Subitop modelling course, teaching numerical modelling in python

* Students had diverse background, many of them no programming or modelling background at all; almost none had background in python
* First day (sessions 1,2) went ok.
* Second day (2D, advection, convection) did not: students found it too difficult, stopped showing interest, preferred to do something else.

Things to improve for next time:

* 2 days is too short: better would be 4 or 5 days
* students didn’t like ready-made template approach much: it gives the feeling they haven’t written code from scratch.
* spend more time on:
  + programming procedures (use commenting, structure of code, make very regular backups, always check every step)
  + how to debug a code (learning how to read error messages of python, matlab or compiler messages of any compiled languages, print statements to see what’s going wrong; use bisection to find where code is failing)
* Have more discussion intermezzos
* Give students a clearer goal, perhaps a short project of their choice at the end
* Simple upwind is good for understanding: it really uses finite difference approach. But also allow time to use semi-Lagrangian advection scheme, since it works so much better.
* Allow time at end to do something with the convection code too
* Perhaps spend less time on deriving physical equations? For some students, this was too much maths.