National Supercomputing Mission | Centre for Development of Advanced Computing

Distributed for the course "HPC Shiksha: Basics of High Performance Computing"
Course Website: https://www.iitgoa.ac.in/hpcshiksha/

Installation Steps on Linux Systems

In case the user plans to make use of their own system with Nvidia GPU, the steps mentioned in the CUDA installation guide based on the linux Distro needs to be followed:
https://docs.nvidia.com/cuda/cuda-installation-guide-linux/index.html

Can also follow this https://www.youtube.com/watch?v=UhuK9ShIpf8

Installation Steps on Windows Systems

In case the user plans to make use of their own system with Nvidia GPU, the steps mentioned in the CUDA installation guide needs to be followed: https://docs.nvidia.com/cuda/cuda-installation-guide-microsoft-windows/index.html

Installation Steps on Linux on Windows Systems
We do not recommend users using to use linux VM on Windows for these sessions.

CUDA on Google Colab
1. From any browser search for google colab (https://colab.research.google.com/notebooks/intro.ipynb).
2. Create a new notebook using File->New notebook (on top left).
3. Change the runtime to GPU using Runtime->change runtime type (on top left).
4. Copy a simple hello world example from https://subscription.packtpub.com/book/programming/9781788996242/1/ch01lvl1sec03/hello-world-from-cuda
5. Save the above program as hello.cu

6. Upload the hello.cu file to google colab using the file icon on center left of your colab notebook.
7. Compile your code with !nvcc hello.cu -o hello by typing it on a cell and run the cell.
8. Execute your code with !./hello by typing it on a cell and run the cell.
9. Expected output :-

```
Hello World from host!
Hello World! from thread [0,0]          From device
```