**Exercise: A Very Simple Exercise for Using NetCDF**

1. If you haven’t already, install NetCDF, using the instructions in the document “Building NetCDF.”
2. From the directory from which you built NetCDF, go into the subdirectory named examples:

**cd examples**

1. Choose your preferred programming language (among those available) and go into that directory; for example:

**cd C**

1. Create a subdirectory of your home directory named Original:

**mkdir Original**

1. Copy all of the source files into that new directory, so that you have the originals to refer back to, just in case; for example:

**cp \*.c Original**

1. Any file whose name ends with the extension .nc (dot nc) files are not readable. But, we can convert them into a text file. Next we are going to convert simple\_xy.nc into simple\_xy.txt using the ncdump command. Do the following:

**../../ncdump/ncdump simple\_xy.nc > simple\_xy.txt**

1. Look at content of the simple\_xy.txt using the cat command:

**cat simple\_xy.txt**

1. Using your preferred text editor (for example, vi, emacs, nano), edit simple\_xy\_wr.c to change the formula for calculating data\_out to:

**data\_out[x][y] = x \* NY + y \* NX;**

1. **Note**: In order to know all NetCDF commands you might want to look at the NetCDF full documentation.
2. Once you’ve edited your source file, compile, linking to the NetCDF library:

**make simple\_xy\_wr**

1. Run the test program:

**simple\_xy\_wr**

1. You can examine the contents of the output file using the ncdump utility:

**../../build/bin/ncdump simple\_xy.nc > simple\_xy2.txt**

1. Look at the content of both .txt files:

**cat simple\_xy.txt**

**cat simple\_xy2.txt**

1. Repeat the above steps (8 through 13), but this time you should change the name of data\_out to temperature (i.e., temperature as a function of x and y).