In [4]:

```
import tensorflow as tf
import pathlib
import matplotlib.pyplot as plt
```

In [5]:

```
IMG_WIDTH = 256
IMG_HEIGHT = 256
BATCH_SIZE = 1

def normalize(img):
    img = tf.cast(img, tf.float32)
    img = (img / 127.5) - 1
    return img

def read_file(filename):
    # read the filename
    x = tf.io.read_file(filename)
    # Convert into color image
    x = tf.image.decode_jpeg(x, channels=3)
    x = normalize(x)
    # return image with specific image width and height
    return tf.image.resize(x, [IMG_WIDTH//2, IMG_HEIGHT//2])

# Code credit: https://www.tensorflow.org/tutorials/generative/cyclegan
# Generate image from particular model when feeding test_input as input
def generate_images(model, test_input):
    prediction = model(test_input)

    plt.figure(figsize=(12, 12))

    display_list = [test_input[0], prediction[0]]
    title = ['Input Image', 'Predicted Image']

    for i in range(2):
        plt.subplot(1, 2, i+1)
        plt.title(title[i])
        # getting the pixel values between [0, 1] to plot it.
        plt.imshow(display_list[i]*0.5+0.5)
        plt.axis('off')
    plt.show()

def predictImage(data_dir, BUFFER_SIZE, F):
    print('*'*50)
    data_dir = pathlib.Path(data_dir)
    print(data_dir)
    list_1 = tf.data.Dataset.list_files(str(data_dir)+'/*')
    print(list_1)
    for i in list_1.take(5):
        print(i.numpy())
    test = list_1.map(read_file, num_parallel_calls=-1)
#     sampletest = next(iter(test))
    test = test.shuffle(BUFFER_SIZE).batch(BATCH_SIZE)
    for inp in test.take(5):
        generate_images(F,inp)
```

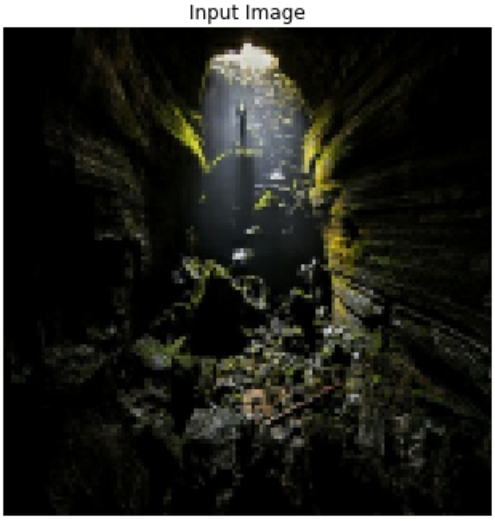
In [6]:

```
# Load saveModel
F = tf.keras.models.load_model('F_Model')
# Just enter the directory which contain photo images with image size 256x256.
predictImage('./datasets/cezanne2photo/testB/',100,F)
```

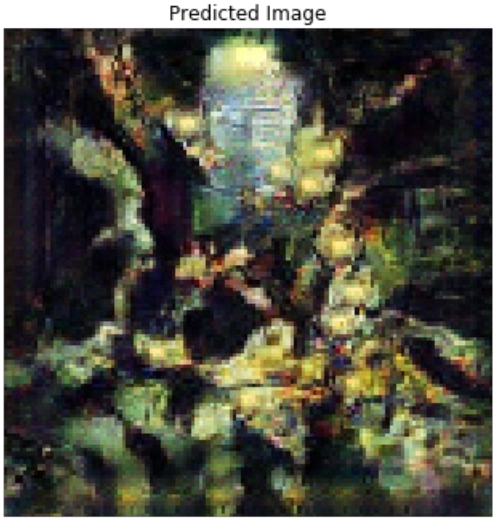
```
WARNING:tensorflow:No training configuration found in save file, so the model was *not* compiled. Compi
le it manually.
**************************************************
datasets\cezanne2photo\testB
<ShuffleDataset shapes: (), types: tf.string>
```

```
b'datasets\\cezanne2photo\\testB\\2014-12-18 03_04_56.jpg'
b'datasets\\cezanne2photo\\testB\\2014-10-14 19_47_48.jpg'
b'datasets\\cezanne2photo\\testB\\2014-08-01 22_38_22.jpg'
b'datasets\\cezanne2photo\\testB\\2014-12-24 05_41_33.jpg'
b'datasets\\cezanne2photo\\testB\\2014-12-08 10_31_27.jpg'
```

