INSTRUCTIONS:

The project has been set up by relative linking so no extra settings are required but if in case it doesn't work, refer to the following steps:

1. Include Directory

Right click on the Simulations Project in the Solution Explorer, go to Properties.

a. Then on the new window, click C/C++ then Additional Include Directories.
b. When you see a down arrow, open it and click on the Edit option.
c. On the new Dialog box, you will see a folder icon. Click to open the browse folder option. From there, navigate to the include folder which in this case will be in FINAL PROJECT/Simulations/SFML/include. Select the folder and then hit OK.
d. On the Project Property Pages, hit Apply and then OK to finish the set up.

2. Lib Directory

a. Right click on the Project name in the Solution Explorer, go to Properties.
b. Then go to the Linker tab and click on the Additional Library Directories.
c. When you see a down arrow, open it and click on the Edit option.
d. On the new Dialog box, you will see a folder icon. Click to open the browse folder option. From there, navigate to the include folder which in this case will be in FINAL PROJECT/Simulations/SFML/lib. Select the folder and then hit OK.
e. On the Project Property Pages, hit Apply and then OK to finish the set up.

3. Input dlls

If the code doesn't run after completing the steps mentioned in points 1 and 2 then follow the further steps:

a. Right click on the Project name in the Solution Explorer, go to Properties.
b. On the top left corner, you will see the mode set as either Debug or Release.
   If its **Debug**, then:
   i. Got to the Linker tab and then to Input and then click on the Additional Dependencies option.
   ii. When you see a down arrow, open it and click on the Edit option.
   iii. Then enter sfml-graphics-d.lib in the top-most text box and hit enter. After that add the sfml-window-d.lib & sfml-system-d.lib in the same way. Hit OK.
   iv. Then again hit the OK button on the Project Properties menu to save it.

If its **Release**, then:

      i.   Got to the Linker tab and then to Input and then click on the Additional Dependencies option.

     ii.   When you see a down arrow, open it and click on the Edit option.

   iii.   Then enter sfml-graphics.lib in the top-most Textbox and hit enter. After that add the sfml-window.lib & sfml-system.lib in the same way. Hit OK.

   iv.   Then again hit the OK button on the Project Properties menu to save it.

How to Run:

1) Open the project in Visual Studio.
2) Change the configuration mode to **Release** and the architecture to 'x86'.
3) Then run the project via the Local Windows Debugger.
4) The program starts with water as the default simulation
   a) Press number key **2** to change to **oil** simulation
   b) Press number key **1** to switch back to **water** simulation.
   c) Press **Escape** or hit the close button to close the window.

References:

a. http://matthias-mueller-fischer.ch/publications/sca03.pdf
b. https://www.youtube.com/watch?v=H5FRzSQZkFI
c. https://github.com/tizian/SPH-Water-Simulation