SpecDist 2.0 consists of the following programs:

SpecDist – for computing the spectral distances with respect to either the adjacency matrix, the Laplacian matrix or the signless Laplacian matrix of a graph. The input should be given in a file named *graphs.txt* (see the example). In the case of the adjacency matrix, a matrix-form output obtained by generating graphs by nauty is an appropriate input for this program. For the remaining two matrices, the input should be modified in the appropriate way.

Starting this program, corresponding distances between pairs of graphs are computed, stored in the corresponding dat files (these files appear in the same folder where the exe file is) and sorted. This computation could take some time depending on the size of the input file. The spectra of all graphs will be computed and given, together with a corresponding graph matrices, in the separate txt file.

To see the A-, L- or Q-distances computed, one may choose between the following options:

1. All distances,
2. All distances sorted ascending,
3. All distances sorted descending,
4. Distances less/larger than a selected value,
5. K least/largest distances,
6. Distances in a chosen numeric interval.

These options may be chosen independently. The final result will appear in the txt file.

SpecDist_L – the same as SpecDist but with an input containing the adjacency matrices, and the output containing the L-distances.

SpecDist_Q – the same as SpecDist but with an input containing the adjacency matrices, and the output containing the Q-distances.

Energy_L – for computing the Laplacian energy of graphs. The input should be given in a file named *graphs_L.txt* as in the example.

Energy_Q –for computing the signless Laplacian energy of graphs. The input should be given in a file named *graphs_Q.txt* as in the example.

Starting one of the last two programs, (signless) Laplacian energies of graphs are computed and sorted. An intermediate containing spectra and additional data will apear. After that the user may chose the representation form by selecting one of the options:

1. All energies,
2. All energies sorted ascending,
3. All energies sorted descending.

The final result will appear in the txt file.