Input Image

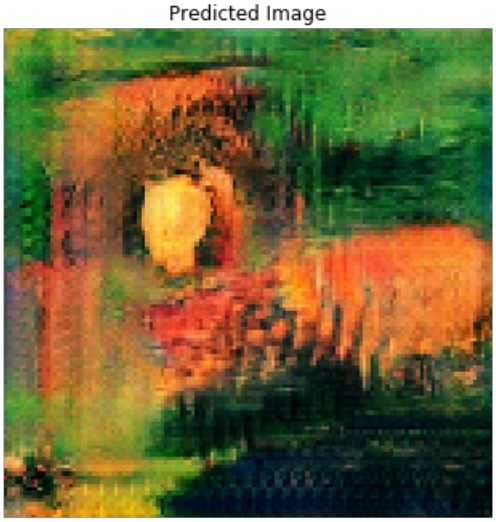


Predicted Image



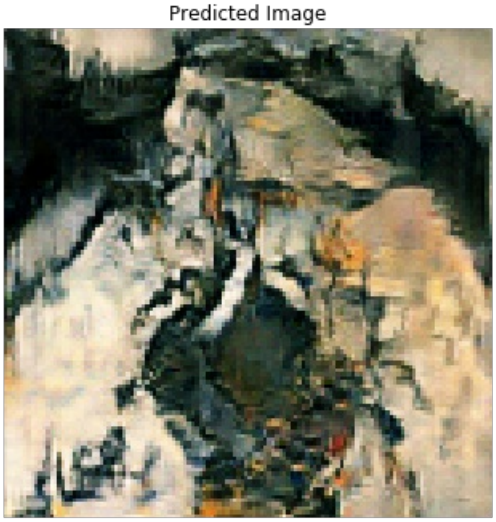
Input Image

Predicted Image



Input Image

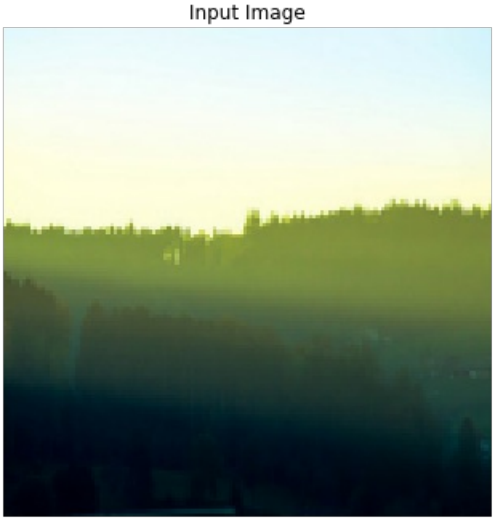
Predicted Image



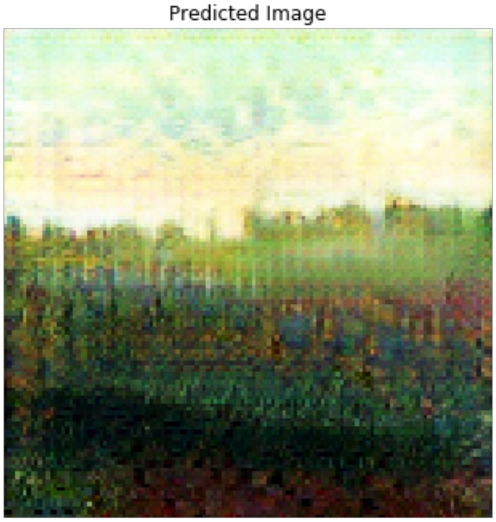
Input Image

