Algokomp Lab 1

1. , Matrix M is the distances between different sub-words of "labd" and "blad".
2. It computes the distance between the word w1 up to the x:th character and the word w2 up to the y:th character.
3. In the worst case, the function will run the or the part recursively twice depends on the length of the longest word. So, the complexity is then
4. Pseudocode:

CALC\_M(w1, w2, l1, l2):

int M[l1+1][l2+1];

for(int i = 0; i<=l1; i++) M[i][0]=i;

for(int j = 0; j<=l2; j++) M[0][j]=j;

for(int i = 1; i<=l1; i++)

for(int j = 1; j<=l2; j++) {

M[i][j] = min(M[i-1][j-1]+

(w1.charAt(i-1) == w2.charAt(l2 - 1) ? 0 : 1),

M[i-1][j]+1, M[i][j-1]+1

);

}

1. Time complexity is since all cells is calculated once.
2. Distance between "labs" and "blad" is .
3. The only difference is the last element.
4. The different part is the matrix without the first matrix.