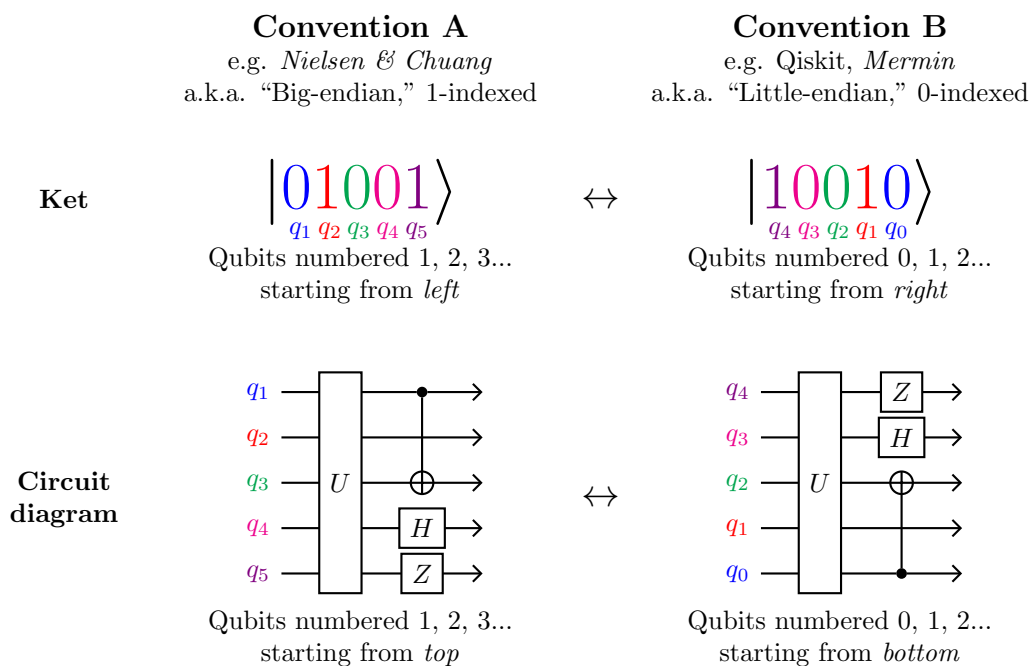# Please read: convention on qubit ordering

Multiple competing conventions exist for the ordering and numbering of qubits inside kets and circuit diagrams. Two common conventions are illustrated here:

Convention A	**Convention B**
e.g. *Nielsen & Chuang*	e.g. Qiskit, *Mermin*
a.k.a. "Big-endian," 1-indexed	a.k.a. "Little-endian," 0-indexed

Ket

$$|01001\rangle_{q_1\,q_2\,q_3\,q_4\,q_5} \quad\leftrightarrow\quad |10010\rangle_{q_4\,q_3\,q_2\,q_1\,q_0}$$

Qubits numbered 1, 2, 3... starting from *left* ↔ Qubits numbered 0, 1, 2... starting from *right*

Circuit diagram

Qubits numbered 1, 2, 3... starting from *top* ↔ Qubits numbered 0, 1, 2... starting from *bottom*

This survey uses **Convention A** throughout. However, in all cases of notational disagreement across textbooks, qubits have been explicitly numbered (using subscripts) to eliminate any possible confusion. **Please pay attention to the qubit number subscripts to ensure you have interpreted notations correctly!**