Predicted Image

Input Image

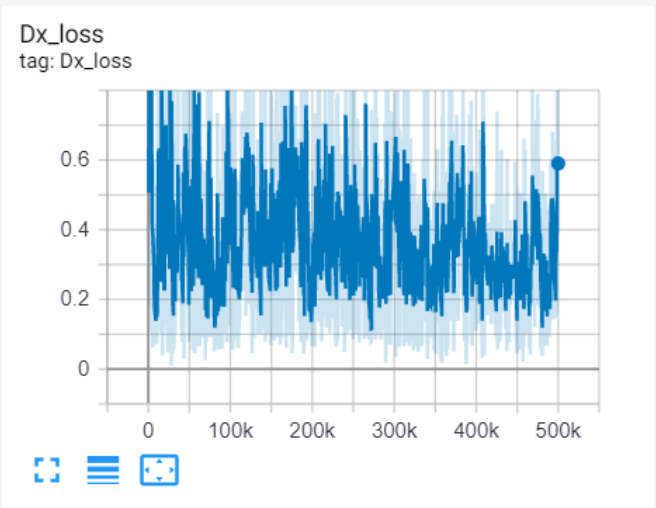


Predicted Image

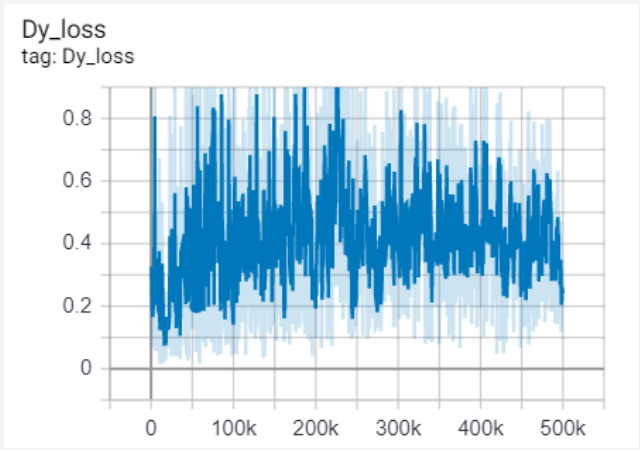


Train per steps

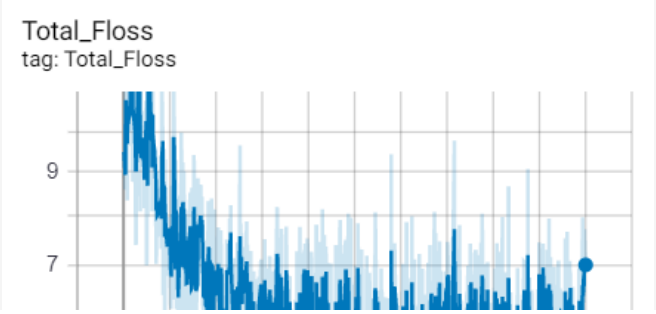
Dx Loss



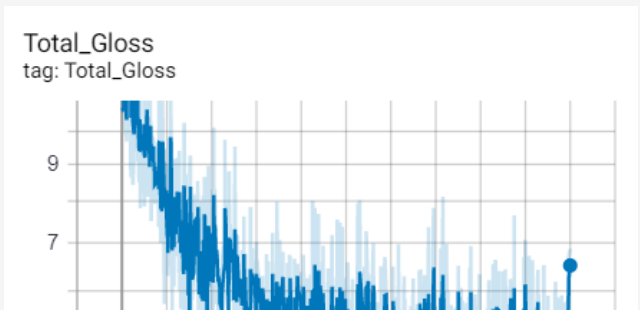
Dy Loss

