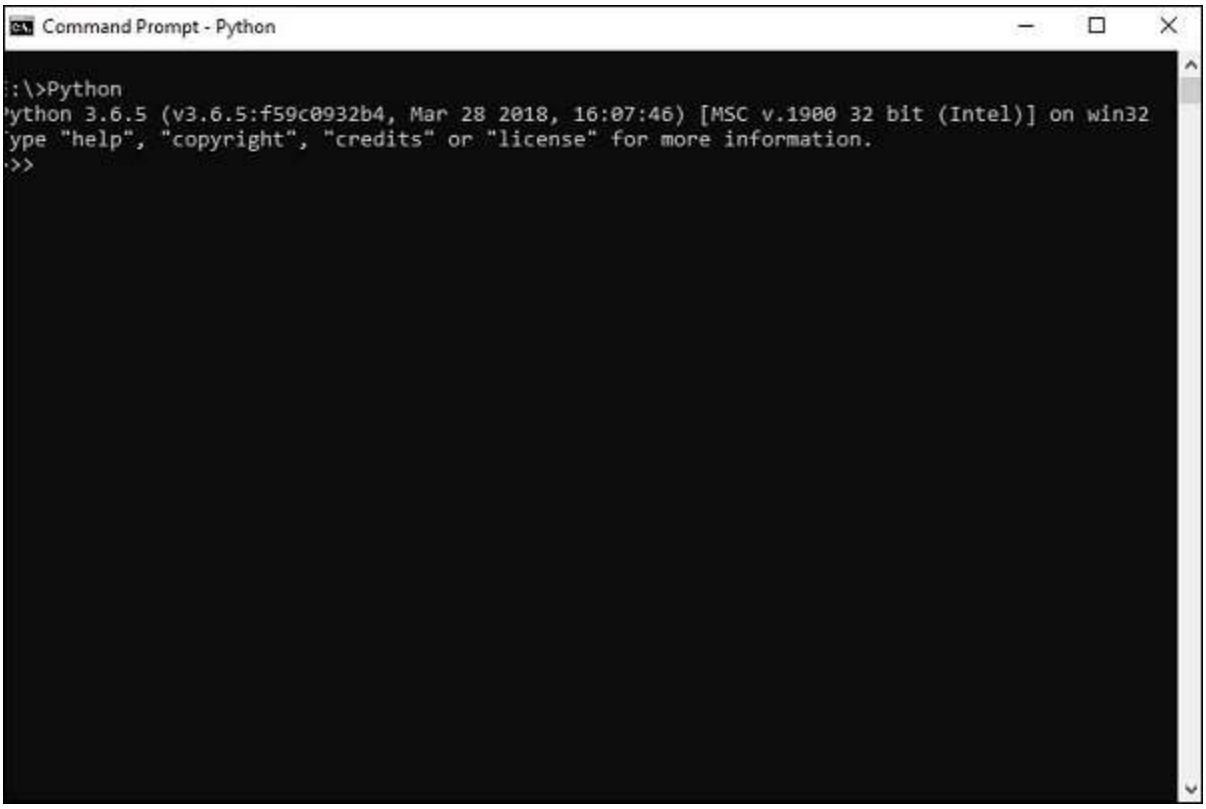
Assignment 7

Aim: Installation of Tensor Flow

To install TensorFlow, it is important to have “Python” installed in your system. Python version 3.4+ is considered the best to start with TensorFlow installation.

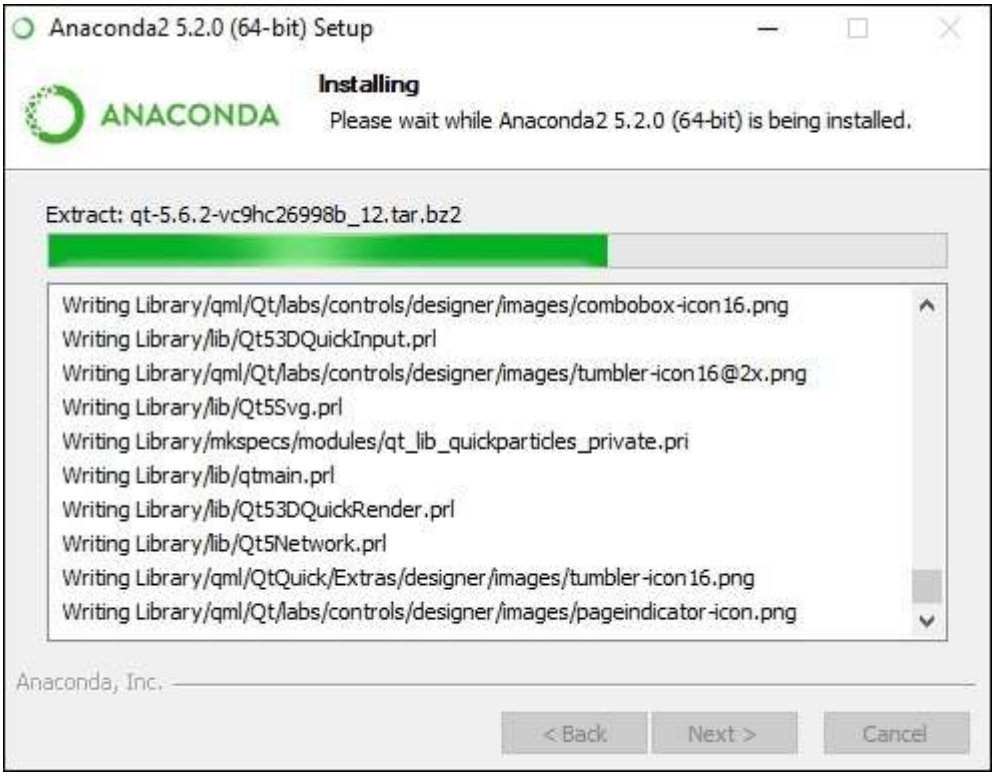
Consider the following steps to install TensorFlow in Windows operating system.

