In [1]:

```python
import datetime
from IPython.display import Image
import tensorflow as tf
import numpy as np
import matplotlib.pyplot as plt
import matplotlib.gridspec as gridspec
import os
```

/home/crypto736/anaconda3/lib/python3.6/site-packages/tensorflow/python/framework/dtypes.
py:519: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; i
n a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.
  _np_qint8 = np.dtype([("qint8", np.int8, 1)])
/home/crypto736/anaconda3/lib/python3.6/site-packages/tensorflow/python/framework/dtypes.
py:520: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; i
n a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.
  _np_quint8 = np.dtype([("quint8", np.uint8, 1)])
/home/crypto736/anaconda3/lib/python3.6/site-packages/tensorflow/python/framework/dtypes.
py:521: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; i
n a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.
  _np_qint16 = np.dtype([("qint16", np.int16, 1)])
/home/crypto736/anaconda3/lib/python3.6/site-packages/tensorflow/python/framework/dtypes.
py:522: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; i
n a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.
  _np_quint16 = np.dtype([("quint16", np.uint16, 1)])
/home/crypto736/anaconda3/lib/python3.6/site-packages/tensorflow/python/framework/dtypes.
py:523: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; i
n a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.
  _np_qint32 = np.dtype([("qint32", np.int32, 1)])
/home/crypto736/anaconda3/lib/python3.6/site-packages/tensorflow/python/framework/dtypes.
py:528: FutureWarning: Passing (type, 1) or '1type' as a synonym of type is deprecated; i
n a future version of numpy, it will be understood as (type, (1,)) / '(1,)type'.
  np_resource = np.dtype([("resource", np.ubyte, 1)])

In [2]:

```python
# MNIST 데이터를 불러옵니다.
from tensorflow.examples.tutorials.mnist import input_data
mnist = input_data.read_data_sets("./mnist/data/", one_hot=True)
```

/home/crypto736/anaconda3/lib/python3.6/site-packages/dask/dataframe/utils.py:14: FutureW
arning: pandas.util.testing is deprecated. Use the functions in the public API at pandas.
testing instead.
  import pandas.util.testing as tm

WARNING:tensorflow:From <ipython-input-2-16960e6667d1>:3: read_data_sets (from tensorflow
.contrib.learn.python.learn.datasets.mnist) is deprecated and will be removed in a future
version.
Instructions for updating:
Please use alternatives such as official/mnist/dataset.py from tensorflow/models.
WARNING:tensorflow:From /home/crypto736/anaconda3/lib/python3.6/site-packages/tensorflow/
contrib/learn/python/learn/datasets/mnist.py:260: maybe_download (from tensorflow.contrib
.learn.python.learn.datasets.base) is deprecated and will be removed in a future version.
Instructions for updating:
Please write your own downloading logic.
WARNING:tensorflow:From /home/crypto736/anaconda3/lib/python3.6/site-packages/tensorflow/
contrib/learn/python/learn/datasets/base.py:252: _internal_retry.<locals>.wrap.<locals>.w
rapped_fn (from tensorflow.contrib.learn.python.learn.datasets.base) is deprecated and wi
ll be removed in a future version.
Instructions for updating:
Please use urllib or similar directly.
Successfully downloaded train-images-idx3-ubyte.gz 9912422 bytes.
WARNING:tensorflow:From /home/crypto736/anaconda3/lib/python3.6/site-packages/tensorflow/
contrib/learn/python/learn/datasets/mnist.py:262: extract_images (from tensorflow.contrib
.learn.python.learn.datasets.mnist) is deprecated and will be removed in a future version
.
Instructions for updating:
Please use tf.data to implement this functionality.

```
Extracting ./mnist/data/train-images-idx3-ubyte.gz
Successfully downloaded train-labels-idx1-ubyte.gz 28881 bytes.
WARNING:tensorflow:From /home/crypto736/anaconda3/lib/python3.6/site-packages/tensorflow/
contrib/learn/python/learn/datasets/mnist.py:267: extract_labels (from tensorflow.contrib
.learn.python.learn.datasets.mnist) is deprecated and will be removed in a future version
.
Instructions for updating:
Please use tf.data to implement this functionality.
Extracting ./mnist/data/train-labels-idx1-ubyte.gz
WARNING:tensorflow:From /home/crypto736/anaconda3/lib/python3.6/site-packages/tensorflow/
contrib/learn/python/learn/datasets/mnist.py:110: dense_to_one_hot (from tensorflow.contr
ib.learn.python.learn.datasets.mnist) is deprecated and will be removed in a future versi
on.
Instructions for updating:
Please use tf.one_hot on tensors.
Successfully downloaded t10k-images-idx3-ubyte.gz 1648877 bytes.
Extracting ./mnist/data/t10k-images-idx3-ubyte.gz
Successfully downloaded t10k-labels-idx1-ubyte.gz 4542 bytes.
Extracting ./mnist/data/t10k-labels-idx1-ubyte.gz
WARNING:tensorflow:From /home/crypto736/anaconda3/lib/python3.6/site-packages/tensorflow/
contrib/learn/python/learn/datasets/mnist.py:290: DataSet.__init__ (from tensorflow.contr
ib.learn.python.learn.datasets.mnist) is deprecated and will be removed in a future versi
on.
Instructions for updating:
Please use alternatives such as official/mnist/dataset.py from tensorflow/models.
```

In [3]:

```python
# 생성된 MNIST 이미지를 8x8 Grid로 보여주는 plot 함수를 정의합니다.
def plot(samples):
    fig = plt.figure(figsize=(8, 8))
    gs = gridspec.GridSpec(8, 8)
    gs.update(wspace=0.05, hspace=0.05)

    for i, sample in enumerate(samples):
        ax = plt.subplot(gs[i])
        plt.axis('off')
        plt.imshow(sample.reshape(28, 28))
    return fig
```

In [4]:

```python
# 설정값들을 선언합니다.
num_epoch = 100000
batch_size = 64
num_input = 28 * 28
num_latent_variable = 100
num_hidden = 128
learning_rate = 0.001
```

In [5]:

```python
# 플레이스 홀더를 선언합니다.
X = tf.placeholder(tf.float32, [None, num_input])              # 인풋 이미지
z = tf.placeholder(tf.float32, [None, num_latent_variable])    # 인풋 Latent Variable
```

In [6]:

```python
# Generator 변수들 설정
# 100 -> 128 -> 784
with tf.variable_scope('generator'):
    # 히든 레이어 파라미터
    G_W1 = tf.Variable(tf.random_normal(shape=[num_latent_variable, num_hidden], stddev=
5e-2))
    G_b1 = tf.Variable(tf.constant(0.1, shape=[num_hidden]))
    # 아웃풋 레이어 파라미터
    G_W2 = tf.Variable(tf.random_normal(shape=[num_hidden, num_input], stddev=5e-2))
    G_b2 = tf.Variable(tf.constant(0.1, shape=[num_input]))
```

In [7]:

```python
# Discriminator 변수들 설정
```

```python
# Discriminator 인수를 설정
# 784 -> 128 -> 1
with tf.variable_scope('discriminator'):
    # 히든 레이어 파라미터
    D_W1 = tf.Variable(tf.random_normal(shape=[num_input, num_hidden], stddev=5e-2))
    D_b1 = tf.Variable(tf.constant(0.1, shape=[num_hidden]))
    # 아웃풋 레이어 파라미터
    D_W2 = tf.Variable(tf.random_normal(shape=[num_hidden, 1], stddev=5e-2))
    D_b2 = tf.Variable(tf.constant(0.1, shape=[1]))
```

In [8]:

```python
# Generator를 생성하는 함수를 정의합니다.
# Inputs:
#   X : 인풋 Latent Variable
# Output:
#   generated_mnist_image : 생성된 MNIST 이미지
def build_generator(X):
    hidden_layer = tf.nn.relu((tf.matmul(X, G_W1) + G_b1))
    output_layer = tf.matmul(hidden_layer, G_W2) + G_b2
    generated_mnist_image = tf.nn.sigmoid(output_layer)

    return generated_mnist_image
```

In [9]:

```python
# Discriminator를 생성하는 함수를 정의합니다.
# Inputs:
#   X : 인풋 이미지
# Output:
#   predicted_value : Discriminator가 판단한 True(1) or Fake(0)
#   logits : sigmoid를 씌우기전의 출력값
def build_discriminator(X):
    hidden_layer = tf.nn.relu((tf.matmul(X, D_W1) + D_b1))
    logits = tf.matmul(hidden_layer, D_W2) + D_b2
    predicted_value = tf.nn.sigmoid(logits)

    return predicted_value, logits
```

In [10]:

```python
# 생성자(Generator)를 선언합니다.
G = build_generator(z)
```

In [11]:

```python
# 구분자(Discriminator)를 선언합니다.
D_real, D_real_logits = build_discriminator(X)  # D(x)
D_fake, D_fake_logits = build_discriminator(G)  # D(G(z))
```

In [12]:

```python
# Discriminator의 손실 함수를 정의합니다.
d_loss_real = tf.reduce_mean(tf.nn.sigmoid_cross_entropy_with_logits(logits=D_real_logits, labels=tf.ones_like(D_real_logits)))    # log(D(x))
d_loss_fake = tf.reduce_mean(tf.nn.sigmoid_cross_entropy_with_logits(logits=D_fake_logits, labels=tf.zeros_like(D_fake_logits)))    # log(1-D(G(z)))
d_loss = d_loss_real + d_loss_fake  # log(D(x)) + log(1-D(G(z)))
```

In [13]:

```python
# Generator의 손실 함수를 정의합니다.
g_loss = tf.reduce_mean(tf.nn.sigmoid_cross_entropy_with_logits(logits=D_fake_logits, labels=tf.ones_like(D_fake_logits)))         # log(D(G(z))
```

In [14]:

```python
# 전체 파라미터를 Discriminator와 관련된 파라미터와 Generator와 관련된 파라미터로 나눕니다.
tvar = tf.trainable_variables()
dvar = [var for var in tvar if 'discriminator' in var.name]
gvar = [var for var in tvar if 'generator' in var.name]
```

In [15]:

```python
# Discriminator와 Generator의 Optimizer를 정의합니다.
d_train_step = tf.train.AdamOptimizer(learning_rate).minimize(d_loss, var_list=dvar)
g_train_step = tf.train.AdamOptimizer(learning_rate).minimize(g_loss, var_list=gvar)
```

In [16]:

```python
# 생성된 이미지들을 저장할 generated_outputs 폴더를 생성합니다.
num_img = 0
if not os.path.exists('generated_output/'):
    os.makedirs('generated_output/')
```

In [17]:

```python
start_time = datetime.datetime.now()
```

In [18]:

```python
with tf.Session() as sess:
    # 변수들에 초기값을 할당합니다.
    sess.run(tf.global_variables_initializer())

    # num_epoch 횟수만큼 최적화를 수행합니다.
    for i in range(num_epoch):
        # MNIST 이미지를 batch_size만큼 불러옵니다.
        batch_X, _ = mnist.train.next_batch(batch_size)
        # Latent Variable의 인풋으로 사용할 noise를 Uniform Distribution에서 batch_size만큼
샘플링합니다.
        batch_noise = np.random.uniform(-1., 1., [batch_size, 100])

        # 500번 반복할때마다 생성된 이미지를 저장합니다.
        if i % 500 == 0:
            samples = sess.run(G, feed_dict={z: np.random.uniform(-1., 1., [64, 100])})
            fig = plot(samples)
            plt.savefig('generated_output/%s.png' % str(num_img).zfill(3), bbox_inches='
tight')
            num_img += 1
            plt.close(fig)

        # Discriminator 최적화를 수행하고 Discriminator의 손실함수를 return합니다.
        _, d_loss_print = sess.run([d_train_step, d_loss], feed_dict={X: batch_X, z: bat
ch_noise})

        # Generator 최적화를 수행하고 Generator 손실함수를 return합니다.
        _, g_loss_print = sess.run([g_train_step, g_loss], feed_dict={z: batch_noise})

        # 100번 반복할때마다 Discriminator의 손실함수와 Generator 손실함수를 출력합니다.
        if i % 100 == 0:
            print('반복(Epoch): %d, Generator 손실함수(g_loss): %f, Discriminator 손실함수(d
_loss): %f' % (i, g_loss_print, d_loss_print))

end_time= datetime.datetime.now()
learning_time = end_time - start_time
print('훈련시간: %d 마이크로초' % learning_time.microseconds)
print('훈련시간: %d 초' % learning_time.seconds)
```

```
반복(Epoch): 0, Generator 손실함수(g_loss): 0.885471, Discriminator 손실함수(d_loss): 1.67278
6
반복(Epoch): 100, Generator 손실함수(g_loss): 2.433144, Discriminator 손실함수(d_loss): 0.51
9332
반복(Epoch): 200, Generator 손실함수(g_loss): 3.969491, Discriminator 손실함수(d_loss): 0.09
0409
반복(Epoch): 300, Generator 손실함수(g_loss): 4.632869, Discriminator 손실함수(d_loss): 0.04
2643
반복(Epoch): 400, Generator 손실함수(g_loss): 5.230685, Discriminator 손실함수(d_loss): 0.05
0043
반복(Epoch): 500, Generator 손실함수(g_loss): 5.615204, Discriminator 손실함수(d_loss): 0.02
8475
반복(Epoch): 600, Generator 손실함수(g_loss): 6.745543, Discriminator 손실함수(d_loss): 0.01
2471
```

