**Social Network Interaction Documentation**

The current document presents a description of the public variables and functions which are available to the user.

**socialnetworkinteractionclass.h**

**Class: SocialNetworkInteractionClass**

Public Functions:

**SocialNetworkInteractionClass** ();

Description: Creates an object of class **SocialNetworkInteractionClass**.

~ **SocialNetworkInteractionClass** ();

Description: Destroys the object of class **SocialNetworkInteractionClass**.

void **addFile**(string inputPath)

Description: Function that gets as input the path of data csv file(s) and pushes them back into a vector.

**Parameters: 1. inputPath** –path of data file(s).

void **savePositionsToFile**(Qstring outputPath)

Description: Function that saves vertices’ position and number of connections to a file.

**Parameters: 1. outputPath** –path of output file.

void **computePositions**(float dampenLast, float Dimension, float restDistance, float epsilon, float repulseConstant, float springConstant)

Description: Function that reads the data from the vector of the string(s) of input file path(s) and computes the positions of vertices and the number of connections of each node, of the main K-partite graph.

**Parameters: 1. dampenLast** – Default value: 0.65

**2. Dimension** – Dimension of the graph - Default value: 3000.0

**3. restDistance** – Default value: 10.0

**4. epsilon** – Default value: 0.0000001

**5. repulseConstant** – Repulse constant - Default value: -1 (if the user input a value that is greater than zero, the algorithms accepts selected value. Otherwise, the algorithm uses a default value).

**6. springConstant** – Spring constant - Default value: -1 (if the user input a value that is greater than zero, the algorithms accepts selected value. Otherwise, the algorithm uses a default value).

void **computeAbstractPositions**(float dampenLast, float Dimension, float restDistance, float epsilon, float repulseConstant, float springConstant)

Description: Function that reads the data from the vector of the string(s) of input file path(s) and computes the positions of vertices and the number of connections of each node of the Abstract graph.

**Parameters: 1. dampenLast** – Default value: 0.65

**2. Dimension** – Dimension of the graph - Default value: 3000.0

**3. restDistance** – Default value: 10.0

**4. epsilon** – Default value: 0.0000001

**5. repulseConstant** – Repulse constant - Default value: -1 (if the user input a value that is greater than zero, the algorithms accepts selected value. Otherwise, the algorithm uses a default value).

**6. springConstant** – Spring constant - Default value: -1 (if the user input a value that is greater than zero, the algorithms accepts selected value. Otherwise, the algorithm uses a default value).