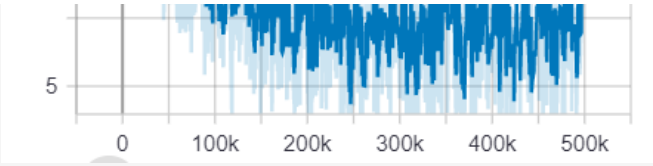


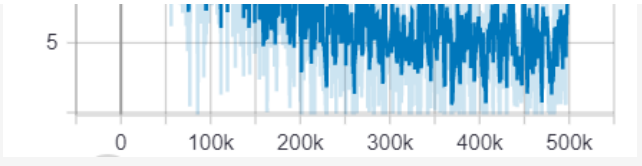
F Loss



G Loss



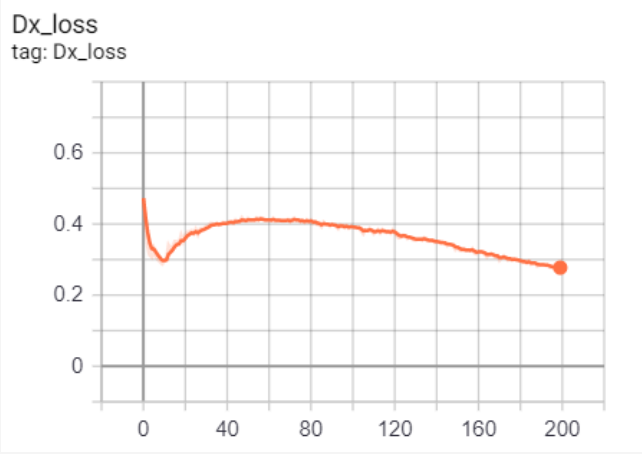




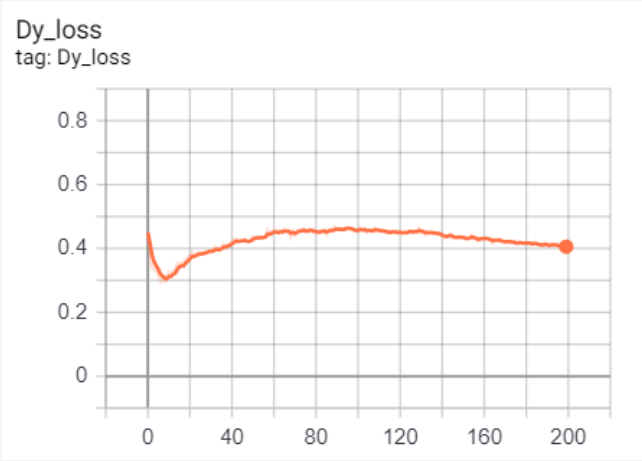
In [ ]:

Train per epoch

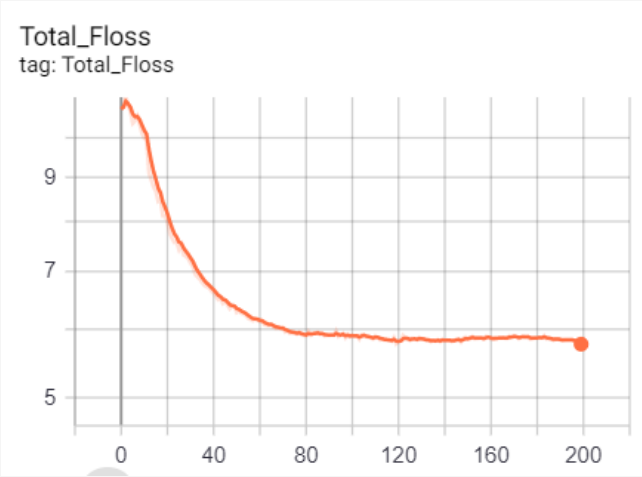
Dx Loss



Dy Loss



F Loss



G Loss