Step 1 − Verify the python version being installed.



Step 2 − A user can pick up any mechanism to install TensorFlow in the system. We recommend “pip” and “Anaconda”. Pip is a command used for executing and installing modules in Python.

Before we install TensorFlow, we need to install Anaconda framework in our system.

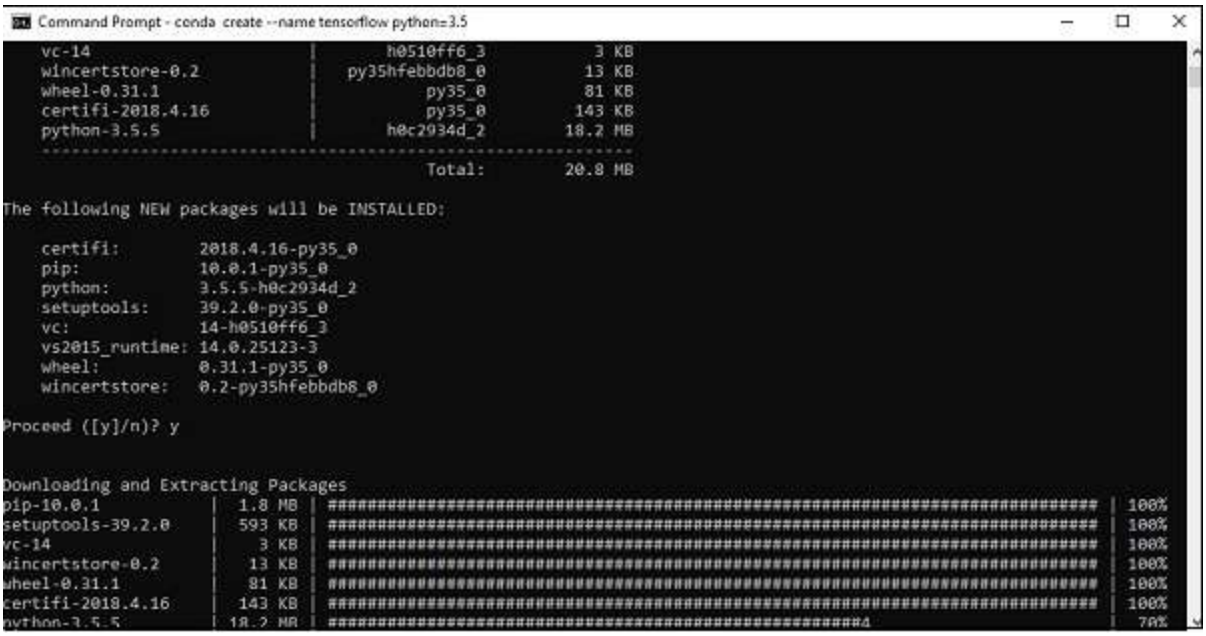


After successful installation, check in command prompt through “conda” command. The execution of command is displayed below –

```
C:\Users\Radhika>conda
usage: conda [-h] [-V] command ...

conda is a tool for managing and deploying applications, environments and packages.

Options:

positional arguments:
  command
    clean        Remove unused packages and caches.
    config       Modify configuration values in .condarc. This is modeled
                 after the git config command. Writes to the user .condarc
                 file (C:\Users\Radhika\.condarc) by default.
    create       Create a new conda environment from a list of specified
                 packages.
    help         Displays a list of available conda commands and their help
                 strings.
    info         Display information about current conda install.
    install      Installs a list of packages into a specified conda
                 environment.
    list         List linked packages in a conda environment.
    package      Low-level conda package utility. (EXPERIMENTAL)
    remove       Remove a list of packages from a specified conda environment.
    uninstall    Alias for conda remove. See conda remove --help.
    search       Search for packages and display associated information. The
                 input is a MatchSpec, a query language for conda packages.
                 See examples below.
```

Step 3 − Execute the following command to initialize the installation of TensorFlow –

conda create --name tensorflow python = 3.5



It downloads the necessary packages needed for TensorFlow setup.

