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DAA :-

STRING EDITING :-

Problem analysis :-

For Given 2 strings. First string is source & second is the target string.

& In this we will find how many edits are required to convert source string (1) to target (2). & this edit can be insert source elements, delete or modify to convert to second string.

So,..

modify	delete
insert	

insert → m & n-1

delete → m-1 & n

modify → m-1 & n-1

example:- (I/p):- First string : pqrab
second string : psrab

I/P	0	p	s	r	a	b
0	0	1	2	3	4	5
p	1	0	1	2	3	4
q	2	1	1	2	3	4
r	3	2	2	1	2	3
a	4	3	3	2	2	3
b	5	4	4	3	3	2

min. edit (O/p)

Algorithm:-

```
edit distance (A[1...n], B[1...m])
  D(i,0) ← i  and  D(0,j) ← j for all i,j

  for j from 1 to m:
      for i from 1 to n:
          insertion ← D(i,j-1) + 1
          deletion ← D(i-1,j) + 1
          match ← D(i-1, j-1) + 1

      if (A[i] == B[j]):
          D(i,j) ← min [insertion, Deletion,
                        match ]
      else
          D(i,j) ← min [insertion, Deletion,
                        mismatch ]

      return D(n,m)
```

Time complexity :-

$O(m \times n)$ → length of strings.