Greengraph coursework report – Robert Sinclair

Installation

In the root directory enter: $ sudo python install setup.py

Or you can install directly from github using pip with:
$ sudo pip install git+git://github.com/velocirobbie/greengraph

Usage

To display all option: $ greengraph –help
A typical graph showing green space between London and Manchester would be achieved with:
$ greengraph –start London –end Manchester –steps 20 –out London_to_Manchester.png
or
$ greengraph -s London -e Manchester -n 20 -o London_to_Manchester.png
Options steps and out do not need to be set. Default steps=10, out=green_between.png

Problems encountered

Using mocks to allow tests to interact with class functions was very difficult and was not explained in the lessons. I'm still not sure what the best way to do this is, using a patch decorator or a patch.object mock behave a bit differently and I'm not sure which is the best practice.

I was also stuck for an embarrassingly long time on linking the entry point script, setup and command files together properly. The example given in the notes didn't quite explain the role of the entryp point scripts/greengraph file which made this harder.

The show_green method seems to be defunct and does not run so I didn't write a test for it.

Package Managers

Packaging a project, including writing tests, documentation, command-line entry points and pip (or other) comparability, increase the time spent on a project but comes with many advantages. A complete project can be accessed and used by many other researchers with little hassle, advancing other's science and increasing the original coder's exposure.

Writing tests for a code project adds validity to its results and reproducibility across different platforms. A properly packaged and tested code will mean other people are more likely to use it.

Preparing code for release ensures a project will reach a cohesive stage where it can be understood and used by others, unlike many codes which keep getting tinkered with and added to until they are only usable by the creator. This is another way to ensure the codes legacy, so that if the main developer(s) leave, there will always be a readable record.

Public libraries and package managers like PyPI and github provide a great way for coders to collaborate, get their work seen and used by others. Use of permissive licences, like the one I have used, allow work to be used and spread freely by others.

Further steps

To build a community of users it would help if the project was published in some way to gain a user base. Otherwise, I would look to collaborate with interested researchers in the University. The project is pretty simple at the moment so a plan of additional functionality and potential uses may encourage other people to work on it.

I have already set up a github repository for this project: this allows different development branches, organising development cycles and issue tracking, which are all useful to a community of collaborating coders.