Step 4 − After successful environmental setup, it is important to activate TensorFlow module.

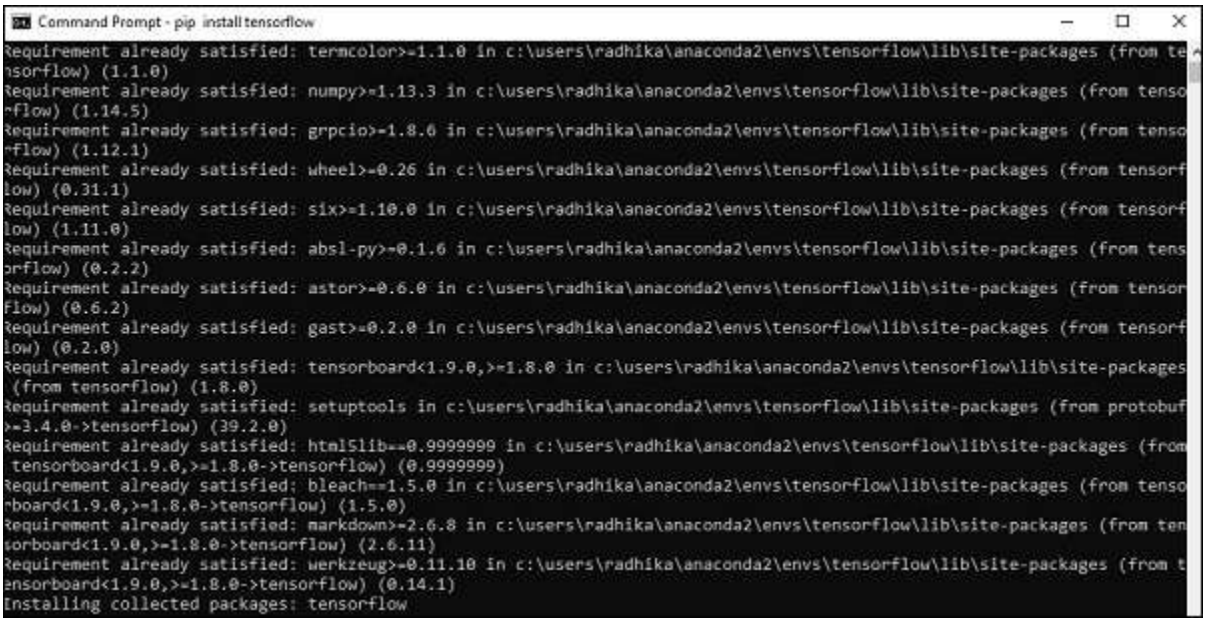
activate tensorflow

Step 5 − Use pip to install “Tensorflow” in the system. The command used for installation is mentioned as below –

pip install tensorflow

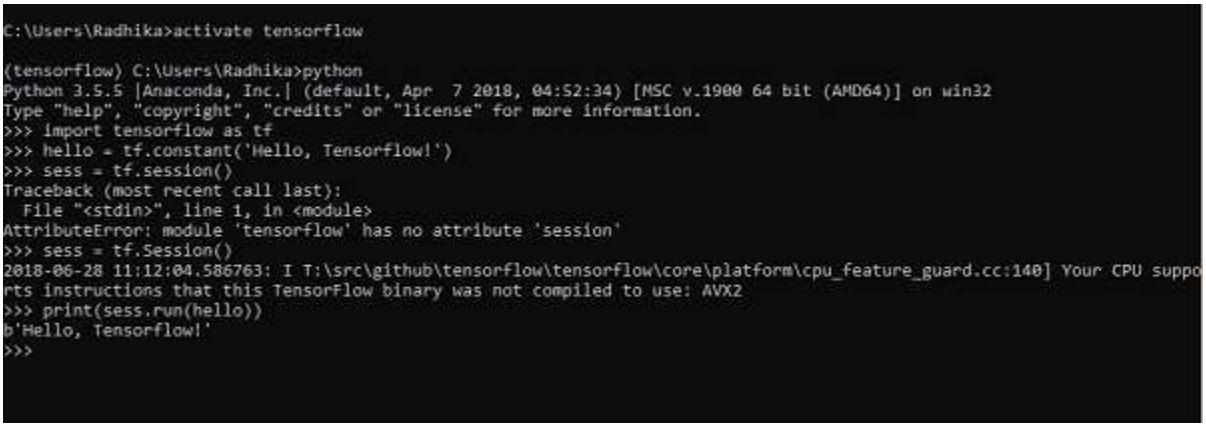
And,

pip install tensorflow-gpu



After successful installation, it is important to know the sample program execution of TensorFlow.

Following example helps us understand the basic program creation “Hello World” in TensorFlow.



The code for first program implementation is mentioned below –

>> activate tensorflow
>> python (activating python shell)
>> import tensorflow as tf
>> hello = tf.constant('Hello, Tensorflow!')
>> sess = tf.Session()
>> print(sess.run(hello))

Conclusion:----------