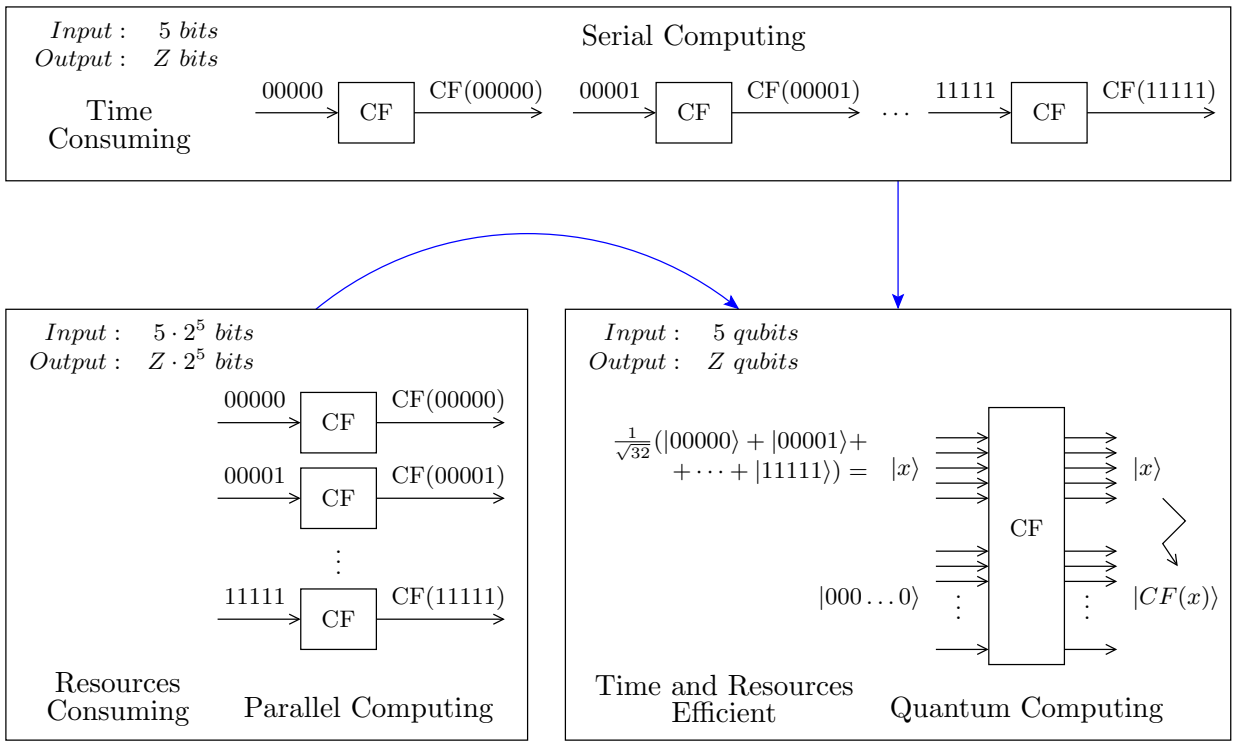
Input : 5 bits
Output : Z bits
Serial Computing
Time Consuming
00000
CF
CF(00000)
00001
CF
CF(00001)
11111
CF
CF(11111)
Input : 5 · 2^5 bits
Output : Z · 2^5 bits
00000
CF
CF(00000)
00001
CF
CF(00001)
11111
CF
CF(11111)
Resources Consuming
Parallel Computing
Input : 5 qubits
Output : Z qubits
|x⟩
CF
|x⟩
|000...0⟩
|CF(x)⟩
Time and Resources Efficient
Quantum Computing