

Observation 1:

Part 1:GAN

When the experiment was conducted using the lesser layers the following results were observed after 300 epochs



Fig 1

After retraining the model for another 50 epochs



Fig 2

From Fig 1 and Fig 2, we can see that the prediction has improved as getting closer to the real image.

## Observation 2

When the number of layers increased for GAN the slight improvement in the results was observed.



Fig 3

After retraining it for another 50 epochs the accuracy has improved



Fig 4

**Observation 3:**

Based on theory, the LSGAN performs better than GAN it can be seen in Fig 5. If compared with Fig 1 then we can see that the images from LSGAN are much cleaner i.e., with less error after training for the first 300 epochs.



Fig 5

After retraining it for another 50 epochs the accuracy has improved.



Fig 6

The system crashed multiple times when the number of layers was increased and also the training time was increased. However, the results were almost the same. Also after increasing the number of layers for LSGAN the result image quality was decreased.