2471
반복(Epoch): 700, Generator 손실함수(g_loss): 8.492043, Discriminator 손실함수(d_loss): 0.018313
반복(Epoch): 800, Generator 손실함수(g_loss): 6.987991, Discriminator 손실함수(d_loss): 0.043576
반복(Epoch): 900, Generator 손실함수(g_loss): 9.116617, Discriminator 손실함수(d_loss): 0.032210
반복(Epoch): 1000, Generator 손실함수(g_loss): 19.281754, Discriminator 손실함수(d_loss): 0.016166
반복(Epoch): 1100, Generator 손실함수(g_loss): 13.566674, Discriminator 손실함수(d_loss): 0.009572
반복(Epoch): 1200, Generator 손실함수(g_loss): 6.398978, Discriminator 손실함수(d_loss): 0.020529
반복(Epoch): 1300, Generator 손실함수(g_loss): 8.251353, Discriminator 손실함수(d_loss): 0.041593
반복(Epoch): 1400, Generator 손실함수(g_loss): 5.727003, Discriminator 손실함수(d_loss): 0.010704
반복(Epoch): 1500, Generator 손실함수(g_loss): 6.137976, Discriminator 손실함수(d_loss): 0.038908
반복(Epoch): 1600, Generator 손실함수(g_loss): 7.867441, Discriminator 손실함수(d_loss): 0.038678
반복(Epoch): 1700, Generator 손실함수(g_loss): 7.391349, Discriminator 손실함수(d_loss): 0.030606
반복(Epoch): 1800, Generator 손실함수(g_loss): 5.967421, Discriminator 손실함수(d_loss): 0.025102
반복(Epoch): 1900, Generator 손실함수(g_loss): 6.396882, Discriminator 손실함수(d_loss): 0.013073
반복(Epoch): 2000, Generator 손실함수(g_loss): 6.703965, Discriminator 손실함수(d_loss): 0.015839
반복(Epoch): 2100, Generator 손실함수(g_loss): 5.608476, Discriminator 손실함수(d_loss): 0.036757
반복(Epoch): 2200, Generator 손실함수(g_loss): 5.083155, Discriminator 손실함수(d_loss): 0.034537
반복(Epoch): 2300, Generator 손실함수(g_loss): 6.108691, Discriminator 손실함수(d_loss): 0.011239
반복(Epoch): 2400, Generator 손실함수(g_loss): 6.546256, Discriminator 손실함수(d_loss): 0.038146
반복(Epoch): 2500, Generator 손실함수(g_loss): 5.207878, Discriminator 손실함수(d_loss): 0.031000
반복(Epoch): 2600, Generator 손실함수(g_loss): 5.193237, Discriminator 손실함수(d_loss): 0.073259
반복(Epoch): 2700, Generator 손실함수(g_loss): 5.175631, Discriminator 손실함수(d_loss): 0.061874
반복(Epoch): 2800, Generator 손실함수(g_loss): 4.110368, Discriminator 손실함수(d_loss): 0.067525
반복(Epoch): 2900, Generator 손실함수(g_loss): 4.318788, Discriminator 손실함수(d_loss): 0.104900
반복(Epoch): 3000, Generator 손실함수(g_loss): 4.683347, Discriminator 손실함수(d_loss): 0.059875
반복(Epoch): 3100, Generator 손실함수(g_loss): 6.052518, Discriminator 손실함수(d_loss): 0.038555
반복(Epoch): 3200, Generator 손실함수(g_loss): 4.822566, Discriminator 손실함수(d_loss): 0.082002
반복(Epoch): 3300, Generator 손실함수(g_loss): 4.753589, Discriminator 손실함수(d_loss): 0.093618
반복(Epoch): 3400, Generator 손실함수(g_loss): 5.336478, Discriminator 손실함수(d_loss): 0.091168
반복(Epoch): 3500, Generator 손실함수(g_loss): 3.505383, Discriminator 손실함수(d_loss): 0.211315
반복(Epoch): 3600, Generator 손실함수(g_loss): 4.283049, Discriminator 손실함수(d_loss): 0.147775
반복(Epoch): 3700, Generator 손실함수(g_loss): 4.961648, Discriminator 손실함수(d_loss): 0.212452
반복(Epoch): 3800, Generator 손실함수(g_loss): 4.232658, Discriminator 손실함수(d_loss): 0.180649
반복(Epoch): 3900, Generator 손실함수(g_loss): 5.431128, Discriminator 손실함수(d_loss): 0.247567
반복(Epoch): 4000, Generator 손실함수(g_loss): 4.242864, Discriminator 손실함수(d_loss): 0.120019
반복(Epoch): 4100, Generator 손실함수(g_loss): 4.167856, Discriminator 손실함수(d_loss): 0.224332
반복(Epoch): 4200, Generator 손실함수(g_loss): 3.587835, Discriminator 손실함수(d_loss): 0.1
85939

85939
반복(Epoch): 4300, Generator 손실함수(g_loss): 3.964162, Discriminator 손실함수(d_loss): 0.444522
반복(Epoch): 4400, Generator 손실함수(g_loss): 4.871879, Discriminator 손실함수(d_loss): 0.189222
반복(Epoch): 4500, Generator 손실함수(g_loss): 3.593869, Discriminator 손실함수(d_loss): 0.187926
반복(Epoch): 4600, Generator 손실함수(g_loss): 4.172325, Discriminator 손실함수(d_loss): 0.183061
반복(Epoch): 4700, Generator 손실함수(g_loss): 4.171232, Discriminator 손실함수(d_loss): 0.148935
반복(Epoch): 4800, Generator 손실함수(g_loss): 5.109286, Discriminator 손실함수(d_loss): 0.115623
반복(Epoch): 4900, Generator 손실함수(g_loss): 5.727410, Discriminator 손실함수(d_loss): 0.340302
반복(Epoch): 5000, Generator 손실함수(g_loss): 4.605163, Discriminator 손실함수(d_loss): 0.272840
반복(Epoch): 5100, Generator 손실함수(g_loss): 4.394044, Discriminator 손실함수(d_loss): 0.316892
반복(Epoch): 5200, Generator 손실함수(g_loss): 3.906548, Discriminator 손실함수(d_loss): 0.176223
반복(Epoch): 5300, Generator 손실함수(g_loss): 4.905084, Discriminator 손실함수(d_loss): 0.122227
반복(Epoch): 5400, Generator 손실함수(g_loss): 4.317766, Discriminator 손실함수(d_loss): 0.144942
반복(Epoch): 5500, Generator 손실함수(g_loss): 4.600676, Discriminator 손실함수(d_loss): 0.297455
반복(Epoch): 5600, Generator 손실함수(g_loss): 4.217851, Discriminator 손실함수(d_loss): 0.440076
반복(Epoch): 5700, Generator 손실함수(g_loss): 4.502125, Discriminator 손실함수(d_loss): 0.272145
반복(Epoch): 5800, Generator 손실함수(g_loss): 4.552937, Discriminator 손실함수(d_loss): 0.192555
반복(Epoch): 5900, Generator 손실함수(g_loss): 3.919242, Discriminator 손실함수(d_loss): 0.505843
반복(Epoch): 6000, Generator 손실함수(g_loss): 4.023285, Discriminator 손실함수(d_loss): 0.361463
반복(Epoch): 6100, Generator 손실함수(g_loss): 3.787179, Discriminator 손실함수(d_loss): 0.466859
반복(Epoch): 6200, Generator 손실함수(g_loss): 3.774668, Discriminator 손실함수(d_loss): 0.156690
반복(Epoch): 6300, Generator 손실함수(g_loss): 3.387742, Discriminator 손실함수(d_loss): 0.624867
반복(Epoch): 6400, Generator 손실함수(g_loss): 3.985597, Discriminator 손실함수(d_loss): 0.463855
반복(Epoch): 6500, Generator 손실함수(g_loss): 4.050391, Discriminator 손실함수(d_loss): 0.439287
반복(Epoch): 6600, Generator 손실함수(g_loss): 3.578703, Discriminator 손실함수(d_loss): 0.520142
반복(Epoch): 6700, Generator 손실함수(g_loss): 3.433729, Discriminator 손실함수(d_loss): 0.262940
반복(Epoch): 6800, Generator 손실함수(g_loss): 3.576734, Discriminator 손실함수(d_loss): 0.417769
반복(Epoch): 6900, Generator 손실함수(g_loss): 3.111764, Discriminator 손실함수(d_loss): 0.668151
반복(Epoch): 7000, Generator 손실함수(g_loss): 3.766495, Discriminator 손실함수(d_loss): 0.520806
반복(Epoch): 7100, Generator 손실함수(g_loss): 3.278479, Discriminator 손실함수(d_loss): 0.431647
반복(Epoch): 7200, Generator 손실함수(g_loss): 3.759594, Discriminator 손실함수(d_loss): 0.314912
반복(Epoch): 7300, Generator 손실함수(g_loss): 3.776843, Discriminator 손실함수(d_loss): 0.427493
반복(Epoch): 7400, Generator 손실함수(g_loss): 3.002721, Discriminator 손실함수(d_loss): 0.412610
반복(Epoch): 7500, Generator 손실함수(g_loss): 3.143665, Discriminator 손실함수(d_loss): 0.454857
반복(Epoch): 7600, Generator 손실함수(g_loss): 2.692186, Discriminator 손실함수(d_loss): 0.889320
반복(Epoch): 7700, Generator 손실함수(g_loss): 3.054996, Discriminator 손실함수(d_loss): 0.588770
반복(Epoch): 7800, Generator 손실함수(g_loss): 3.078649, Discriminator 손실함수(d_loss): 0.444083

44083
반복(Epoch): 7900, Generator 손실함수(g_loss): 3.358094, Discriminator 손실함수(d_loss): 0.5
53449
반복(Epoch): 8000, Generator 손실함수(g_loss): 3.421517, Discriminator 손실함수(d_loss): 0.6
72312
반복(Epoch): 8100, Generator 손실함수(g_loss): 3.578000, Discriminator 손실함수(d_loss): 0.3
77101
반복(Epoch): 8200, Generator 손실함수(g_loss): 2.631243, Discriminator 손실함수(d_loss): 0.4
69514
반복(Epoch): 8300, Generator 손실함수(g_loss): 2.857878, Discriminator 손실함수(d_loss): 0.8
42320
반복(Epoch): 8400, Generator 손실함수(g_loss): 2.695608, Discriminator 손실함수(d_loss): 0.7
36311
반복(Epoch): 8500, Generator 손실함수(g_loss): 3.293769, Discriminator 손실함수(d_loss): 0.3
79649
반복(Epoch): 8600, Generator 손실함수(g_loss): 2.672347, Discriminator 손실함수(d_loss): 0.3
86498
반복(Epoch): 8700, Generator 손실함수(g_loss): 3.117427, Discriminator 손실함수(d_loss): 0.4
82405
반복(Epoch): 8800, Generator 손실함수(g_loss): 2.961057, Discriminator 손실함수(d_loss): 0.6
48373
반복(Epoch): 8900, Generator 손실함수(g_loss): 3.118931, Discriminator 손실함수(d_loss): 0.5
90036
반복(Epoch): 9000, Generator 손실함수(g_loss): 3.057179, Discriminator 손실함수(d_loss): 0.4
85416
반복(Epoch): 9100, Generator 손실함수(g_loss): 2.505040, Discriminator 손실함수(d_loss): 0.6
60932
반복(Epoch): 9200, Generator 손실함수(g_loss): 2.819085, Discriminator 손실함수(d_loss): 0.5
04290
반복(Epoch): 9300, Generator 손실함수(g_loss): 2.748641, Discriminator 손실함수(d_loss): 0.5
85784
반복(Epoch): 9400, Generator 손실함수(g_loss): 2.549687, Discriminator 손실함수(d_loss): 0.4
00596
반복(Epoch): 9500, Generator 손실함수(g_loss): 2.678483, Discriminator 손실함수(d_loss): 0.6
42717
반복(Epoch): 9600, Generator 손실함수(g_loss): 2.555380, Discriminator 손실함수(d_loss): 0.5
81086
반복(Epoch): 9700, Generator 손실함수(g_loss): 3.017417, Discriminator 손실함수(d_loss): 0.7
17299
반복(Epoch): 9800, Generator 손실함수(g_loss): 2.300947, Discriminator 손실함수(d_loss): 0.7
10191
반복(Epoch): 9900, Generator 손실함수(g_loss): 2.223754, Discriminator 손실함수(d_loss): 0.6
80167
반복(Epoch): 10000, Generator 손실함수(g_loss): 2.132863, Discriminator 손실함수(d_loss): 0.
602326
반복(Epoch): 10100, Generator 손실함수(g_loss): 2.660165, Discriminator 손실함수(d_loss): 0.
577823
반복(Epoch): 10200, Generator 손실함수(g_loss): 2.100833, Discriminator 손실함수(d_loss): 0.
635121
반복(Epoch): 10300, Generator 손실함수(g_loss): 2.256523, Discriminator 손실함수(d_loss): 0.
589799
반복(Epoch): 10400, Generator 손실함수(g_loss): 2.515713, Discriminator 손실함수(d_loss): 0.
662845
반복(Epoch): 10500, Generator 손실함수(g_loss): 2.782587, Discriminator 손실함수(d_loss): 0.
563746
반복(Epoch): 10600, Generator 손실함수(g_loss): 2.281790, Discriminator 손실함수(d_loss): 0.
759227
반복(Epoch): 10700, Generator 손실함수(g_loss): 2.531208, Discriminator 손실함수(d_loss): 0.
792991
반복(Epoch): 10800, Generator 손실함수(g_loss): 2.492109, Discriminator 손실함수(d_loss): 0.
466083
반복(Epoch): 10900, Generator 손실함수(g_loss): 2.601310, Discriminator 손실함수(d_loss): 0.
409222
반복(Epoch): 11000, Generator 손실함수(g_loss): 2.507360, Discriminator 손실함수(d_loss): 0.
509705
반복(Epoch): 11100, Generator 손실함수(g_loss): 2.112613, Discriminator 손실함수(d_loss): 0.
494408
반복(Epoch): 11200, Generator 손실함수(g_loss): 2.423821, Discriminator 손실함수(d_loss): 0.
626035
반복(Epoch): 11300, Generator 손실함수(g_loss): 2.424842, Discriminator 손실함수(d_loss): 0.
582383
반복(Epoch): 11400, Generator 손실함수(g_loss): 2.630702, Discriminator 손실함수(d_loss): 0.
506476

