Application instructions

The executable files are under the folder '*InnerspecAssignment/d-executable*'.

- To run the application in **Windows**, open the subfolder '*Windows*' and execute the file '*SinusoidalWaveGenerator.exe*'.
- To run the application in **Linux**, open a terminal and access the folder '*InnerspecAssignment/d-executable/Linux*'. Check that the file '*SinusoidalWaveGenerator*' has execute permissions.

  If not, give execute permissions to the file:

  chmod +x SinusoidalWaveGenerator

  After that, run the executable file:

  ./SinusoidalWaveGenerator

  It is supposed that the computer where the application is going to be run has the Qt libraries installed.

A splash screen will be shown during three seconds to welcome the user (only in Windows).

Then, two separated windows will be shown:

- The **main window** will be used by the user to change different parameters.
- The **visualization window** is where the user will see the graph of the sinusoidal wave. Whenever the user changes any of the parameters in the main window, the result will be reflected in real time in the visualization window.

The main window is splitted in different sections:

- The first section, called 'Wave parameters' is used to change the sinusoidal wave parameters: oscillation frequency, number of periods, initial delay and sampling frequency. The user can play with different values. The user won't be able to set not-allowed values. For example, negative values are not allowed in any of the controls.
- The second section, called 'Advanced features' is used to modify some advanced characteristics of the sinusoidal wave, such as the initial amplitude or the attenuation factor. To show the controls of this section, the user must check the box near to the title of the section. The user can also show/hide it through the menu bar > Show > Advanced features. Once the box is checked, the advanced features controls will be shown and the user will be able to play with different values.
- The third section, called 'Visualization features' is used to modify some visualization characteristics of the graph, such as the window size, the line style and the color of the graph. To show the controls of this section, the user must check the box near to the title of the section. The user can also show/hide it through the menu bar > Show > Visualization features. Once the box is checked, the visualization features controls will be shown and the user will be able to play with different values. For example, if the user presses the button called 'Select color', a pick color dialog will be shown. If the user selects a color and accepts the dialog, the color of the graph will be modified accordingly.
- Finally, the user can save the graph being visualized in PNG format. To do so, s/he must

select the option 'Save to file' in the 'File' menu. A file dialog will appear so the user can select where to save the file and with which name. If the user accepts the dialog, a message will be shown in the status bar during five seconds to let the user know if the action has been performed correctly.

- The user can resize the visualization window in two different ways. On one hand, s/he can modify the Data Window Size spin boxes in the main window. On the other hand, s/he can adjust the size of the visualization window with the mouse. In the latter case, the current size of the window will be updated in the main window controls.
- If the user wants to close the application, s/he can do it in two different ways: by pressing the close cross button in the upper right corner of the main window, or by pressing the ESC key when the main window has the focus.

If the user has any doubts about what each control is used for, s/he can hold the mouse over the control, and a tool tip will be shown to help her/him.