

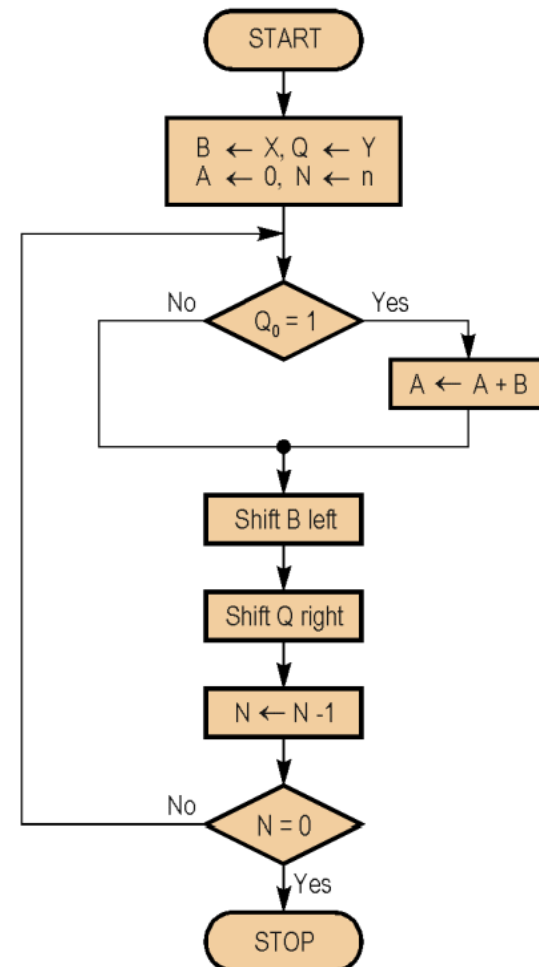
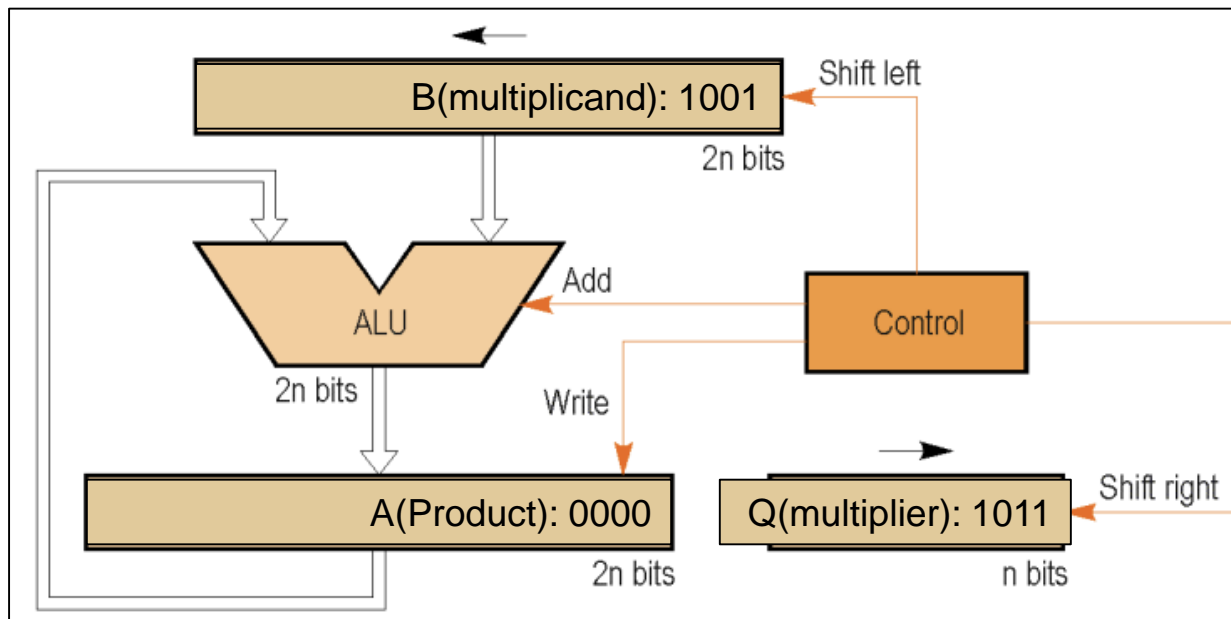
n-bit Add & Shift Multiplier Lab [ver1]