506476
반복(Epoch): 11500, Generator 손실함수(g_loss): 2.421087, Discriminator 손실함수(d_loss): 0.615992
반복(Epoch): 11600, Generator 손실함수(g_loss): 2.101834, Discriminator 손실함수(d_loss): 0.748722
반복(Epoch): 11700, Generator 손실함수(g_loss): 2.019429, Discriminator 손실함수(d_loss): 0.677809
반복(Epoch): 11800, Generator 손실함수(g_loss): 2.266779, Discriminator 손실함수(d_loss): 0.762290
반복(Epoch): 11900, Generator 손실함수(g_loss): 2.403408, Discriminator 손실함수(d_loss): 0.743057
반복(Epoch): 12000, Generator 손실함수(g_loss): 2.884408, Discriminator 손실함수(d_loss): 0.520785
반복(Epoch): 12100, Generator 손실함수(g_loss): 2.641383, Discriminator 손실함수(d_loss): 0.719648
반복(Epoch): 12200, Generator 손실함수(g_loss): 2.959789, Discriminator 손실함수(d_loss): 0.379829
반복(Epoch): 12300, Generator 손실함수(g_loss): 2.205926, Discriminator 손실함수(d_loss): 0.726748
반복(Epoch): 12400, Generator 손실함수(g_loss): 2.768973, Discriminator 손실함수(d_loss): 0.620246
반복(Epoch): 12500, Generator 손실함수(g_loss): 2.234913, Discriminator 손실함수(d_loss): 0.720703
반복(Epoch): 12600, Generator 손실함수(g_loss): 2.551396, Discriminator 손실함수(d_loss): 0.750566
반복(Epoch): 12700, Generator 손실함수(g_loss): 2.113754, Discriminator 손실함수(d_loss): 0.683661
반복(Epoch): 12800, Generator 손실함수(g_loss): 2.684069, Discriminator 손실함수(d_loss): 0.553950
반복(Epoch): 12900, Generator 손실함수(g_loss): 2.267308, Discriminator 손실함수(d_loss): 0.624581
반복(Epoch): 13000, Generator 손실함수(g_loss): 2.549582, Discriminator 손실함수(d_loss): 0.856914
반복(Epoch): 13100, Generator 손실함수(g_loss): 2.350427, Discriminator 손실함수(d_loss): 0.816798
반복(Epoch): 13200, Generator 손실함수(g_loss): 2.494313, Discriminator 손실함수(d_loss): 0.586802
반복(Epoch): 13300, Generator 손실함수(g_loss): 2.487895, Discriminator 손실함수(d_loss): 0.650306
반복(Epoch): 13400, Generator 손실함수(g_loss): 1.904902, Discriminator 손실함수(d_loss): 0.949371
반복(Epoch): 13500, Generator 손실함수(g_loss): 2.301238, Discriminator 손실함수(d_loss): 0.664459
반복(Epoch): 13600, Generator 손실함수(g_loss): 2.154845, Discriminator 손실함수(d_loss): 0.586244
반복(Epoch): 13700, Generator 손실함수(g_loss): 2.118541, Discriminator 손실함수(d_loss): 0.667695
반복(Epoch): 13800, Generator 손실함수(g_loss): 2.263157, Discriminator 손실함수(d_loss): 0.547629
반복(Epoch): 13900, Generator 손실함수(g_loss): 2.265826, Discriminator 손실함수(d_loss): 0.619135
반복(Epoch): 14000, Generator 손실함수(g_loss): 2.111326, Discriminator 손실함수(d_loss): 0.664092
반복(Epoch): 14100, Generator 손실함수(g_loss): 2.511230, Discriminator 손실함수(d_loss): 0.576052
반복(Epoch): 14200, Generator 손실함수(g_loss): 2.008096, Discriminator 손실함수(d_loss): 0.841025
반복(Epoch): 14300, Generator 손실함수(g_loss): 2.211839, Discriminator 손실함수(d_loss): 0.697844
반복(Epoch): 14400, Generator 손실함수(g_loss): 1.878649, Discriminator 손실함수(d_loss): 0.952462
반복(Epoch): 14500, Generator 손실함수(g_loss): 2.431082, Discriminator 손실함수(d_loss): 0.842451
반복(Epoch): 14600, Generator 손실함수(g_loss): 2.233654, Discriminator 손실함수(d_loss): 0.722179
반복(Epoch): 14700, Generator 손실함수(g_loss): 2.021216, Discriminator 손실함수(d_loss): 0.590477
반복(Epoch): 14800, Generator 손실함수(g_loss): 2.035459, Discriminator 손실함수(d_loss): 0.708906
반복(Epoch): 14900, Generator 손실함수(g_loss): 1.989494, Discriminator 손실함수(d_loss): 0.717358
반복(Epoch): 15000, Generator 손실함수(g_loss): 2.001256, Discriminator 손실함수(d_loss): 0.

850069
반복(Epoch): 15100, Generator 손실함수(g_loss): 2.314604, Discriminator 손실함수(d_loss): 0.778298
반복(Epoch): 15200, Generator 손실함수(g_loss): 2.572536, Discriminator 손실함수(d_loss): 0.746119
반복(Epoch): 15300, Generator 손실함수(g_loss): 2.132522, Discriminator 손실함수(d_loss): 0.684418
반복(Epoch): 15400, Generator 손실함수(g_loss): 2.291315, Discriminator 손실함수(d_loss): 0.604131
반복(Epoch): 15500, Generator 손실함수(g_loss): 1.893875, Discriminator 손실함수(d_loss): 0.939201
반복(Epoch): 15600, Generator 손실함수(g_loss): 1.882973, Discriminator 손실함수(d_loss): 0.951946
반복(Epoch): 15700, Generator 손실함수(g_loss): 2.130622, Discriminator 손실함수(d_loss): 0.771476
반복(Epoch): 15800, Generator 손실함수(g_loss): 2.020610, Discriminator 손실함수(d_loss): 0.869402
반복(Epoch): 15900, Generator 손실함수(g_loss): 2.812444, Discriminator 손실함수(d_loss): 0.564571
반복(Epoch): 16000, Generator 손실함수(g_loss): 2.127934, Discriminator 손실함수(d_loss): 0.691825
반복(Epoch): 16100, Generator 손실함수(g_loss): 1.727613, Discriminator 손실함수(d_loss): 0.951298
반복(Epoch): 16200, Generator 손실함수(g_loss): 1.990278, Discriminator 손실함수(d_loss): 0.828635
반복(Epoch): 16300, Generator 손실함수(g_loss): 2.052343, Discriminator 손실함수(d_loss): 0.806276
반복(Epoch): 16400, Generator 손실함수(g_loss): 2.034891, Discriminator 손실함수(d_loss): 0.693117
반복(Epoch): 16500, Generator 손실함수(g_loss): 2.687946, Discriminator 손실함수(d_loss): 0.502902
반복(Epoch): 16600, Generator 손실함수(g_loss): 2.250794, Discriminator 손실함수(d_loss): 0.621224
반복(Epoch): 16700, Generator 손실함수(g_loss): 2.239966, Discriminator 손실함수(d_loss): 0.750153
반복(Epoch): 16800, Generator 손실함수(g_loss): 2.090142, Discriminator 손실함수(d_loss): 0.724347
반복(Epoch): 16900, Generator 손실함수(g_loss): 1.666126, Discriminator 손실함수(d_loss): 0.861336
반복(Epoch): 17000, Generator 손실함수(g_loss): 1.858653, Discriminator 손실함수(d_loss): 0.725670
반복(Epoch): 17100, Generator 손실함수(g_loss): 2.139752, Discriminator 손실함수(d_loss): 0.627582
반복(Epoch): 17200, Generator 손실함수(g_loss): 2.401394, Discriminator 손실함수(d_loss): 0.554883
반복(Epoch): 17300, Generator 손실함수(g_loss): 2.231133, Discriminator 손실함수(d_loss): 0.798448
반복(Epoch): 17400, Generator 손실함수(g_loss): 2.323349, Discriminator 손실함수(d_loss): 0.695237
반복(Epoch): 17500, Generator 손실함수(g_loss): 1.832958, Discriminator 손실함수(d_loss): 0.973172
반복(Epoch): 17600, Generator 손실함수(g_loss): 1.942385, Discriminator 손실함수(d_loss): 0.865509
반복(Epoch): 17700, Generator 손실함수(g_loss): 1.621163, Discriminator 손실함수(d_loss): 0.771543
반복(Epoch): 17800, Generator 손실함수(g_loss): 2.241207, Discriminator 손실함수(d_loss): 0.615466
반복(Epoch): 17900, Generator 손실함수(g_loss): 2.186569, Discriminator 손실함수(d_loss): 0.621237
반복(Epoch): 18000, Generator 손실함수(g_loss): 2.312519, Discriminator 손실함수(d_loss): 0.681360
반복(Epoch): 18100, Generator 손실함수(g_loss): 1.732903, Discriminator 손실함수(d_loss): 0.901248
반복(Epoch): 18200, Generator 손실함수(g_loss): 1.908482, Discriminator 손실함수(d_loss): 0.619300
반복(Epoch): 18300, Generator 손실함수(g_loss): 1.991958, Discriminator 손실함수(d_loss): 0.745531
반복(Epoch): 18400, Generator 손실함수(g_loss): 1.753685, Discriminator 손실함수(d_loss): 0.753857
반복(Epoch): 18500, Generator 손실함수(g_loss): 1.970780, Discriminator 손실함수(d_loss): 0.633651
반복(Epoch): 18600, Generator 손실함수(g_loss): 2.133203, Discriminator 손실함수(d_loss): 0.

590250
반복(Epoch): 18700, Generator 손실함수(g_loss): 1.960170, Discriminator 손실함수(d_loss): 0.788750
반복(Epoch): 18800, Generator 손실함수(g_loss): 2.030211, Discriminator 손실함수(d_loss): 0.651539
반복(Epoch): 18900, Generator 손실함수(g_loss): 2.361357, Discriminator 손실함수(d_loss): 0.675175
반복(Epoch): 19000, Generator 손실함수(g_loss): 2.182210, Discriminator 손실함수(d_loss): 0.742381
반복(Epoch): 19100, Generator 손실함수(g_loss): 2.336514, Discriminator 손실함수(d_loss): 0.659112
반복(Epoch): 19200, Generator 손실함수(g_loss): 1.834744, Discriminator 손실함수(d_loss): 0.765123
반복(Epoch): 19300, Generator 손실함수(g_loss): 1.787568, Discriminator 손실함수(d_loss): 0.722501
반복(Epoch): 19400, Generator 손실함수(g_loss): 2.136549, Discriminator 손실함수(d_loss): 0.620150
반복(Epoch): 19500, Generator 손실함수(g_loss): 1.703320, Discriminator 손실함수(d_loss): 0.964013
반복(Epoch): 19600, Generator 손실함수(g_loss): 1.949565, Discriminator 손실함수(d_loss): 0.872420
반복(Epoch): 19700, Generator 손실함수(g_loss): 1.526150, Discriminator 손실함수(d_loss): 0.926490
반복(Epoch): 19800, Generator 손실함수(g_loss): 1.705650, Discriminator 손실함수(d_loss): 1.022783
반복(Epoch): 19900, Generator 손실함수(g_loss): 1.874468, Discriminator 손실함수(d_loss): 0.675900
반복(Epoch): 20000, Generator 손실함수(g_loss): 2.049900, Discriminator 손실함수(d_loss): 0.858458
반복(Epoch): 20100, Generator 손실함수(g_loss): 1.891383, Discriminator 손실함수(d_loss): 0.817317
반복(Epoch): 20200, Generator 손실함수(g_loss): 1.973294, Discriminator 손실함수(d_loss): 0.783456
반복(Epoch): 20300, Generator 손실함수(g_loss): 1.782038, Discriminator 손실함수(d_loss): 0.958213
반복(Epoch): 20400, Generator 손실함수(g_loss): 2.041221, Discriminator 손실함수(d_loss): 0.694977
반복(Epoch): 20500, Generator 손실함수(g_loss): 1.722727, Discriminator 손실함수(d_loss): 0.842965
반복(Epoch): 20600, Generator 손실함수(g_loss): 2.223287, Discriminator 손실함수(d_loss): 0.782087
반복(Epoch): 20700, Generator 손실함수(g_loss): 1.946803, Discriminator 손실함수(d_loss): 0.874298
반복(Epoch): 20800, Generator 손실함수(g_loss): 1.788358, Discriminator 손실함수(d_loss): 0.851727
반복(Epoch): 20900, Generator 손실함수(g_loss): 2.114342, Discriminator 손실함수(d_loss): 0.800447
반복(Epoch): 21000, Generator 손실함수(g_loss): 1.965622, Discriminator 손실함수(d_loss): 0.975629
반복(Epoch): 21100, Generator 손실함수(g_loss): 1.655141, Discriminator 손실함수(d_loss): 0.776253
반복(Epoch): 21200, Generator 손실함수(g_loss): 1.926424, Discriminator 손실함수(d_loss): 0.708086
반복(Epoch): 21300, Generator 손실함수(g_loss): 1.999467, Discriminator 손실함수(d_loss): 0.625762
반복(Epoch): 21400, Generator 손실함수(g_loss): 2.111992, Discriminator 손실함수(d_loss): 0.743908
반복(Epoch): 21500, Generator 손실함수(g_loss): 1.879782, Discriminator 손실함수(d_loss): 0.859464
반복(Epoch): 21600, Generator 손실함수(g_loss): 1.953530, Discriminator 손실함수(d_loss): 0.785484
반복(Epoch): 21700, Generator 손실함수(g_loss): 1.508673, Discriminator 손실함수(d_loss): 0.953658
반복(Epoch): 21800, Generator 손실함수(g_loss): 1.987331, Discriminator 손실함수(d_loss): 0.696345
반복(Epoch): 21900, Generator 손실함수(g_loss): 1.900969, Discriminator 손실함수(d_loss): 0.758682
반복(Epoch): 22000, Generator 손실함수(g_loss): 1.912295, Discriminator 손실함수(d_loss): 0.863286
반복(Epoch): 22100, Generator 손실함수(g_loss): 1.999659, Discriminator 손실함수(d_loss): 0.890335
반복(Epoch): 22200, Generator 손실함수(g_loss): 1.729334, Discriminator 손실함수(d_loss): 0.

