Exercise 2.4 – Edit Distance from "leda" to "deal"

We compute the minimum edit distance using dynamic programming with equal costs for insertion, deletion, and substitution (cost = 1).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | d | e | a | l |
|  | 0 | 1 | 2 | 3 | 4 |
| l | 1 | 1 | 2 | 3 | 3 |
| e | 2 | 2 | 1 | 2 | 3 |
| d | 3 | 2 | 2 | 2 | 3 |
| a | 4 | 3 | 3 | 2 | 3 |

The two strings are:

* Source: leda
* Target: deal
* Edit Distance = 3

Explanation:

* Replace l → d
* Substitute e stays
* Swap d with a
* Final letter a ↔ l (one substitution)