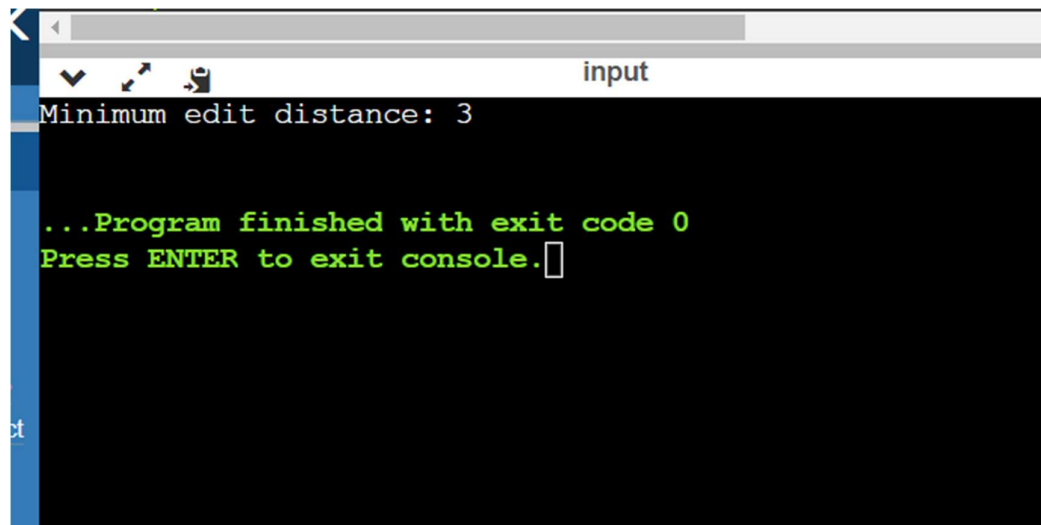


Problem 5 Edit Distance

```
def edit_distance(s1, s2):  
    m, n = len(s1), len(s2)  
  
    # Initialize a 2D table to store the edit distances  
    dp = [[0 for _ in range(n + 1)] for _ in range(m + 1)]  
  
    # Fill in the base cases (first row and first column)  
    for i in range(m + 1):  
        dp[i][0] = i  
    for j in range(n + 1):  
        dp[0][j] = j  
  
    # Fill in the rest of the table using dynamic programming  
    for i in range(1, m + 1):  
        for j in range(1, n + 1):  
            if s1[i - 1] == s2[j - 1]:  
                dp[i][j] = dp[i - 1][j - 1]  
            else:  
                dp[i][j] = 1 + min(dp[i - 1][j],      # Deletion  
                                   dp[i][j - 1],      # Insertion  
                                   dp[i - 1][j - 1])    # Replacement  
  
    return dp[m][n]  
  
s1 = "kitten"  
s2 = "sitting"  
print("Minimum edit distance:", edit_distance(s1, s2))
```



A screenshot of a terminal window with a title bar that says "input". The terminal has a black background with white and green text. The output shows "Minimum edit distance: 3" in white, followed by two lines in green: "...Program finished with exit code 0" and "Press ENTER to exit console." with a cursor. On the left side of the terminal, there is a blue vertical bar and the letters "ct" are partially visible.

```
Minimum edit distance: 3

...Program finished with exit code 0
Press ENTER to exit console.
```