835998
반복(Epoch): 22300, Generator 손실함수(g_loss): 1.922744, Discriminator 손실함수(d_loss): 0.760676
반복(Epoch): 22400, Generator 손실함수(g_loss): 1.995453, Discriminator 손실함수(d_loss): 0.814572
반복(Epoch): 22500, Generator 손실함수(g_loss): 2.009260, Discriminator 손실함수(d_loss): 0.919176
반복(Epoch): 22600, Generator 손실함수(g_loss): 1.673604, Discriminator 손실함수(d_loss): 0.901641
반복(Epoch): 22700, Generator 손실함수(g_loss): 2.011368, Discriminator 손실함수(d_loss): 0.788539
반복(Epoch): 22800, Generator 손실함수(g_loss): 1.842480, Discriminator 손실함수(d_loss): 0.656615
반복(Epoch): 22900, Generator 손실함수(g_loss): 2.169042, Discriminator 손실함수(d_loss): 0.733427
반복(Epoch): 23000, Generator 손실함수(g_loss): 1.788931, Discriminator 손실함수(d_loss): 0.601565
반복(Epoch): 23100, Generator 손실함수(g_loss): 1.914028, Discriminator 손실함수(d_loss): 0.703876
반복(Epoch): 23200, Generator 손실함수(g_loss): 1.887777, Discriminator 손실함수(d_loss): 0.713467
반복(Epoch): 23300, Generator 손실함수(g_loss): 1.732798, Discriminator 손실함수(d_loss): 0.809489
반복(Epoch): 23400, Generator 손실함수(g_loss): 1.897863, Discriminator 손실함수(d_loss): 0.816345
반복(Epoch): 23500, Generator 손실함수(g_loss): 1.951209, Discriminator 손실함수(d_loss): 0.839329
반복(Epoch): 23600, Generator 손실함수(g_loss): 1.985882, Discriminator 손실함수(d_loss): 0.643790
반복(Epoch): 23700, Generator 손실함수(g_loss): 1.581501, Discriminator 손실함수(d_loss): 0.858013
반복(Epoch): 23800, Generator 손실함수(g_loss): 1.782021, Discriminator 손실함수(d_loss): 0.794893
반복(Epoch): 23900, Generator 손실함수(g_loss): 2.150775, Discriminator 손실함수(d_loss): 0.680816
반복(Epoch): 24000, Generator 손실함수(g_loss): 1.814445, Discriminator 손실함수(d_loss): 0.765716
반복(Epoch): 24100, Generator 손실함수(g_loss): 1.896329, Discriminator 손실함수(d_loss): 0.796880
반복(Epoch): 24200, Generator 손실함수(g_loss): 1.866652, Discriminator 손실함수(d_loss): 0.757431
반복(Epoch): 24300, Generator 손실함수(g_loss): 1.614830, Discriminator 손실함수(d_loss): 0.969697
반복(Epoch): 24400, Generator 손실함수(g_loss): 2.299076, Discriminator 손실함수(d_loss): 0.640106
반복(Epoch): 24500, Generator 손실함수(g_loss): 1.933331, Discriminator 손실함수(d_loss): 0.604686
반복(Epoch): 24600, Generator 손실함수(g_loss): 2.001106, Discriminator 손실함수(d_loss): 0.869119
반복(Epoch): 24700, Generator 손실함수(g_loss): 2.139063, Discriminator 손실함수(d_loss): 0.655913
반복(Epoch): 24800, Generator 손실함수(g_loss): 1.636765, Discriminator 손실함수(d_loss): 0.809966
반복(Epoch): 24900, Generator 손실함수(g_loss): 1.841689, Discriminator 손실함수(d_loss): 0.832937
반복(Epoch): 25000, Generator 손실함수(g_loss): 1.719151, Discriminator 손실함수(d_loss): 0.841242
반복(Epoch): 25100, Generator 손실함수(g_loss): 1.842201, Discriminator 손실함수(d_loss): 0.903499
반복(Epoch): 25200, Generator 손실함수(g_loss): 1.943605, Discriminator 손실함수(d_loss): 0.891022
반복(Epoch): 25300, Generator 손실함수(g_loss): 1.916174, Discriminator 손실함수(d_loss): 0.750412
반복(Epoch): 25400, Generator 손실함수(g_loss): 1.713176, Discriminator 손실함수(d_loss): 0.732503
반복(Epoch): 25500, Generator 손실함수(g_loss): 2.138331, Discriminator 손실함수(d_loss): 0.766925
반복(Epoch): 25600, Generator 손실함수(g_loss): 1.910496, Discriminator 손실함수(d_loss): 0.798942
반복(Epoch): 25700, Generator 손실함수(g_loss): 1.930966, Discriminator 손실함수(d_loss): 0.720379
반복(Epoch): 25800, Generator 손실함수(g_loss): 2.166709, Discriminator 손실함수(d_loss): 0.

639189
반복(Epoch): 25900, Generator 손실함수(g_loss): 1.818226, Discriminator 손실함수(d_loss): 0.851310
반복(Epoch): 26000, Generator 손실함수(g_loss): 1.973000, Discriminator 손실함수(d_loss): 0.716978
반복(Epoch): 26100, Generator 손실함수(g_loss): 1.902990, Discriminator 손실함수(d_loss): 0.989563
반복(Epoch): 26200, Generator 손실함수(g_loss): 1.888355, Discriminator 손실함수(d_loss): 0.735077
반복(Epoch): 26300, Generator 손실함수(g_loss): 1.947047, Discriminator 손실함수(d_loss): 0.824043
반복(Epoch): 26400, Generator 손실함수(g_loss): 1.818817, Discriminator 손실함수(d_loss): 0.568586
반복(Epoch): 26500, Generator 손실함수(g_loss): 1.654490, Discriminator 손실함수(d_loss): 0.857475
반복(Epoch): 26600, Generator 손실함수(g_loss): 1.792143, Discriminator 손실함수(d_loss): 0.705105
반복(Epoch): 26700, Generator 손실함수(g_loss): 2.058827, Discriminator 손실함수(d_loss): 0.699498
반복(Epoch): 26800, Generator 손실함수(g_loss): 1.839756, Discriminator 손실함수(d_loss): 0.771913
반복(Epoch): 26900, Generator 손실함수(g_loss): 2.092773, Discriminator 손실함수(d_loss): 0.925082
반복(Epoch): 27000, Generator 손실함수(g_loss): 1.946595, Discriminator 손실함수(d_loss): 0.791213
반복(Epoch): 27100, Generator 손실함수(g_loss): 1.860207, Discriminator 손실함수(d_loss): 0.678544
반복(Epoch): 27200, Generator 손실함수(g_loss): 1.986457, Discriminator 손실함수(d_loss): 0.677514
반복(Epoch): 27300, Generator 손실함수(g_loss): 2.039853, Discriminator 손실함수(d_loss): 0.954869
반복(Epoch): 27400, Generator 손실함수(g_loss): 1.632032, Discriminator 손실함수(d_loss): 0.813566
반복(Epoch): 27500, Generator 손실함수(g_loss): 2.145519, Discriminator 손실함수(d_loss): 0.790105
반복(Epoch): 27600, Generator 손실함수(g_loss): 1.720586, Discriminator 손실함수(d_loss): 1.030600
반복(Epoch): 27700, Generator 손실함수(g_loss): 1.984403, Discriminator 손실함수(d_loss): 0.829916
반복(Epoch): 27800, Generator 손실함수(g_loss): 1.936321, Discriminator 손실함수(d_loss): 0.755593
반복(Epoch): 27900, Generator 손실함수(g_loss): 2.085753, Discriminator 손실함수(d_loss): 0.799436
반복(Epoch): 28000, Generator 손실함수(g_loss): 1.703577, Discriminator 손실함수(d_loss): 0.785320
반복(Epoch): 28100, Generator 손실함수(g_loss): 1.863742, Discriminator 손실함수(d_loss): 0.667871
반복(Epoch): 28200, Generator 손실함수(g_loss): 1.816119, Discriminator 손실함수(d_loss): 0.916734
반복(Epoch): 28300, Generator 손실함수(g_loss): 1.726333, Discriminator 손실함수(d_loss): 0.960382
반복(Epoch): 28400, Generator 손실함수(g_loss): 1.738102, Discriminator 손실함수(d_loss): 0.823155
반복(Epoch): 28500, Generator 손실함수(g_loss): 2.001662, Discriminator 손실함수(d_loss): 0.723967
반복(Epoch): 28600, Generator 손실함수(g_loss): 2.222333, Discriminator 손실함수(d_loss): 0.848989
반복(Epoch): 28700, Generator 손실함수(g_loss): 1.629091, Discriminator 손실함수(d_loss): 0.954683
반복(Epoch): 28800, Generator 손실함수(g_loss): 1.416022, Discriminator 손실함수(d_loss): 0.875278
반복(Epoch): 28900, Generator 손실함수(g_loss): 2.202364, Discriminator 손실함수(d_loss): 0.746044
반복(Epoch): 29000, Generator 손실함수(g_loss): 1.938945, Discriminator 손실함수(d_loss): 0.804780
반복(Epoch): 29100, Generator 손실함수(g_loss): 2.179883, Discriminator 손실함수(d_loss): 0.778531
반복(Epoch): 29200, Generator 손실함수(g_loss): 1.724254, Discriminator 손실함수(d_loss): 0.888687
반복(Epoch): 29300, Generator 손실함수(g_loss): 2.107941, Discriminator 손실함수(d_loss): 0.760484
반복(Epoch): 29400, Generator 손실함수(g_loss): 2.246840, Discriminator 손실함수(d_loss): 0.
835270

835370
반복(Epoch): 29500, Generator 손실함수(g_loss): 2.005930, Discriminator 손실함수(d_loss): 0.829302
반복(Epoch): 29600, Generator 손실함수(g_loss): 2.103379, Discriminator 손실함수(d_loss): 0.826793
반복(Epoch): 29700, Generator 손실함수(g_loss): 2.175590, Discriminator 손실함수(d_loss): 0.487392
반복(Epoch): 29800, Generator 손실함수(g_loss): 2.034790, Discriminator 손실함수(d_loss): 0.803478
반복(Epoch): 29900, Generator 손실함수(g_loss): 1.956780, Discriminator 손실함수(d_loss): 0.721959
반복(Epoch): 30000, Generator 손실함수(g_loss): 1.734906, Discriminator 손실함수(d_loss): 0.928980
반복(Epoch): 30100, Generator 손실함수(g_loss): 1.559494, Discriminator 손실함수(d_loss): 0.970005
반복(Epoch): 30200, Generator 손실함수(g_loss): 2.114584, Discriminator 손실함수(d_loss): 0.782996
반복(Epoch): 30300, Generator 손실함수(g_loss): 2.196245, Discriminator 손실함수(d_loss): 0.734321
반복(Epoch): 30400, Generator 손실함수(g_loss): 1.905412, Discriminator 손실함수(d_loss): 0.890205
반복(Epoch): 30500, Generator 손실함수(g_loss): 1.945004, Discriminator 손실함수(d_loss): 0.692240
반복(Epoch): 30600, Generator 손실함수(g_loss): 1.986005, Discriminator 손실함수(d_loss): 0.743630
반복(Epoch): 30700, Generator 손실함수(g_loss): 1.852340, Discriminator 손실함수(d_loss): 0.895462
반복(Epoch): 30800, Generator 손실함수(g_loss): 1.990225, Discriminator 손실함수(d_loss): 0.688576
반복(Epoch): 30900, Generator 손실함수(g_loss): 1.943802, Discriminator 손실함수(d_loss): 0.917728
반복(Epoch): 31000, Generator 손실함수(g_loss): 1.947889, Discriminator 손실함수(d_loss): 0.765463
반복(Epoch): 31100, Generator 손실함수(g_loss): 1.710677, Discriminator 손실함수(d_loss): 0.869152
반복(Epoch): 31200, Generator 손실함수(g_loss): 1.776522, Discriminator 손실함수(d_loss): 0.674555
반복(Epoch): 31300, Generator 손실함수(g_loss): 2.132234, Discriminator 손실함수(d_loss): 0.585505
반복(Epoch): 31400, Generator 손실함수(g_loss): 1.893581, Discriminator 손실함수(d_loss): 1.000268
반복(Epoch): 31500, Generator 손실함수(g_loss): 1.470545, Discriminator 손실함수(d_loss): 0.901482
반복(Epoch): 31600, Generator 손실함수(g_loss): 2.160002, Discriminator 손실함수(d_loss): 0.677941
반복(Epoch): 31700, Generator 손실함수(g_loss): 2.049418, Discriminator 손실함수(d_loss): 0.741798
반복(Epoch): 31800, Generator 손실함수(g_loss): 2.072951, Discriminator 손실함수(d_loss): 0.742463
반복(Epoch): 31900, Generator 손실함수(g_loss): 1.484027, Discriminator 손실함수(d_loss): 0.808672
반복(Epoch): 32000, Generator 손실함수(g_loss): 1.975730, Discriminator 손실함수(d_loss): 0.845778
반복(Epoch): 32100, Generator 손실함수(g_loss): 1.686160, Discriminator 손실함수(d_loss): 0.706554
반복(Epoch): 32200, Generator 손실함수(g_loss): 2.078850, Discriminator 손실함수(d_loss): 0.789004
반복(Epoch): 32300, Generator 손실함수(g_loss): 1.779889, Discriminator 손실함수(d_loss): 0.828234
반복(Epoch): 32400, Generator 손실함수(g_loss): 1.898137, Discriminator 손실함수(d_loss): 0.879063
반복(Epoch): 32500, Generator 손실함수(g_loss): 1.932119, Discriminator 손실함수(d_loss): 0.825396
반복(Epoch): 32600, Generator 손실함수(g_loss): 1.636205, Discriminator 손실함수(d_loss): 0.927577
반복(Epoch): 32700, Generator 손실함수(g_loss): 1.915368, Discriminator 손실함수(d_loss): 0.673306
반복(Epoch): 32800, Generator 손실함수(g_loss): 2.191916, Discriminator 손실함수(d_loss): 0.622633
반복(Epoch): 32900, Generator 손실함수(g_loss): 1.964705, Discriminator 손실함수(d_loss): 0.777291
반복(Epoch): 33000, Generator 손실함수(g_loss): 1.984637, Discriminator 손실함수(d_loss): 0.

