Notes:
Make sure that CUDA is installed and working. For more information check: Module 7.10 Installing and running CUDA

Make sure that python is installed. To install python using Anaconda

https://docs.anaconda.com/anaconda/install/windows/
After installing Anaconda, check that Jupyter notebook is working properly.

Make sure that Numba is installed. To install using Conda, type:

conda install cudatoolkit

If you are not using Conda or if you want to use a different version of CUDA toolkit, check here: https://numba.pydata.org/numba-doc/latest/cuda/overview.html

Exercises

1. Review the code Numa_example.ipynb in Jupyter notebook
2. Similar to the given example, write a python code with Numba to add two 1D lists

Since it is a 1D array, you need to use single dimension instead of 2 Dimension
Solution: Numba_exercise.ipynb

- In this work, the 2D needs to be changed to 1D.
- Lists should be 1D
- Memory allocation should be for 1D
- For blockspergrid, blockspergrid_y is not required
- In the kernel, cud.grid(1) should be used to get thread id
- Add only the x dimension

Common Pitfalls for Students and Instructors

- Students will need at least some basic knowledge of CUDA concepts and GPU, working with Numba without these prerequisites can make the concept confusing and implementation difficult
- Make sure that CUDA, Python and Numba are installed and set correctly in path if using from command line