**Mac OS – GCC, OpenMPI installation**

1. Install Xcode from Appstore which has the GNU compilers bundled with it: <https://www.cs.auckland.ac.nz/~paul/C/Mac/xcode/>

OR

1. Install the GCC compiler alone:

Using Xcode tools: <https://www.cs.auckland.ac.nz/~paul/C/Mac/>

OR Using Brew: <https://apple.stackexchange.com/questions/38222/how-do-i-install-gcc-via-homebrew>

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2. Install OpenMPI Package:

Download the latest version- [openmpi-4.1.1.tar.gz](https://download.open-mpi.org/release/open-mpi/v4.1/openmpi-4.1.1.tar.gz) from:

<https://www.open-mpi.org/software/ompi/v4.1/>

Move the zip to some temporary location and cd into it using terminal

Run the following commands:

tar zxvf openmpi-4.1.1.tar.gz

cd openmpi-4.1.1

./configure --prefix=/opt/openmpi

./configure CC=cc --prefix=/opt/openmpi

make all

sudo make install

ln -s ~/.bash\_profile ~/.bashrc

echo 'export PATH="$PATH:/opt/openmpi/bin"' >> ~/.bashrc

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Any editor Xcode/VScode/etc. can be used for the programs.

Open the terminal, cd into folder with the code files

Compile: mpicc filename.c -o exename

Execute: mpirun -np <number of processors> exename