812467
반복(Epoch): 33100, Generator 손실함수(g_loss): 1.888009, Discriminator 손실함수(d_loss): 0.829653
반복(Epoch): 33200, Generator 손실함수(g_loss): 1.737217, Discriminator 손실함수(d_loss): 0.923123
반복(Epoch): 33300, Generator 손실함수(g_loss): 2.164256, Discriminator 손실함수(d_loss): 0.719336
반복(Epoch): 33400, Generator 손실함수(g_loss): 2.017879, Discriminator 손실함수(d_loss): 0.784641
반복(Epoch): 33500, Generator 손실함수(g_loss): 2.078957, Discriminator 손실함수(d_loss): 0.814838
반복(Epoch): 33600, Generator 손실함수(g_loss): 1.860656, Discriminator 손실함수(d_loss): 0.756514
반복(Epoch): 33700, Generator 손실함수(g_loss): 1.841270, Discriminator 손실함수(d_loss): 0.885287
반복(Epoch): 33800, Generator 손실함수(g_loss): 1.907329, Discriminator 손실함수(d_loss): 0.859275
반복(Epoch): 33900, Generator 손실함수(g_loss): 1.939517, Discriminator 손실함수(d_loss): 0.713397
반복(Epoch): 34000, Generator 손실함수(g_loss): 1.902395, Discriminator 손실함수(d_loss): 0.805382
반복(Epoch): 34100, Generator 손실함수(g_loss): 2.104724, Discriminator 손실함수(d_loss): 0.791597
반복(Epoch): 34200, Generator 손실함수(g_loss): 1.948062, Discriminator 손실함수(d_loss): 0.792427
반복(Epoch): 34300, Generator 손실함수(g_loss): 1.993665, Discriminator 손실함수(d_loss): 0.810547
반복(Epoch): 34400, Generator 손실함수(g_loss): 1.861380, Discriminator 손실함수(d_loss): 0.739595
반복(Epoch): 34500, Generator 손실함수(g_loss): 1.954218, Discriminator 손실함수(d_loss): 0.795371
반복(Epoch): 34600, Generator 손실함수(g_loss): 2.044275, Discriminator 손실함수(d_loss): 0.787642
반복(Epoch): 34700, Generator 손실함수(g_loss): 1.714327, Discriminator 손실함수(d_loss): 1.073184
반복(Epoch): 34800, Generator 손실함수(g_loss): 2.109589, Discriminator 손실함수(d_loss): 0.707502
반복(Epoch): 34900, Generator 손실함수(g_loss): 1.908993, Discriminator 손실함수(d_loss): 0.714176
반복(Epoch): 35000, Generator 손실함수(g_loss): 1.853484, Discriminator 손실함수(d_loss): 0.840739
반복(Epoch): 35100, Generator 손실함수(g_loss): 1.849242, Discriminator 손실함수(d_loss): 0.661385
반복(Epoch): 35200, Generator 손실함수(g_loss): 1.950967, Discriminator 손실함수(d_loss): 0.701521
반복(Epoch): 35300, Generator 손실함수(g_loss): 2.171009, Discriminator 손실함수(d_loss): 0.685219
반복(Epoch): 35400, Generator 손실함수(g_loss): 1.969026, Discriminator 손실함수(d_loss): 0.904703
반복(Epoch): 35500, Generator 손실함수(g_loss): 1.920794, Discriminator 손실함수(d_loss): 0.782180
반복(Epoch): 35600, Generator 손실함수(g_loss): 2.063411, Discriminator 손실함수(d_loss): 0.712508
반복(Epoch): 35700, Generator 손실함수(g_loss): 2.277279, Discriminator 손실함수(d_loss): 0.787328
반복(Epoch): 35800, Generator 손실함수(g_loss): 2.176920, Discriminator 손실함수(d_loss): 0.576875
반복(Epoch): 35900, Generator 손실함수(g_loss): 1.841322, Discriminator 손실함수(d_loss): 0.924928
반복(Epoch): 36000, Generator 손실함수(g_loss): 1.767322, Discriminator 손실함수(d_loss): 0.782671
반복(Epoch): 36100, Generator 손실함수(g_loss): 1.953700, Discriminator 손실함수(d_loss): 0.687015
반복(Epoch): 36200, Generator 손실함수(g_loss): 1.842820, Discriminator 손실함수(d_loss): 0.806807
반복(Epoch): 36300, Generator 손실함수(g_loss): 1.874319, Discriminator 손실함수(d_loss): 0.786882
반복(Epoch): 36400, Generator 손실함수(g_loss): 1.682833, Discriminator 손실함수(d_loss): 0.928112
반복(Epoch): 36500, Generator 손실함수(g_loss): 2.209873, Discriminator 손실함수(d_loss): 0.724073
반복(Epoch): 36600, Generator 손실함수(g_loss): 1.907384, Discriminator 손실함수(d_loss): 0.

898690
반복(Epoch): 36700, Generator 손실함수(g_loss): 2.242058, Discriminator 손실함수(d_loss): 0.691343
반복(Epoch): 36800, Generator 손실함수(g_loss): 1.825668, Discriminator 손실함수(d_loss): 0.731510
반복(Epoch): 36900, Generator 손실함수(g_loss): 2.071589, Discriminator 손실함수(d_loss): 0.764240
반복(Epoch): 37000, Generator 손실함수(g_loss): 2.050772, Discriminator 손실함수(d_loss): 0.801003
반복(Epoch): 37100, Generator 손실함수(g_loss): 1.982723, Discriminator 손실함수(d_loss): 0.617182
반복(Epoch): 37200, Generator 손실함수(g_loss): 2.029504, Discriminator 손실함수(d_loss): 0.641195
반복(Epoch): 37300, Generator 손실함수(g_loss): 1.753809, Discriminator 손실함수(d_loss): 0.809118
반복(Epoch): 37400, Generator 손실함수(g_loss): 2.056427, Discriminator 손실함수(d_loss): 0.668897
반복(Epoch): 37500, Generator 손실함수(g_loss): 2.018787, Discriminator 손실함수(d_loss): 0.805693
반복(Epoch): 37600, Generator 손실함수(g_loss): 2.154636, Discriminator 손실함수(d_loss): 0.840850
반복(Epoch): 37700, Generator 손실함수(g_loss): 2.178332, Discriminator 손실함수(d_loss): 0.667765
반복(Epoch): 37800, Generator 손실함수(g_loss): 1.864969, Discriminator 손실함수(d_loss): 0.787730
반복(Epoch): 37900, Generator 손실함수(g_loss): 1.971312, Discriminator 손실함수(d_loss): 0.804843
반복(Epoch): 38000, Generator 손실함수(g_loss): 2.002361, Discriminator 손실함수(d_loss): 0.724083
반복(Epoch): 38100, Generator 손실함수(g_loss): 1.899163, Discriminator 손실함수(d_loss): 0.830949
반복(Epoch): 38200, Generator 손실함수(g_loss): 2.174805, Discriminator 손실함수(d_loss): 0.706845
반복(Epoch): 38300, Generator 손실함수(g_loss): 2.007004, Discriminator 손실함수(d_loss): 0.807914
반복(Epoch): 38400, Generator 손실함수(g_loss): 1.960665, Discriminator 손실함수(d_loss): 0.669112
반복(Epoch): 38500, Generator 손실함수(g_loss): 2.191137, Discriminator 손실함수(d_loss): 0.633406
반복(Epoch): 38600, Generator 손실함수(g_loss): 1.779326, Discriminator 손실함수(d_loss): 0.917651
반복(Epoch): 38700, Generator 손실함수(g_loss): 1.929161, Discriminator 손실함수(d_loss): 1.019277
반복(Epoch): 38800, Generator 손실함수(g_loss): 2.083478, Discriminator 손실함수(d_loss): 0.850762
반복(Epoch): 38900, Generator 손실함수(g_loss): 1.984565, Discriminator 손실함수(d_loss): 0.668231
반복(Epoch): 39000, Generator 손실함수(g_loss): 1.734961, Discriminator 손실함수(d_loss): 0.743202
반복(Epoch): 39100, Generator 손실함수(g_loss): 2.133757, Discriminator 손실함수(d_loss): 0.622386
반복(Epoch): 39200, Generator 손실함수(g_loss): 2.211796, Discriminator 손실함수(d_loss): 0.732813
반복(Epoch): 39300, Generator 손실함수(g_loss): 1.789629, Discriminator 손실함수(d_loss): 0.793928
반복(Epoch): 39400, Generator 손실함수(g_loss): 2.202210, Discriminator 손실함수(d_loss): 0.856940
반복(Epoch): 39500, Generator 손실함수(g_loss): 2.219868, Discriminator 손실함수(d_loss): 0.736746
반복(Epoch): 39600, Generator 손실함수(g_loss): 1.708000, Discriminator 손실함수(d_loss): 0.789094
반복(Epoch): 39700, Generator 손실함수(g_loss): 1.649820, Discriminator 손실함수(d_loss): 0.920773
반복(Epoch): 39800, Generator 손실함수(g_loss): 2.190889, Discriminator 손실함수(d_loss): 0.924064
반복(Epoch): 39900, Generator 손실함수(g_loss): 2.066264, Discriminator 손실함수(d_loss): 0.825751
반복(Epoch): 40000, Generator 손실함수(g_loss): 1.834051, Discriminator 손실함수(d_loss): 0.889038
반복(Epoch): 40100, Generator 손실함수(g_loss): 1.948547, Discriminator 손실함수(d_loss): 0.681703
반복(Epoch): 40200, Generator 손실함수(g_loss): 1.933888, Discriminator 손실함수(d_loss): 0.
701000

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반복(Epoch): 40300, Generator 손실함수(g_loss): 2.172744, Discriminator 손실함수(d_loss): 1.034120
반복(Epoch): 40400, Generator 손실함수(g_loss): 2.274309, Discriminator 손실함수(d_loss): 0.628644
반복(Epoch): 40500, Generator 손실함수(g_loss): 2.182182, Discriminator 손실함수(d_loss): 0.557667
반복(Epoch): 40600, Generator 손실함수(g_loss): 2.443871, Discriminator 손실함수(d_loss): 0.711206
반복(Epoch): 40700, Generator 손실함수(g_loss): 1.984621, Discriminator 손실함수(d_loss): 0.705191
반복(Epoch): 40800, Generator 손실함수(g_loss): 1.815812, Discriminator 손실함수(d_loss): 0.796010
반복(Epoch): 40900, Generator 손실함수(g_loss): 2.181189, Discriminator 손실함수(d_loss): 0.695461
반복(Epoch): 41000, Generator 손실함수(g_loss): 2.062252, Discriminator 손실함수(d_loss): 0.998828
반복(Epoch): 41100, Generator 손실함수(g_loss): 2.100408, Discriminator 손실함수(d_loss): 0.793112
반복(Epoch): 41200, Generator 손실함수(g_loss): 1.658030, Discriminator 손실함수(d_loss): 0.739365
반복(Epoch): 41300, Generator 손실함수(g_loss): 1.740855, Discriminator 손실함수(d_loss): 0.792670
반복(Epoch): 41400, Generator 손실함수(g_loss): 2.165281, Discriminator 손실함수(d_loss): 0.617713
반복(Epoch): 41500, Generator 손실함수(g_loss): 2.084322, Discriminator 손실함수(d_loss): 0.696694
반복(Epoch): 41600, Generator 손실함수(g_loss): 1.689755, Discriminator 손실함수(d_loss): 0.998932
반복(Epoch): 41700, Generator 손실함수(g_loss): 2.060844, Discriminator 손실함수(d_loss): 0.939032
반복(Epoch): 41800, Generator 손실함수(g_loss): 2.001311, Discriminator 손실함수(d_loss): 0.616890
반복(Epoch): 41900, Generator 손실함수(g_loss): 1.776809, Discriminator 손실함수(d_loss): 0.867212
반복(Epoch): 42000, Generator 손실함수(g_loss): 1.777646, Discriminator 손실함수(d_loss): 0.858282
반복(Epoch): 42100, Generator 손실함수(g_loss): 2.255070, Discriminator 손실함수(d_loss): 1.797270
반복(Epoch): 42200, Generator 손실함수(g_loss): 1.903033, Discriminator 손실함수(d_loss): 0.714542
반복(Epoch): 42300, Generator 손실함수(g_loss): 2.103043, Discriminator 손실함수(d_loss): 0.668898
반복(Epoch): 42400, Generator 손실함수(g_loss): 2.109923, Discriminator 손실함수(d_loss): 0.704371
반복(Epoch): 42500, Generator 손실함수(g_loss): 1.574121, Discriminator 손실함수(d_loss): 0.993738
반복(Epoch): 42600, Generator 손실함수(g_loss): 1.933642, Discriminator 손실함수(d_loss): 0.660078
반복(Epoch): 42700, Generator 손실함수(g_loss): 1.742138, Discriminator 손실함수(d_loss): 0.830235
반복(Epoch): 42800, Generator 손실함수(g_loss): 2.189077, Discriminator 손실함수(d_loss): 0.645438
반복(Epoch): 42900, Generator 손실함수(g_loss): 1.852147, Discriminator 손실함수(d_loss): 0.949418
반복(Epoch): 43000, Generator 손실함수(g_loss): 1.840263, Discriminator 손실함수(d_loss): 0.811838
반복(Epoch): 43100, Generator 손실함수(g_loss): 1.940011, Discriminator 손실함수(d_loss): 0.915493
반복(Epoch): 43200, Generator 손실함수(g_loss): 1.860590, Discriminator 손실함수(d_loss): 0.781373
반복(Epoch): 43300, Generator 손실함수(g_loss): 1.803087, Discriminator 손실함수(d_loss): 0.909146
반복(Epoch): 43400, Generator 손실함수(g_loss): 2.310828, Discriminator 손실함수(d_loss): 0.620406
반복(Epoch): 43500, Generator 손실함수(g_loss): 1.937365, Discriminator 손실함수(d_loss): 0.783245
반복(Epoch): 43600, Generator 손실함수(g_loss): 1.648282, Discriminator 손실함수(d_loss): 0.881757
반복(Epoch): 43700, Generator 손실함수(g_loss): 2.260815, Discriminator 손실함수(d_loss): 0.516076
반복(Epoch): 43800, Generator 손실함수(g_loss): 2.270786, Discriminator 손실함수(d_loss): 0.758635

