Weekly Exercise 1:   **Submission Deadline: 18-08-2020**

Ex. 1) Generation of continuous signals using Python(Note: use plot function)

   a) sine   b)cosine   c)sawtooth wave   d)Square wave   e) Triangular

Ex. 2) Generation of discrete signals using Python(Note: use stem function)

   a) impulse   b)step   c)ramp   d) Exponentially growing Signal   e) Exponentially decaying signal

Ex. 3) Generate continuous time and discrete time signal for the following

   (a) y = sin(t)

   (b) y= cos(2πt)

   (c) y=cos(5t + sin (2t))

Ex. 4) Consider the following length 7 sequences defined for -3≤ n ≤3

x[n] = [3 -2 0 1 4 5 2], y[n] = [0 7 1 -3 4 9 -2], w[n] = [-5 4 3 6 -5 0 1]. Generate the following sequences

a) u[n] = x[n] + y[n],   b) v[n] = x[n].w[n],   c) s[n] = y[n] – w[n], and d) r[n] = 4.5y[n]

Ex. 5) Generate the sequences

a)   x[n] = sin(0.6πn+0.6π)   b) x[n] = 2cos(1.1πn -0.5π)   c)x[n] = n modulo 6

Note:

1) All exercises must be implemented using Jupyter Notebook.(Language:python)

2) Please do all sub questions in a single Jupyter notebook only.

2) Install and import all necessary packages based on the task given.

3) Indicate all steps clearly with explanation.

4) After execution download .pdf and .ipynb file which includes code, explanation as well as output.

Do's:

1. Please use Jupyter notebook to complete your lab exercises and submit before deadline.

2. In Jupyter notebook please add the complete explanation for the topic and modules/libraries you used to complete the lab exercise.

3. Once you complete the lab exercise please record the working demo video of the exercise and upload.

4. Save your notebook filename and video as your_roll_no.ipynb.
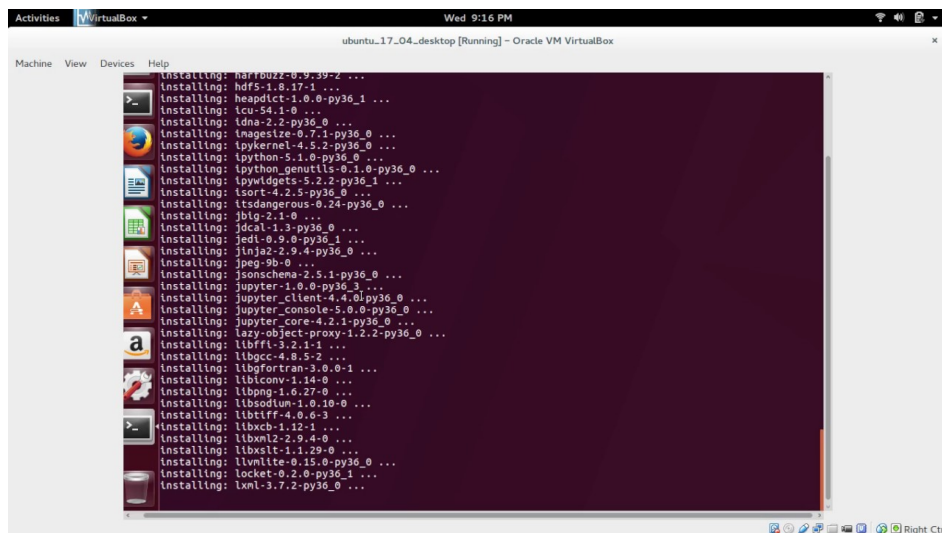   **(eg. 191IT49_yourname.ipynb).**

Dont's:

1. Try not to share the solution of the lab exercise with the other groups.

Installation procdeure:

1. Please use the below link for installing Anaconda and create the environment.
   1.

2. Then after activating environment use below command to open Jupyter notebook

   jupyter notebook

3. Then you can start working on your lab exercise.