

## **72. Edit Distance**

Given two strings word1 and word2, return the minimum number of operations required to convert word1 to word2.

You have the following three operations permitted on a word:

- Insert a character
- Delete a character
- Replace a character

### **Example 1:**

- **Input:** word1 = "horse", word2 = "ros"
- **Output:** 3
- **Explanation:**
  - ✓ horse -> rorse (replace 'h' with 'r')
  - ✓ rorse -> rose (remove 'r')
  - ✓ rose -> ros (remove 'e')

### **Example 2:**

- **Input:** word1 = "intention", word2 = "execution"
- **Output:** 5

- **Explanation:**

- ✓ intention -> inention (remove 't')
- ✓ inention -> enention (replace 'i' with 'e')
- ✓ enention -> exention (replace 'n' with 'x')
- ✓ exention -> exection (replace 'n' with 'c')
- ✓ exection -> execution (insert 'u')

**Constraints:**

- $0 \leq \text{word1.length}, \text{word2.length} \leq 500$
- word1 and word2 consist of lowercase English letters.