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반복(Epoch): 43900, Generator 손실함수(g_loss): 2.147621, Discriminator 손실함수(d_loss): 0.685121
반복(Epoch): 44000, Generator 손실함수(g_loss): 1.835335, Discriminator 손실함수(d_loss): 0.833784
반복(Epoch): 44100, Generator 손실함수(g_loss): 2.010504, Discriminator 손실함수(d_loss): 0.846210
반복(Epoch): 44200, Generator 손실함수(g_loss): 2.011723, Discriminator 손실함수(d_loss): 0.948662
반복(Epoch): 44300, Generator 손실함수(g_loss): 2.027885, Discriminator 손실함수(d_loss): 0.768575
반복(Epoch): 44400, Generator 손실함수(g_loss): 2.289925, Discriminator 손실함수(d_loss): 0.591300
반복(Epoch): 44500, Generator 손실함수(g_loss): 1.965569, Discriminator 손실함수(d_loss): 0.857394
반복(Epoch): 44600, Generator 손실함수(g_loss): 1.695985, Discriminator 손실함수(d_loss): 0.898278
반복(Epoch): 44700, Generator 손실함수(g_loss): 2.159635, Discriminator 손실함수(d_loss): 0.704536
반복(Epoch): 44800, Generator 손실함수(g_loss): 2.097396, Discriminator 손실함수(d_loss): 0.929722
반복(Epoch): 44900, Generator 손실함수(g_loss): 2.181571, Discriminator 손실함수(d_loss): 0.622109
반복(Epoch): 45000, Generator 손실함수(g_loss): 2.371706, Discriminator 손실함수(d_loss): 0.626294
반복(Epoch): 45100, Generator 손실함수(g_loss): 2.204338, Discriminator 손실함수(d_loss): 0.755412
반복(Epoch): 45200, Generator 손실함수(g_loss): 1.815428, Discriminator 손실함수(d_loss): 0.730139
반복(Epoch): 45300, Generator 손실함수(g_loss): 1.984410, Discriminator 손실함수(d_loss): 0.693902
반복(Epoch): 45400, Generator 손실함수(g_loss): 2.061385, Discriminator 손실함수(d_loss): 0.835185
반복(Epoch): 45500, Generator 손실함수(g_loss): 2.367929, Discriminator 손실함수(d_loss): 0.852498
반복(Epoch): 45600, Generator 손실함수(g_loss): 1.948230, Discriminator 손실함수(d_loss): 0.839617
반복(Epoch): 45700, Generator 손실함수(g_loss): 2.214456, Discriminator 손실함수(d_loss): 0.726484
반복(Epoch): 45800, Generator 손실함수(g_loss): 2.196437, Discriminator 손실함수(d_loss): 0.830412
반복(Epoch): 45900, Generator 손실함수(g_loss): 2.040104, Discriminator 손실함수(d_loss): 0.801425
반복(Epoch): 46000, Generator 손실함수(g_loss): 2.026053, Discriminator 손실함수(d_loss): 0.795177
반복(Epoch): 46100, Generator 손실함수(g_loss): 2.196599, Discriminator 손실함수(d_loss): 0.707262
반복(Epoch): 46200, Generator 손실함수(g_loss): 1.569200, Discriminator 손실함수(d_loss): 0.794032
반복(Epoch): 46300, Generator 손실함수(g_loss): 1.975432, Discriminator 손실함수(d_loss): 0.661464
반복(Epoch): 46400, Generator 손실함수(g_loss): 1.911590, Discriminator 손실함수(d_loss): 0.688367
반복(Epoch): 46500, Generator 손실함수(g_loss): 2.124200, Discriminator 손실함수(d_loss): 0.854967
반복(Epoch): 46600, Generator 손실함수(g_loss): 2.126139, Discriminator 손실함수(d_loss): 0.679228
반복(Epoch): 46700, Generator 손실함수(g_loss): 1.765878, Discriminator 손실함수(d_loss): 0.804564
반복(Epoch): 46800, Generator 손실함수(g_loss): 2.068581, Discriminator 손실함수(d_loss): 0.682760
반복(Epoch): 46900, Generator 손실함수(g_loss): 2.397768, Discriminator 손실함수(d_loss): 0.654857
반복(Epoch): 47000, Generator 손실함수(g_loss): 2.341138, Discriminator 손실함수(d_loss): 0.601343
반복(Epoch): 47100, Generator 손실함수(g_loss): 2.008313, Discriminator 손실함수(d_loss): 0.586916
반복(Epoch): 47200, Generator 손실함수(g_loss): 1.965916, Discriminator 손실함수(d_loss): 0.946931
반복(Epoch): 47300, Generator 손실함수(g_loss): 2.221422, Discriminator 손실함수(d_loss): 0.673799
반복(Epoch): 47400, Generator 손실함수(g_loss): 2.180872, Discriminator 손실함수(d_loss): 0.714432

714422
반복(Epoch): 47500, Generator 손실함수(g_loss): 2.402260, Discriminator 손실함수(d_loss): 0.647999
반복(Epoch): 47600, Generator 손실함수(g_loss): 1.963494, Discriminator 손실함수(d_loss): 0.681185
반복(Epoch): 47700, Generator 손실함수(g_loss): 1.936654, Discriminator 손실함수(d_loss): 0.572404
반복(Epoch): 47800, Generator 손실함수(g_loss): 2.057586, Discriminator 손실함수(d_loss): 0.698845
반복(Epoch): 47900, Generator 손실함수(g_loss): 1.730902, Discriminator 손실함수(d_loss): 0.825233
반복(Epoch): 48000, Generator 손실함수(g_loss): 2.170967, Discriminator 손실함수(d_loss): 0.643507
반복(Epoch): 48100, Generator 손실함수(g_loss): 1.973467, Discriminator 손실함수(d_loss): 0.642151
반복(Epoch): 48200, Generator 손실함수(g_loss): 1.840293, Discriminator 손실함수(d_loss): 0.951946
반복(Epoch): 48300, Generator 손실함수(g_loss): 1.921918, Discriminator 손실함수(d_loss): 0.775874
반복(Epoch): 48400, Generator 손실함수(g_loss): 1.895843, Discriminator 손실함수(d_loss): 0.914995
반복(Epoch): 48500, Generator 손실함수(g_loss): 1.925510, Discriminator 손실함수(d_loss): 0.505044
반복(Epoch): 48600, Generator 손실함수(g_loss): 1.835279, Discriminator 손실함수(d_loss): 0.918555
반복(Epoch): 48700, Generator 손실함수(g_loss): 1.994748, Discriminator 손실함수(d_loss): 0.761449
반복(Epoch): 48800, Generator 손실함수(g_loss): 1.861046, Discriminator 손실함수(d_loss): 0.677662
반복(Epoch): 48900, Generator 손실함수(g_loss): 2.040048, Discriminator 손실함수(d_loss): 0.634252
반복(Epoch): 49000, Generator 손실함수(g_loss): 1.969868, Discriminator 손실함수(d_loss): 0.746826
반복(Epoch): 49100, Generator 손실함수(g_loss): 1.888288, Discriminator 손실함수(d_loss): 0.799442
반복(Epoch): 49200, Generator 손실함수(g_loss): 1.801844, Discriminator 손실함수(d_loss): 0.692111
반복(Epoch): 49300, Generator 손실함수(g_loss): 1.762647, Discriminator 손실함수(d_loss): 0.756138
반복(Epoch): 49400, Generator 손실함수(g_loss): 2.196862, Discriminator 손실함수(d_loss): 0.887803
반복(Epoch): 49500, Generator 손실함수(g_loss): 2.286792, Discriminator 손실함수(d_loss): 0.704917
반복(Epoch): 49600, Generator 손실함수(g_loss): 2.078186, Discriminator 손실함수(d_loss): 0.885396
반복(Epoch): 49700, Generator 손실함수(g_loss): 2.067440, Discriminator 손실함수(d_loss): 1.015888
반복(Epoch): 49800, Generator 손실함수(g_loss): 2.291003, Discriminator 손실함수(d_loss): 0.608337
반복(Epoch): 49900, Generator 손실함수(g_loss): 1.864046, Discriminator 손실함수(d_loss): 0.745105
반복(Epoch): 50000, Generator 손실함수(g_loss): 2.397725, Discriminator 손실함수(d_loss): 0.557381
반복(Epoch): 50100, Generator 손실함수(g_loss): 2.266360, Discriminator 손실함수(d_loss): 0.727567
반복(Epoch): 50200, Generator 손실함수(g_loss): 1.921008, Discriminator 손실함수(d_loss): 0.669235
반복(Epoch): 50300, Generator 손실함수(g_loss): 1.964712, Discriminator 손실함수(d_loss): 0.750455
반복(Epoch): 50400, Generator 손실함수(g_loss): 1.980082, Discriminator 손실함수(d_loss): 0.662818
반복(Epoch): 50500, Generator 손실함수(g_loss): 2.087181, Discriminator 손실함수(d_loss): 0.677331
반복(Epoch): 50600, Generator 손실함수(g_loss): 1.924182, Discriminator 손실함수(d_loss): 0.856132
반복(Epoch): 50700, Generator 손실함수(g_loss): 2.328320, Discriminator 손실함수(d_loss): 0.769590
반복(Epoch): 50800, Generator 손실함수(g_loss): 1.947696, Discriminator 손실함수(d_loss): 0.932175
반복(Epoch): 50900, Generator 손실함수(g_loss): 1.832972, Discriminator 손실함수(d_loss): 0.812102
반복(Epoch): 51000, Generator 손실함수(g_loss): 2.616506, Discriminator 손실함수(d_loss): 0.

548048
반복(Epoch): 51100, Generator 손실함수(g_loss): 1.999937, Discriminator 손실함수(d_loss): 0.689583
반복(Epoch): 51200, Generator 손실함수(g_loss): 2.108777, Discriminator 손실함수(d_loss): 0.745959
반복(Epoch): 51300, Generator 손실함수(g_loss): 1.970365, Discriminator 손실함수(d_loss): 0.700605
반복(Epoch): 51400, Generator 손실함수(g_loss): 1.983110, Discriminator 손실함수(d_loss): 0.865035
반복(Epoch): 51500, Generator 손실함수(g_loss): 1.832035, Discriminator 손실함수(d_loss): 0.847860
반복(Epoch): 51600, Generator 손실함수(g_loss): 2.087256, Discriminator 손실함수(d_loss): 0.599413
반복(Epoch): 51700, Generator 손실함수(g_loss): 2.095704, Discriminator 손실함수(d_loss): 0.789737
반복(Epoch): 51800, Generator 손실함수(g_loss): 1.712779, Discriminator 손실함수(d_loss): 0.843665
반복(Epoch): 51900, Generator 손실함수(g_loss): 1.692302, Discriminator 손실함수(d_loss): 0.861376
반복(Epoch): 52000, Generator 손실함수(g_loss): 2.035069, Discriminator 손실함수(d_loss): 0.676471
반복(Epoch): 52100, Generator 손실함수(g_loss): 2.435944, Discriminator 손실함수(d_loss): 0.675184
반복(Epoch): 52200, Generator 손실함수(g_loss): 1.840536, Discriminator 손실함수(d_loss): 0.859436
반복(Epoch): 52300, Generator 손실함수(g_loss): 2.201356, Discriminator 손실함수(d_loss): 0.698121
반복(Epoch): 52400, Generator 손실함수(g_loss): 1.901799, Discriminator 손실함수(d_loss): 0.908242
반복(Epoch): 52500, Generator 손실함수(g_loss): 2.207592, Discriminator 손실함수(d_loss): 0.893021
반복(Epoch): 52600, Generator 손실함수(g_loss): 2.029195, Discriminator 손실함수(d_loss): 0.862409
반복(Epoch): 52700, Generator 손실함수(g_loss): 2.160152, Discriminator 손실함수(d_loss): 0.671501
반복(Epoch): 52800, Generator 손실함수(g_loss): 1.900891, Discriminator 손실함수(d_loss): 0.735295
반복(Epoch): 52900, Generator 손실함수(g_loss): 2.363921, Discriminator 손실함수(d_loss): 0.734571
반복(Epoch): 53000, Generator 손실함수(g_loss): 2.302001, Discriminator 손실함수(d_loss): 0.606942
반복(Epoch): 53100, Generator 손실함수(g_loss): 2.054507, Discriminator 손실함수(d_loss): 0.570923
반복(Epoch): 53200, Generator 손실함수(g_loss): 2.022479, Discriminator 손실함수(d_loss): 0.817898
반복(Epoch): 53300, Generator 손실함수(g_loss): 2.513363, Discriminator 손실함수(d_loss): 0.716136
반복(Epoch): 53400, Generator 손실함수(g_loss): 2.334632, Discriminator 손실함수(d_loss): 0.622151
반복(Epoch): 53500, Generator 손실함수(g_loss): 2.034239, Discriminator 손실함수(d_loss): 0.728531
반복(Epoch): 53600, Generator 손실함수(g_loss): 2.090409, Discriminator 손실함수(d_loss): 0.817560
반복(Epoch): 53700, Generator 손실함수(g_loss): 2.017971, Discriminator 손실함수(d_loss): 0.756600
반복(Epoch): 53800, Generator 손실함수(g_loss): 1.672364, Discriminator 손실함수(d_loss): 0.721917
반복(Epoch): 53900, Generator 손실함수(g_loss): 2.134790, Discriminator 손실함수(d_loss): 0.666812
반복(Epoch): 54000, Generator 손실함수(g_loss): 1.884172, Discriminator 손실함수(d_loss): 0.728706
반복(Epoch): 54100, Generator 손실함수(g_loss): 2.148091, Discriminator 손실함수(d_loss): 0.766628
반복(Epoch): 54200, Generator 손실함수(g_loss): 1.997401, Discriminator 손실함수(d_loss): 0.676033
반복(Epoch): 54300, Generator 손실함수(g_loss): 1.501821, Discriminator 손실함수(d_loss): 0.806560
반복(Epoch): 54400, Generator 손실함수(g_loss): 2.129668, Discriminator 손실함수(d_loss): 0.820255
반복(Epoch): 54500, Generator 손실함수(g_loss): 1.927315, Discriminator 손실함수(d_loss): 0.748020
반복(Epoch): 54600, Generator 손실함수(g_loss): 2.178639, Discriminator 손실함수(d_loss): 0.781614

