Deliverables

Src files :

1. 4bit cla
2. 16bit cla
3. Lookahead carry unit ( this is the second level lookahead for c4,c8,c12,c16)

Test\_bench:

1. 4bit cla testbench
2. 16bit cla testbench

4 bit CLA CALCULATIONS:

Pi = Ai ^ Bi

Gi = Ai & Bi

Ci+1 = Gi + Pi & Ci – (although not used here but helps in understanding)

// C1 = G0 + P0\*C0

// C2 = G1 + P1\*G0 + P1\*P0\*C0

// C3 = G2 + P2\*G1 + P2\*P1\*G0 + P2\*P1\*P0\*C0

// C4 = G3 + P3\*G2 + P3\*P2\*G1 + P3\*P2\*P1\*G0 + P3\*P2\*P1\*P0\*C0

// Sum bits: S[i] = P[i] ^ C[i]

// P\_block = P3 & P2 & P1 & P0

// G\_block = G3 + P3&G2 + P3&P2&G1 + P3&P2&P1&G0

WE DO SIMILAR FOR 16 BIT with inputs as P\_block as array element and G\_block as array element

(refer to lookahead carry unit file )