

**Quantum Architecture and Programming**  
**CS F316**  
**BITS PILANI, GOA CAMPUS**

**Version 1.0**

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**ASSIGNMENT 1**  
**10 units**

In this assignment, the goal is to program any two quantum gates and run the simulated gates to obtain the output. Your task is to program these gates and write a report describing what you did. Expected schematics of the quantum circuit and few examples on how the circuit is likely to behave on different inputs is expected as part of the report. The report should be a maximum of two pages and 11 pt font size. Include figures as necessary.

For reference, please refer to the following section of the qiskit textbook.

[https://qiskit.org/textbook/ch-labs/Lab01\\_QuantumCircuits.html](https://qiskit.org/textbook/ch-labs/Lab01_QuantumCircuits.html)

**Please refer to quanta for the submission deadline.**

*We shall also send instructions on quanta about running the code on actual IBM machines. This is optional but highly recommended.*