

The String Alignment Problem

Parameters:

- “*gap*” is the cost of inserting a “-” character, representing an insertion or deletion
- $cost(x,y)$ is the cost of aligning character x with character y .
In the simplest case, $cost(x,x) = 0$ and $cost(x,y) = \text{mismatch penalty}$.

Goal:

- Can compute the edit distance by finding the **lowest cost alignment**.
- Cost of an alignment is: sum of the $cost(x,y)$ for the pairs of characters that are aligned + $gap \times \text{number of - characters inserted}$.