

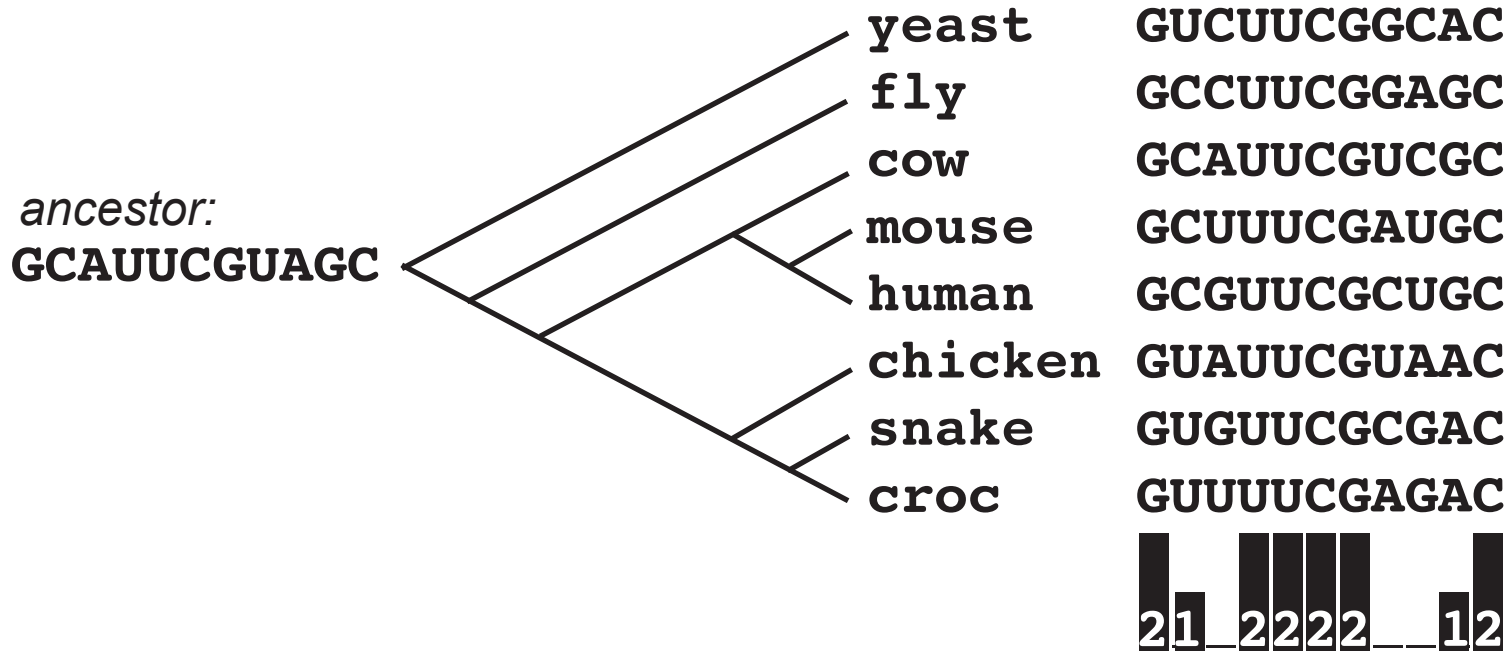


Each column is independent

Maximum information is 2 bits per position, if column is 100% conserved.

$$\log_2 (4/1) = 2 \text{ bits}$$

sequence profile:  
14 bits



expect a match by chance: 1 in  $2^{14}$  nt  $\approx$  16 Kb