

```
package Day15_16;

public class LongestCommonSubsequence {

    public static void main(String[] args) {
        String str1 = "babbab";
        String str2 = "abaaba";

        int length = LongestCommonSubsequence(str1, str2);
        System.out.println("Length of the common substr : " + length);
    }

    private static int longestCommonSubsequence(String str1, String str2) {
        int m = str1.length();
        int n = str2.length();
        int[][] dp = new int[m + 1][n + 1];

        for (int i = 0; i <= m; i++) {
            for (int j = 0; j <= n; j++) {
                if (i == 0 || j == 0) {
                    dp[i][j] = 0;
                } else if (str1.charAt(i - 1) == str2.charAt(j - 1)) {
                    dp[i][j] = 1 + dp[i - 1][j - 1];
                } else {
                    dp[i][j] = Math.max(dp[i - 1][j], dp[i][j - 1]);
                }
            }
        }
        return dp[m][n];
    }
}
```

```

1 package Day15_16;
2
3 public class LongestCommonSubsequence {
4
5
6     public static void main(String[] args) {
7         String str1 = "babbbab";
8         String str2 = "abaaba";
9
10        int length = longestCommonSubsequence(str1, str2);
11        System.out.println("Length of the common substr : " + length);
12    }
13
14    private static int longestCommonSubsequence(String str1, String str2) {
15        int m = str1.length();
16        int n = str2.length();
17        int[][] dp = new int[m + 1][n + 1];
18
19        for (int i = 0; i <= m; i++) {
20            for (int j = 0; j <= n; j++) {
21                if (i == 0 || j == 0) {
22                    dp[i][j] = 0;
23                } else if (str1.charAt(i - 1) == str2.charAt(j - 1)) {
24                    dp[i][j] = 1 + dp[i - 1][j - 1];
25                } else {
26                    dp[i][j] = Math.max(dp[i - 1][j], dp[i][j - 1]);
27                }
28            }
29        }

```

Markers Properties Terminal Console Coverage

<terminated> LongestCommonSubsequence [Java Application] C:\Users\Nikita\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86\_64\_16.0.2.v  
Length of the common substr :4