* Quantum physics describes the behavior of atoms and fundamentals particles like electrons and photons
* Quantum Computer operates by controlling these particles.
* Quantum Computer is based on Quantum physics
* Quantum Bit has a fluid non-binary identity. It can exist in a combination of zero and one. With some probability of being one and some being zero.
* We have to give to give up the precise value of zero and one and allow for some uncertainty.
* Quantum data has superposition and uncertainty – properties of quantum technology
* 5 foundational topics: superposition, gates, measurement, interference, and entanglement
* Classical computers have bits like 0 and 1. This approach does not solve all the problems we have today
* Superposition – uses qubits which can be a 0,1,or any linear combination of the two.
* Gates – string together using qubits to construct gates
* Measurement – when a qubit is measured, it loses the superposition and collapses into 0 or 1.
* Small number of qubits can represent a large amount of information
* Interference - amplify the correct answers and cancel out the incorrect ones
* Entanglement – changing the state of one qubit, will change the state of another