781614
반복(Epoch): 54700, Generator 손실함수(g_loss): 2.047893, Discriminator 손실함수(d_loss): 0.
786759
반복(Epoch): 54800, Generator 손실함수(g_loss): 1.866810, Discriminator 손실함수(d_loss): 0.
693926
반복(Epoch): 54900, Generator 손실함수(g_loss): 2.210036, Discriminator 손실함수(d_loss): 0.
702575
반복(Epoch): 55000, Generator 손실함수(g_loss): 1.975586, Discriminator 손실함수(d_loss): 0.
750805
반복(Epoch): 55100, Generator 손실함수(g_loss): 2.111490, Discriminator 손실함수(d_loss): 0.
692756
반복(Epoch): 55200, Generator 손실함수(g_loss): 1.802667, Discriminator 손실함수(d_loss): 0.
809681
반복(Epoch): 55300, Generator 손실함수(g_loss): 1.824993, Discriminator 손실함수(d_loss): 0.
756674
반복(Epoch): 55400, Generator 손실함수(g_loss): 2.295380, Discriminator 손실함수(d_loss): 0.
779689
반복(Epoch): 55500, Generator 손실함수(g_loss): 1.606852, Discriminator 손실함수(d_loss): 0.
835659
반복(Epoch): 55600, Generator 손실함수(g_loss): 2.221775, Discriminator 손실함수(d_loss): 0.
670621
반복(Epoch): 55700, Generator 손실함수(g_loss): 2.283576, Discriminator 손실함수(d_loss): 0.
844303
반복(Epoch): 55800, Generator 손실함수(g_loss): 2.294870, Discriminator 손실함수(d_loss): 0.
620078
반복(Epoch): 55900, Generator 손실함수(g_loss): 1.850925, Discriminator 손실함수(d_loss): 0.
748720
반복(Epoch): 56000, Generator 손실함수(g_loss): 2.189030, Discriminator 손실함수(d_loss): 0.
773368
반복(Epoch): 56100, Generator 손실함수(g_loss): 1.937507, Discriminator 손실함수(d_loss): 0.
774326
반복(Epoch): 56200, Generator 손실함수(g_loss): 2.032316, Discriminator 손실함수(d_loss): 0.
702789
반복(Epoch): 56300, Generator 손실함수(g_loss): 2.101541, Discriminator 손실함수(d_loss): 0.
651625
반복(Epoch): 56400, Generator 손실함수(g_loss): 2.301017, Discriminator 손실함수(d_loss): 0.
510742
반복(Epoch): 56500, Generator 손실함수(g_loss): 2.007604, Discriminator 손실함수(d_loss): 0.
937537
반복(Epoch): 56600, Generator 손실함수(g_loss): 1.955413, Discriminator 손실함수(d_loss): 0.
814062
반복(Epoch): 56700, Generator 손실함수(g_loss): 2.065773, Discriminator 손실함수(d_loss): 0.
659857
반복(Epoch): 56800, Generator 손실함수(g_loss): 2.283050, Discriminator 손실함수(d_loss): 0.
552322
반복(Epoch): 56900, Generator 손실함수(g_loss): 1.879371, Discriminator 손실함수(d_loss): 0.
794150
반복(Epoch): 57000, Generator 손실함수(g_loss): 2.071722, Discriminator 손실함수(d_loss): 0.
815521
반복(Epoch): 57100, Generator 손실함수(g_loss): 1.936782, Discriminator 손실함수(d_loss): 0.
880090
반복(Epoch): 57200, Generator 손실함수(g_loss): 2.084153, Discriminator 손실함수(d_loss): 0.
644986
반복(Epoch): 57300, Generator 손실함수(g_loss): 1.962863, Discriminator 손실함수(d_loss): 0.
710227
반복(Epoch): 57400, Generator 손실함수(g_loss): 1.697990, Discriminator 손실함수(d_loss): 0.
796119
반복(Epoch): 57500, Generator 손실함수(g_loss): 2.115516, Discriminator 손실함수(d_loss): 0.
629212
반복(Epoch): 57600, Generator 손실함수(g_loss): 1.770888, Discriminator 손실함수(d_loss): 0.
891216
반복(Epoch): 57700, Generator 손실함수(g_loss): 2.245884, Discriminator 손실함수(d_loss): 0.
586900
반복(Epoch): 57800, Generator 손실함수(g_loss): 2.075435, Discriminator 손실함수(d_loss): 0.
830740
반복(Epoch): 57900, Generator 손실함수(g_loss): 2.063244, Discriminator 손실함수(d_loss): 0.
778301
반복(Epoch): 58000, Generator 손실함수(g_loss): 1.993061, Discriminator 손실함수(d_loss): 0.
825506
반복(Epoch): 58100, Generator 손실함수(g_loss): 1.850247, Discriminator 손실함수(d_loss): 0.
774570
반복(Epoch): 58200, Generator 손실함수(g_loss): 1.660275, Discriminator 손실함수(d_loss): 0.

900526

반복(Epoch): 58300, Generator 손실함수(g_loss): 1.909634, Discriminator 손실함수(d_loss): 0.716594

반복(Epoch): 58400, Generator 손실함수(g_loss): 1.687981, Discriminator 손실함수(d_loss): 0.953472

반복(Epoch): 58500, Generator 손실함수(g_loss): 2.191556, Discriminator 손실함수(d_loss): 0.694282

반복(Epoch): 58600, Generator 손실함수(g_loss): 2.185019, Discriminator 손실함수(d_loss): 0.685927

반복(Epoch): 58700, Generator 손실함수(g_loss): 1.940830, Discriminator 손실함수(d_loss): 0.733750

반복(Epoch): 58800, Generator 손실함수(g_loss): 2.044133, Discriminator 손실함수(d_loss): 0.824475

반복(Epoch): 58900, Generator 손실함수(g_loss): 1.756584, Discriminator 손실함수(d_loss): 0.736939

반복(Epoch): 59000, Generator 손실함수(g_loss): 1.896905, Discriminator 손실함수(d_loss): 0.661468

반복(Epoch): 59100, Generator 손실함수(g_loss): 2.183915, Discriminator 손실함수(d_loss): 0.669718

반복(Epoch): 59200, Generator 손실함수(g_loss): 1.948533, Discriminator 손실함수(d_loss): 0.616475

반복(Epoch): 59300, Generator 손실함수(g_loss): 1.938361, Discriminator 손실함수(d_loss): 0.663349

반복(Epoch): 59400, Generator 손실함수(g_loss): 2.107200, Discriminator 손실함수(d_loss): 0.600277

반복(Epoch): 59500, Generator 손실함수(g_loss): 2.058612, Discriminator 손실함수(d_loss): 0.658113

반복(Epoch): 59600, Generator 손실함수(g_loss): 1.914834, Discriminator 손실함수(d_loss): 0.715278

반복(Epoch): 59700, Generator 손실함수(g_loss): 2.165789, Discriminator 손실함수(d_loss): 0.607179

반복(Epoch): 59800, Generator 손실함수(g_loss): 2.072838, Discriminator 손실함수(d_loss): 0.651620

반복(Epoch): 59900, Generator 손실함수(g_loss): 2.097370, Discriminator 손실함수(d_loss): 0.724399

반복(Epoch): 60000, Generator 손실함수(g_loss): 2.217060, Discriminator 손실함수(d_loss): 0.820522

반복(Epoch): 60100, Generator 손실함수(g_loss): 1.718299, Discriminator 손실함수(d_loss): 0.808374

반복(Epoch): 60200, Generator 손실함수(g_loss): 2.357293, Discriminator 손실함수(d_loss): 0.847340

반복(Epoch): 60300, Generator 손실함수(g_loss): 1.729362, Discriminator 손실함수(d_loss): 0.843887

반복(Epoch): 60400, Generator 손실함수(g_loss): 1.767387, Discriminator 손실함수(d_loss): 0.738138

반복(Epoch): 60500, Generator 손실함수(g_loss): 2.092278, Discriminator 손실함수(d_loss): 0.780330

반복(Epoch): 60600, Generator 손실함수(g_loss): 2.105381, Discriminator 손실함수(d_loss): 0.654307

반복(Epoch): 60700, Generator 손실함수(g_loss): 2.109981, Discriminator 손실함수(d_loss): 0.514607

반복(Epoch): 60800, Generator 손실함수(g_loss): 2.039382, Discriminator 손실함수(d_loss): 0.621481

반복(Epoch): 60900, Generator 손실함수(g_loss): 2.026587, Discriminator 손실함수(d_loss): 0.627000

반복(Epoch): 61000, Generator 손실함수(g_loss): 2.357293, Discriminator 손실함수(d_loss): 0.719742

반복(Epoch): 61100, Generator 손실함수(g_loss): 1.941128, Discriminator 손실함수(d_loss): 0.830817

반복(Epoch): 61200, Generator 손실함수(g_loss): 2.277439, Discriminator 손실함수(d_loss): 0.893449

반복(Epoch): 61300, Generator 손실함수(g_loss): 2.724878, Discriminator 손실함수(d_loss): 0.695992

반복(Epoch): 61400, Generator 손실함수(g_loss): 1.944941, Discriminator 손실함수(d_loss): 0.776350

반복(Epoch): 61500, Generator 손실함수(g_loss): 2.148399, Discriminator 손실함수(d_loss): 0.669325

반복(Epoch): 61600, Generator 손실함수(g_loss): 2.188224, Discriminator 손실함수(d_loss): 0.837269

반복(Epoch): 61700, Generator 손실함수(g_loss): 2.172895, Discriminator 손실함수(d_loss): 0.720216

반복(Epoch): 61800, Generator 손실함수(g_loss): 1.798278, Discriminator 손실함수(d_loss): 0.

