MEA 712: (An Introduction to) Mesoscale Atmospheric Modeling
First mini computing assignment

Before embarking on the more complicated tasks that will come later in the semester, we are going to build up a very very simple model, step by step. The goal is to brush up our coding skills and familiarize everyone with what a finite difference model “looks like”.

**Due at the start of the next class (Tuesday 28 August)**

The first mini assignment is to simply set up the FORTRAN code.

1. Set up a program named `SIMPLEMOD`, with `STOP` and `END` statements at the end.

2. Declare the variables to be used in the code.
   a) Our model will be 1-D, extending only in the x-direction. The number of points on the domain will be `NX`, which is an integer.
   b) Use a `PARAMETER` statement to assign a value to `NX`. For now, it can be any integer value that you like.
   c) The spacing between the points on our grid (with units of meters) will be represented by the variable `DX`, which is a real.
   d) Our simple model will be used to timestep forward the variable `PSI`, which is a real. We will represent this variable on each grid point, so the dimension of `PSI` should be `NX`.
   e) We will use the index `I` to represent which grid point we’re looking at/working on. It should be an integer.
   f) Add a `PRINT *, ’HELLO WORLD!’` statement as the body of your code, and make sure that it compiles and runs.

3. Print out your code and bring it to class to receive credit.