Laboratory practice No. 5: Divide and Conquer, and Dynamic Programming

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3) Practice for final project defense presentation

3.1 For the algorithm, there are implemented two matrices, one for the cost and the other for the visited vertex. The algorithm computes the cost of each vertex and saves it. Then, in the last iteration, it chooses from all the possible paths the one with the least amount of cost.
3.2 O(2^n)
3.3 For the algorithm, it was implemented an adjacency matrix, which holds the initial position and the position of each pile of garbage. Then, the algorithm uses the HeldKarp algorithm to find the shortest path.
3.4 The same answer as in 3.3 applies for this question.
3.5 O(n^2 * 2^n)
3.6 n is the size of the matrix. It is also the number of piles of garbage + 1.

4) Practice for midterms

4.1
4.2
4.2.1 *O(lenx*leny)*
4.2.2 *table[lenx][leny]*
4.3
4.3.1 *a)*
4.3.2 *a)*
4.4
4.4.1 *c)*
4.5
4.5.1 *c)*
4.5.2 *a[mitad]*
4.5.3 *a, mitad + 1, de, z*
4.6
4.6.1 *scm[i] = 1;*
4.6.2 *scm[i] = 1 + scm[j]*
4.6.3 *max = scm[i]*
4.6.4 *O(n^3)*

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4.7
- ***4.7.1*** *d[i][j]*
- ***4.7.2*** *d[k][j]*
- ***4.7.3*** *d[i][k]*
- ***4.7.4*** *O(n^3)*

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