- $\text{Product}(A) \leftarrow \text{Multiplicand}(B) * \text{Multiplier}(Q)$

Multiplicand (B=9)	1001
Multiplier(Q=11)	x 1011

	1001
	1001
	0000
	1001

Product(A:99)	1100011

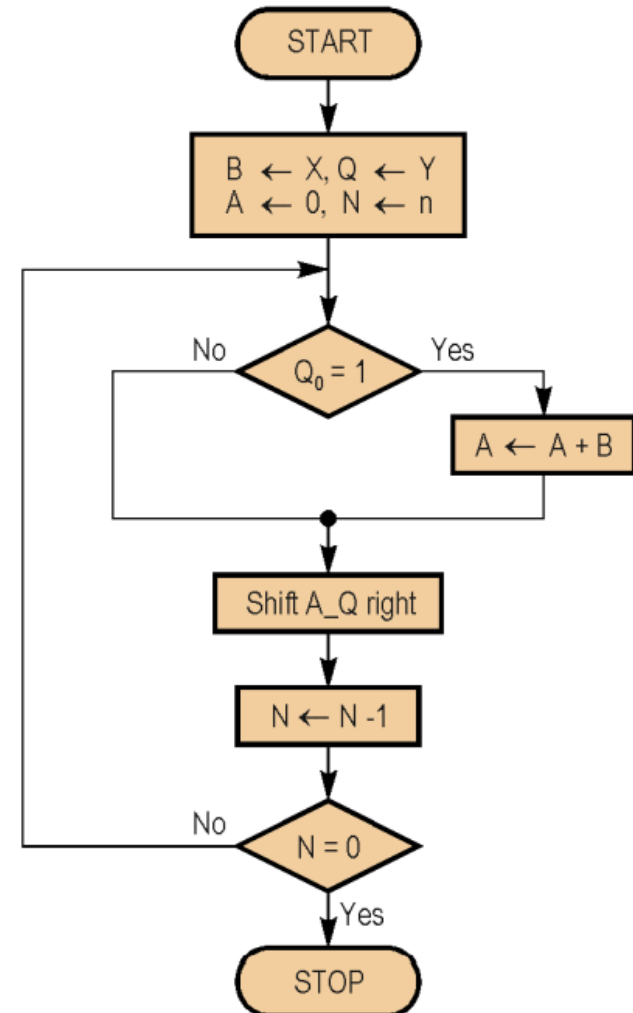
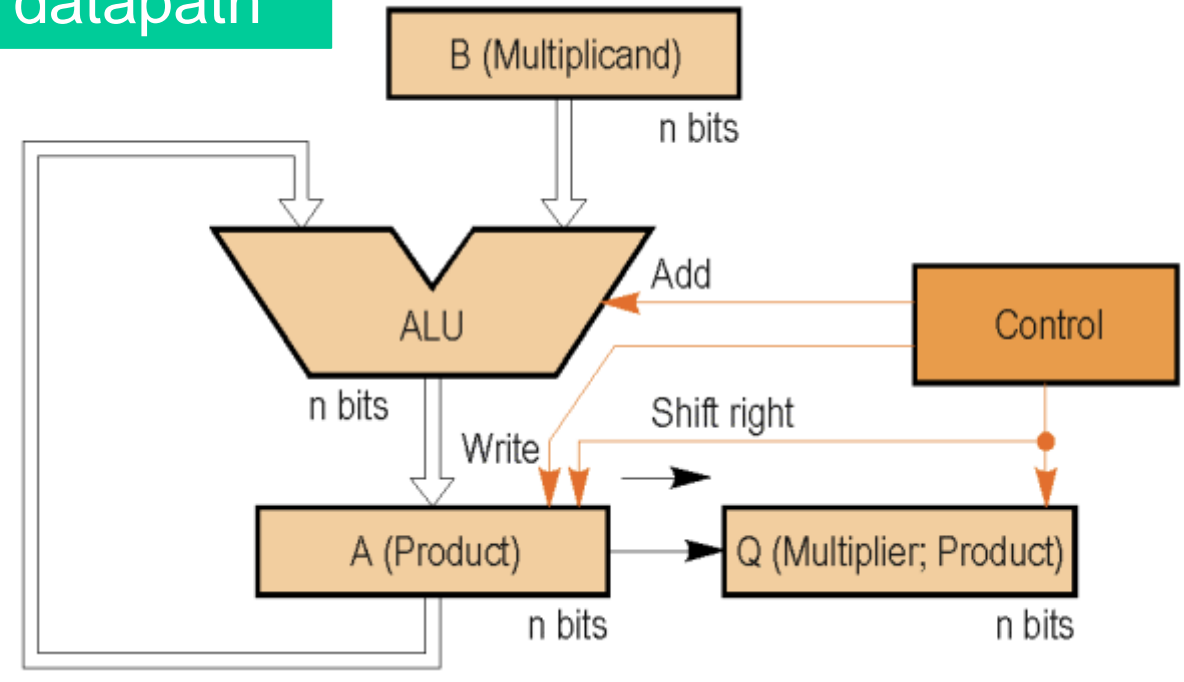


n-bit Add & Shift Multiplier Lab (ver2)

- $\{N, Q\}$
- ← $A * B$

Step	A	Q	B	Operation
0	0000	1100	1001	Initialization
1	0000	0110	1001	Shift right A_Q
2	0000	0011	1001	Shift right A_Q
3	1001	0011	1001	Add B to A
	0100	1001	1001	Shift right A_Q
4	1101	1001	1001	Add B to A
	0110	1100	1001	Shift right A_Q

datapath



N-bit Multiplier Extension Lab

