gate

- Swap Gate

- X Gate

- CX Gate

Quantum Operations

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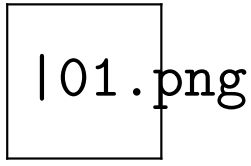
- Barrier Operation

- IF Operation

- 10.png Opertaion



- Z measurement

Tools

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- IBMQ

- Qiskit

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Milestone	Status
Develop working understanding of quantum computing	Done
Study Quantum literature	In progress
Run,deploy quantum program on IBMQ's quantum machine	Done
Implement a Quantum sorted circuit	Done
Increase the qubits for sorting	In progress

Workdone

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- Random Bit Generator
- Number Guess
- Two Qubits Swapping

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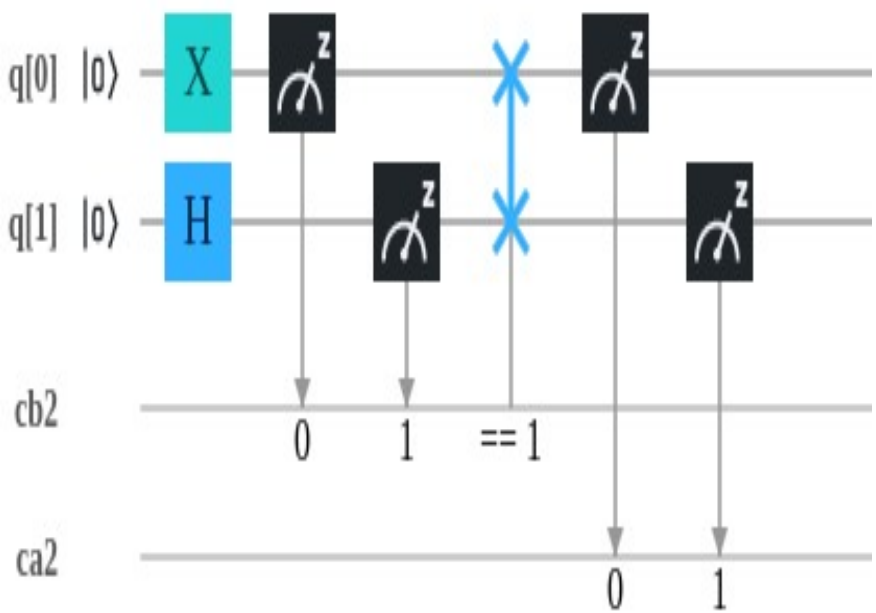
- Two Qubits Circuit



Sorting Quantum Output

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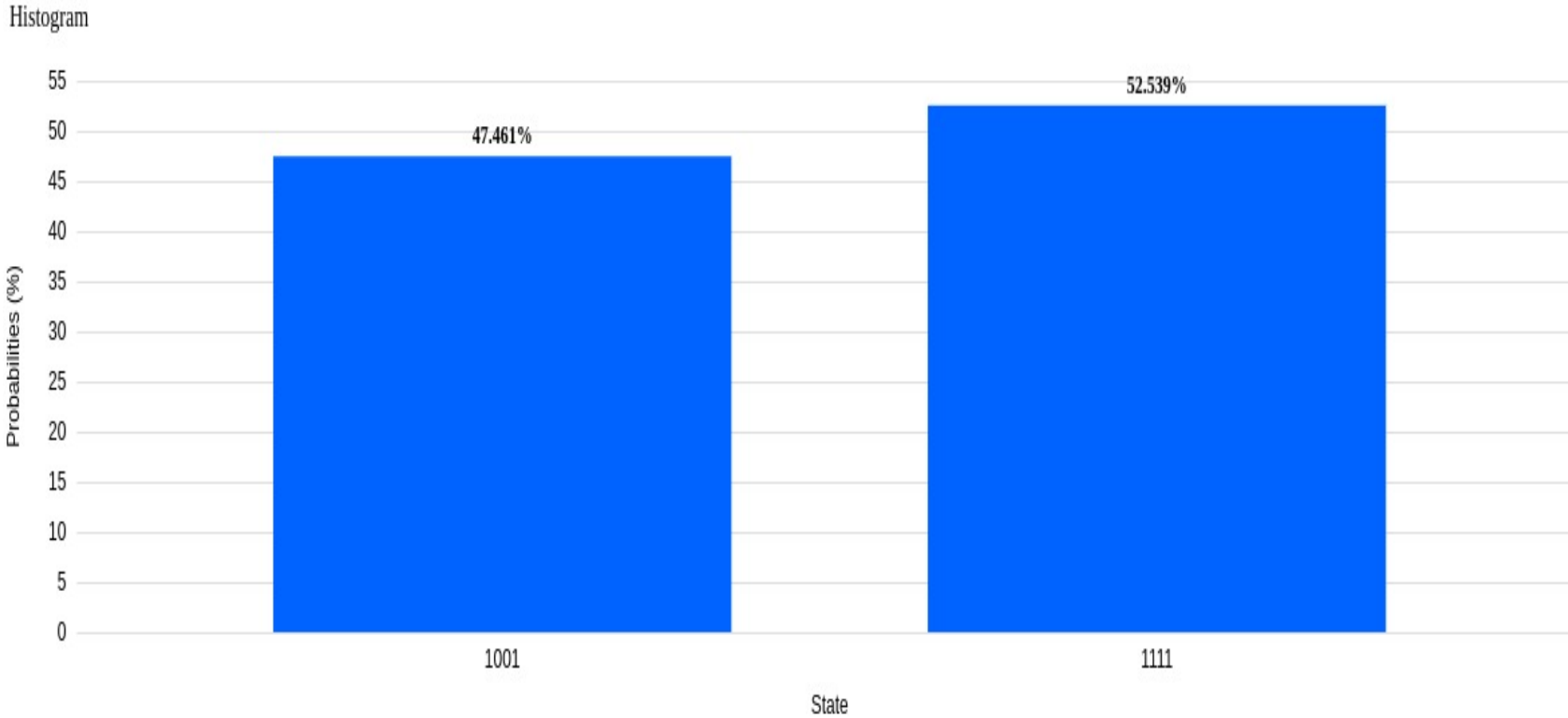
- Output



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- Adder

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Milestone	Status
Expenssion of Sorting Circuit	In progress
Study Quantum literature	In progress

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Sorting N Elements Using Quantum Entanglement sets

D. S. Oliveira and R. V. Ramos, "Quantum bit string comparator: circuits and applications,"Quantum Computers and Computing, vol. 7, pp. 17-26, 2007

J. Maziero, H. Guzman, L. Céleri, M. Sarandy, and R. Serra, "Quantum and classical thermal correlations in the XY spin-1/2 chain,"Physical Review A, vol. 82, p. 012106, 2010.

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Quantum Sort Algorithm bassed On Entanglement Qubits

A. Odeh, K. Elleithy, M. Almasri, and A. Alajlan, "Sorting N Element Using Quantum Entanglement Sets"in innovative Computing Technology (INTECH), 2013 Third International Conference on 2013, pp.213-216

R. P. Feynammn, A. R. Hibbs, and D. Styer, Quantum mechanics and path integrals, Aaver Publications. 2010

Books

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Introduction to Quantum Computing

Phillip Kaye, Raymond Laflamme and Michele Mosca

Quantum Computer Science

N. David Mermin

Quantum Computing for Computer Science

Noson S. Yanofsky and Micro A. Mannucci

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The End