**Instructions for Use**

* Open the ‘project.py’ and ‘rainframework.py’ scripts in an IDE.
* Set the number of raindrops (‘num\_of\_drops’), number of iterations for the model (‘num\_of\_steps’), radius of the raindrops (‘radius’), and size of the environment (‘length’) to the desired values.
* Select ‘Run’ for the ‘project.py’ script.
* In the GUI that appears, select ‘Project’ from the menu bar and then select ‘Run model’. In the window titled ‘Project’, an animation of the model will be shown.
* Once the model has finished running, the message ‘End of model run.’ will be displayed in the Python console, along with a statement expressing whether all raindrops reached an outlet point or not. Here, the term ‘outlet point’ refers to a point of minimum elevation within the landscape.
* Select ‘Project’ from the menu bar again, and there will now be two additional menu options enabled: ‘Calculate…’ and ‘Drainage network’.
* Select ‘Calculate…’ and then ‘Water volume’ to calculate the total volume of water that has reached an outlet point during the model run. This total will be displayed in the Python console and will be appended to a file ‘outlet\_vol.csv’, along with the number of raindrops that reached an outlet, the total number of raindrops used in the model, and the radius of the raindrops, in the same directory as the Python scripts.
* When ‘Drainage network’ is selected from the ‘Project’ menu, there are two options: ‘Show whole network’ and ‘Show common network’.
* Selecting ‘Show whole network’ will display all coordinates of the raindrops across all iterations of the model in the ‘Figure 1’ window.
* Selecting ‘Show common network’ will display the coordinates where three or more raindrops have moved through during the model run in the ‘Figure 1’ window. This gives a more accurate representation of flow accumulation in the landscape.
* If ‘Show whole network’ is selected first, followed by ‘Show common network’, the common network will be overlain onto the whole network.
* To quit the program, select ‘Exit’ from the ‘Project’ menu.