Assignment 5: GAN

The purpose of the assignment is to make you familiar with the working principles of Generative Adversarial Networks based on CNN.

Data: MNIST dataset

Reference:
https://gluon.mxnet.io/chapter14_generative-adversarial-networks/dcgan.html

Tasks:

Run your models for 20 epochs (You need not worry about the accuracy score or loss. Gradings would be done based on your experiments).

Build your generator and discriminator using the reference given above and play around with these 3 hyperparameters only.

1. Number of convolution layers
2. Filter size
3. Different Optimizers (Adam, SGD)

You have to build 3 models with reasonable values of hyperparameters (given above) of your choice.

Submit the following:

1. One Jupyter notebook with 3 models. Name it as **<RollNo>_Assignment5.ipynb**
2. Plot 1 generated sample per class after training. Do it for all 3 experiments.