Minimum edit distance algorithm

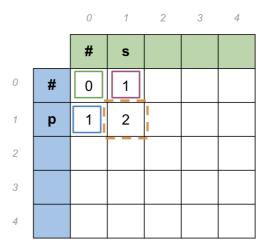
When computing the minimum edit distance, you would start with a *source word* and transform it into the *target word*. Let's look at the following example:

Source: play → Target: stay

Cost: insert: 1, delete: 1, replace: 2

$$p \rightarrow s$$

 $insert + delete: p \rightarrow ps \rightarrow s: 2$
 $delete + insert: p \rightarrow \# \rightarrow s: 2$
 $replace: p \rightarrow s: 2$



To go from $\# \to \#$ you need a cost of 0. From $p \to \#$ you get 1, because that is the cost of a delete. $p \to s$ is 2 because that is the minimum cost one could use to get from \mathbf{p} to \mathbf{s} . You can keep going this way by populating one element at a time, but it turns out there is a faster way to do this. You will learn about it next.