

# 664. Strange Printer

Hard

Topics

Companies

There is a strange printer with the following two special properties:

- The printer can only print a sequence of **the same character** each time.
- At each turn, the printer can print new characters starting from and ending at any place and will cover the original existing characters.

Given a string `s`, return *the minimum number of turns the printer needed to print it*.

**Example 1:**

**Input:** `s = "aaabbb"`

**Output:** 2

**Explanation:** Print "aaa" first and then print "bbb".

**Example 2:**

**Input:** `s = "aba"`

**Output:** 2

**Explanation:** Print "aaa" first and then print "b" from the second place of the string, which will cover the existing character 'a'.

**Constraints:**

- `1 <= s.length <= 100`
- `s` consists of lowercase English letters.

Solution:

```
class Solution {
    public int strangePrinter(String s) {
        int[][] dp = new int[101][101];
        for (int i = 0; i < 101; i++) {
            Arrays.fill(dp[i], 1);
        }

        int n = s.length();
        if (n == 0) {
            return 0;
        }
    }
}
```

```
}  
for (int i = 1; i < n; i++) {  
    for (int j = 0; j < n - i; j++) {  
        dp[j][j + i] = i + 1;  
        for (int k = j + 1; k <= j + i; k++) {  
            int temp = dp[j][k - 1] + dp[k][j + i];  
            if (s.charAt(k - 1) == s.charAt(j + i)) {  
                temp--;  
            }  
            dp[j][j + i] = Math.min(temp, dp[j][j + i]);  
        }  
    }  
}  
return dp[0][n - 1];  
}
```