

$$H(i, j) = \max \left\{ \begin{array}{ll} H(i-1, j-1) + w(a_i, b_j) & \text{Match/Mismatch} \\ H(i-1, j) + w(a_i, -) & \text{Deletion} \\ H(i, j-1) + w(-, b_j) & \text{Insertion} \end{array} \right\}, 1 \leq i \leq m, 1 \leq j \leq n$$