910140
반복(Epoch): 61900, Generator 손실함수(g_loss): 2.396101, Discriminator 손실함수(d_loss): 0.574808
반복(Epoch): 62000, Generator 손실함수(g_loss): 1.929832, Discriminator 손실함수(d_loss): 0.830403
반복(Epoch): 62100, Generator 손실함수(g_loss): 1.985645, Discriminator 손실함수(d_loss): 0.632019
반복(Epoch): 62200, Generator 손실함수(g_loss): 2.172040, Discriminator 손실함수(d_loss): 0.711740
반복(Epoch): 62300, Generator 손실함수(g_loss): 2.015630, Discriminator 손실함수(d_loss): 0.773285
반복(Epoch): 62400, Generator 손실함수(g_loss): 1.828528, Discriminator 손실함수(d_loss): 0.773673
반복(Epoch): 62500, Generator 손실함수(g_loss): 1.913055, Discriminator 손실함수(d_loss): 0.586607
반복(Epoch): 62600, Generator 손실함수(g_loss): 2.132864, Discriminator 손실함수(d_loss): 0.610317
반복(Epoch): 62700, Generator 손실함수(g_loss): 2.060406, Discriminator 손실함수(d_loss): 0.683293
반복(Epoch): 62800, Generator 손실함수(g_loss): 1.562691, Discriminator 손실함수(d_loss): 0.877899
반복(Epoch): 62900, Generator 손실함수(g_loss): 2.229594, Discriminator 손실함수(d_loss): 0.616507
반복(Epoch): 63000, Generator 손실함수(g_loss): 2.237880, Discriminator 손실함수(d_loss): 0.656694
반복(Epoch): 63100, Generator 손실함수(g_loss): 2.298717, Discriminator 손실함수(d_loss): 0.899886
반복(Epoch): 63200, Generator 손실함수(g_loss): 1.857886, Discriminator 손실함수(d_loss): 0.743483
반복(Epoch): 63300, Generator 손실함수(g_loss): 1.966316, Discriminator 손실함수(d_loss): 0.727312
반복(Epoch): 63400, Generator 손실함수(g_loss): 2.022149, Discriminator 손실함수(d_loss): 0.787419
반복(Epoch): 63500, Generator 손실함수(g_loss): 2.209078, Discriminator 손실함수(d_loss): 0.508273
반복(Epoch): 63600, Generator 손실함수(g_loss): 2.205353, Discriminator 손실함수(d_loss): 0.694528
반복(Epoch): 63700, Generator 손실함수(g_loss): 2.031415, Discriminator 손실함수(d_loss): 0.676209
반복(Epoch): 63800, Generator 손실함수(g_loss): 1.733073, Discriminator 손실함수(d_loss): 0.798875
반복(Epoch): 63900, Generator 손실함수(g_loss): 1.985012, Discriminator 손실함수(d_loss): 0.823934
반복(Epoch): 64000, Generator 손실함수(g_loss): 2.140560, Discriminator 손실함수(d_loss): 0.879450
반복(Epoch): 64100, Generator 손실함수(g_loss): 2.349957, Discriminator 손실함수(d_loss): 0.725415
반복(Epoch): 64200, Generator 손실함수(g_loss): 2.145417, Discriminator 손실함수(d_loss): 0.607084
반복(Epoch): 64300, Generator 손실함수(g_loss): 2.013137, Discriminator 손실함수(d_loss): 0.731544
반복(Epoch): 64400, Generator 손실함수(g_loss): 2.002631, Discriminator 손실함수(d_loss): 0.526787
반복(Epoch): 64500, Generator 손실함수(g_loss): 2.275242, Discriminator 손실함수(d_loss): 0.694913
반복(Epoch): 64600, Generator 손실함수(g_loss): 2.222303, Discriminator 손실함수(d_loss): 0.775285
반복(Epoch): 64700, Generator 손실함수(g_loss): 1.829890, Discriminator 손실함수(d_loss): 0.771708
반복(Epoch): 64800, Generator 손실함수(g_loss): 1.940164, Discriminator 손실함수(d_loss): 0.720615
반복(Epoch): 64900, Generator 손실함수(g_loss): 1.683715, Discriminator 손실함수(d_loss): 0.759710
반복(Epoch): 65000, Generator 손실함수(g_loss): 2.134291, Discriminator 손실함수(d_loss): 0.704548
반복(Epoch): 65100, Generator 손실함수(g_loss): 1.850266, Discriminator 손실함수(d_loss): 0.703490
반복(Epoch): 65200, Generator 손실함수(g_loss): 1.806383, Discriminator 손실함수(d_loss): 0.703842
반복(Epoch): 65300, Generator 손실함수(g_loss): 1.907911, Discriminator 손실함수(d_loss): 0.773866
반복(Epoch): 65400, Generator 손실함수(g_loss): 2.110310, Discriminator 손실함수(d_loss): 0.

599231
반복(Epoch): 65500, Generator 손실함수(g_loss): 1.466079, Discriminator 손실함수(d_loss): 0.717786
반복(Epoch): 65600, Generator 손실함수(g_loss): 1.778525, Discriminator 손실함수(d_loss): 1.004056
반복(Epoch): 65700, Generator 손실함수(g_loss): 2.094175, Discriminator 손실함수(d_loss): 0.573305
반복(Epoch): 65800, Generator 손실함수(g_loss): 2.075578, Discriminator 손실함수(d_loss): 0.852545
반복(Epoch): 65900, Generator 손실함수(g_loss): 2.326792, Discriminator 손실함수(d_loss): 0.750226
반복(Epoch): 66000, Generator 손실함수(g_loss): 2.056242, Discriminator 손실함수(d_loss): 0.804766
반복(Epoch): 66100, Generator 손실함수(g_loss): 2.040508, Discriminator 손실함수(d_loss): 0.712354
반복(Epoch): 66200, Generator 손실함수(g_loss): 1.938512, Discriminator 손실함수(d_loss): 0.653465
반복(Epoch): 66300, Generator 손실함수(g_loss): 2.227560, Discriminator 손실함수(d_loss): 0.550618
반복(Epoch): 66400, Generator 손실함수(g_loss): 2.269709, Discriminator 손실함수(d_loss): 0.697196
반복(Epoch): 66500, Generator 손실함수(g_loss): 2.057551, Discriminator 손실함수(d_loss): 0.762716
반복(Epoch): 66600, Generator 손실함수(g_loss): 2.050150, Discriminator 손실함수(d_loss): 0.776925
반복(Epoch): 66700, Generator 손실함수(g_loss): 2.060156, Discriminator 손실함수(d_loss): 0.757476
반복(Epoch): 66800, Generator 손실함수(g_loss): 2.041916, Discriminator 손실함수(d_loss): 0.645873
반복(Epoch): 66900, Generator 손실함수(g_loss): 2.115135, Discriminator 손실함수(d_loss): 0.519820
반복(Epoch): 67000, Generator 손실함수(g_loss): 2.214529, Discriminator 손실함수(d_loss): 0.647590
반복(Epoch): 67100, Generator 손실함수(g_loss): 2.275473, Discriminator 손실함수(d_loss): 0.540990
반복(Epoch): 67200, Generator 손실함수(g_loss): 2.148854, Discriminator 손실함수(d_loss): 0.640383
반복(Epoch): 67300, Generator 손실함수(g_loss): 2.015941, Discriminator 손실함수(d_loss): 0.693231
반복(Epoch): 67400, Generator 손실함수(g_loss): 2.262424, Discriminator 손실함수(d_loss): 0.653494
반복(Epoch): 67500, Generator 손실함수(g_loss): 2.002797, Discriminator 손실함수(d_loss): 0.606741
반복(Epoch): 67600, Generator 손실함수(g_loss): 2.030793, Discriminator 손실함수(d_loss): 0.940781
반복(Epoch): 67700, Generator 손실함수(g_loss): 2.208335, Discriminator 손실함수(d_loss): 0.739497
반복(Epoch): 67800, Generator 손실함수(g_loss): 2.251005, Discriminator 손실함수(d_loss): 0.600197
반복(Epoch): 67900, Generator 손실함수(g_loss): 1.911149, Discriminator 손실함수(d_loss): 0.819657
반복(Epoch): 68000, Generator 손실함수(g_loss): 1.744581, Discriminator 손실함수(d_loss): 0.879879
반복(Epoch): 68100, Generator 손실함수(g_loss): 2.334377, Discriminator 손실함수(d_loss): 0.615154
반복(Epoch): 68200, Generator 손실함수(g_loss): 1.760144, Discriminator 손실함수(d_loss): 0.622751
반복(Epoch): 68300, Generator 손실함수(g_loss): 1.912155, Discriminator 손실함수(d_loss): 0.698913
반복(Epoch): 68400, Generator 손실함수(g_loss): 2.235341, Discriminator 손실함수(d_loss): 0.907499
반복(Epoch): 68500, Generator 손실함수(g_loss): 2.113782, Discriminator 손실함수(d_loss): 0.576882
반복(Epoch): 68600, Generator 손실함수(g_loss): 2.235771, Discriminator 손실함수(d_loss): 0.659227
반복(Epoch): 68700, Generator 손실함수(g_loss): 2.136653, Discriminator 손실함수(d_loss): 0.714227
반복(Epoch): 68800, Generator 손실함수(g_loss): 1.984267, Discriminator 손실함수(d_loss): 0.788058
반복(Epoch): 68900, Generator 손실함수(g_loss): 1.826804, Discriminator 손실함수(d_loss): 0.797889
반복(Epoch): 69000, Generator 손실함수(g_loss): 2.275296, Discriminator 손실함수(d_loss): 0.623580

623580
반복(Epoch): 69100, Generator 손실함수(g_loss): 2.108238, Discriminator 손실함수(d_loss): 0.734482
반복(Epoch): 69200, Generator 손실함수(g_loss): 2.031163, Discriminator 손실함수(d_loss): 0.755124
반복(Epoch): 69300, Generator 손실함수(g_loss): 2.003929, Discriminator 손실함수(d_loss): 0.734579
반복(Epoch): 69400, Generator 손실함수(g_loss): 2.136525, Discriminator 손실함수(d_loss): 0.912127
반복(Epoch): 69500, Generator 손실함수(g_loss): 2.170786, Discriminator 손실함수(d_loss): 0.595271
반복(Epoch): 69600, Generator 손실함수(g_loss): 2.026275, Discriminator 손실함수(d_loss): 0.888083
반복(Epoch): 69700, Generator 손실함수(g_loss): 1.766093, Discriminator 손실함수(d_loss): 0.861646
반복(Epoch): 69800, Generator 손실함수(g_loss): 2.166428, Discriminator 손실함수(d_loss): 0.574331
반복(Epoch): 69900, Generator 손실함수(g_loss): 2.053007, Discriminator 손실함수(d_loss): 0.643995
반복(Epoch): 70000, Generator 손실함수(g_loss): 2.308239, Discriminator 손실함수(d_loss): 0.750675
반복(Epoch): 70100, Generator 손실함수(g_loss): 2.091374, Discriminator 손실함수(d_loss): 0.818415
반복(Epoch): 70200, Generator 손실함수(g_loss): 2.114830, Discriminator 손실함수(d_loss): 0.655942
반복(Epoch): 70300, Generator 손실함수(g_loss): 1.870319, Discriminator 손실함수(d_loss): 0.697158
반복(Epoch): 70400, Generator 손실함수(g_loss): 2.063159, Discriminator 손실함수(d_loss): 0.721260
반복(Epoch): 70500, Generator 손실함수(g_loss): 2.221471, Discriminator 손실함수(d_loss): 0.648078
반복(Epoch): 70600, Generator 손실함수(g_loss): 2.186539, Discriminator 손실함수(d_loss): 0.656485
반복(Epoch): 70700, Generator 손실함수(g_loss): 2.103802, Discriminator 손실함수(d_loss): 0.667334
반복(Epoch): 70800, Generator 손실함수(g_loss): 2.028778, Discriminator 손실함수(d_loss): 0.589166
반복(Epoch): 70900, Generator 손실함수(g_loss): 1.915765, Discriminator 손실함수(d_loss): 0.615665
반복(Epoch): 71000, Generator 손실함수(g_loss): 1.770056, Discriminator 손실함수(d_loss): 0.886264
반복(Epoch): 71100, Generator 손실함수(g_loss): 1.943131, Discriminator 손실함수(d_loss): 0.933155
반복(Epoch): 71200, Generator 손실함수(g_loss): 1.693791, Discriminator 손실함수(d_loss): 0.733430
반복(Epoch): 71300, Generator 손실함수(g_loss): 1.866386, Discriminator 손실함수(d_loss): 0.757565
반복(Epoch): 71400, Generator 손실함수(g_loss): 1.881391, Discriminator 손실함수(d_loss): 0.737824
반복(Epoch): 71500, Generator 손실함수(g_loss): 2.454884, Discriminator 손실함수(d_loss): 0.640438
반복(Epoch): 71600, Generator 손실함수(g_loss): 2.216616, Discriminator 손실함수(d_loss): 0.674313
반복(Epoch): 71700, Generator 손실함수(g_loss): 2.074431, Discriminator 손실함수(d_loss): 0.782772
반복(Epoch): 71800, Generator 손실함수(g_loss): 2.286450, Discriminator 손실함수(d_loss): 0.684391
반복(Epoch): 71900, Generator 손실함수(g_loss): 2.102428, Discriminator 손실함수(d_loss): 0.684735
반복(Epoch): 72000, Generator 손실함수(g_loss): 2.537807, Discriminator 손실함수(d_loss): 0.655334
반복(Epoch): 72100, Generator 손실함수(g_loss): 2.035748, Discriminator 손실함수(d_loss): 0.608485
반복(Epoch): 72200, Generator 손실함수(g_loss): 2.172716, Discriminator 손실함수(d_loss): 0.666784
반복(Epoch): 72300, Generator 손실함수(g_loss): 1.930833, Discriminator 손실함수(d_loss): 0.798038
반복(Epoch): 72400, Generator 손실함수(g_loss): 2.260851, Discriminator 손실함수(d_loss): 0.598123
반복(Epoch): 72500, Generator 손실함수(g_loss): 2.380834, Discriminator 손실함수(d_loss): 0.742780
반복(Epoch): 72600, Generator 손실함수(g_loss): 1.918224, Discriminator 손실함수(d_loss): 0.

722771
반복(Epoch): 72700, Generator 손실함수(g_loss): 1.890268, Discriminator 손실함수(d_loss): 0.908021
반복(Epoch): 72800, Generator 손실함수(g_loss): 2.090012, Discriminator 손실함수(d_loss): 0.798396
반복(Epoch): 72900, Generator 손실함수(g_loss): 2.205926, Discriminator 손실함수(d_loss): 0.619757
반복(Epoch): 73000, Generator 손실함수(g_loss): 2.040861, Discriminator 손실함수(d_loss): 0.827625
반복(Epoch): 73100, Generator 손실함수(g_loss): 2.410257, Discriminator 손실함수(d_loss): 0.819089
반복(Epoch): 73200, Generator 손실함수(g_loss): 2.027075, Discriminator 손실함수(d_loss): 0.789289
반복(Epoch): 73300, Generator 손실함수(g_loss): 1.885788, Discriminator 손실함수(d_loss): 0.873833
반복(Epoch): 73400, Generator 손실함수(g_loss): 1.951708, Discriminator 손실함수(d_loss): 0.711200
반복(Epoch): 73500, Generator 손실함수(g_loss): 2.339543, Discriminator 손실함수(d_loss): 0.847474
반복(Epoch): 73600, Generator 손실함수(g_loss): 2.084057, Discriminator 손실함수(d_loss): 0.801810
반복(Epoch): 73700, Generator 손실함수(g_loss): 2.317190, Discriminator 손실함수(d_loss): 0.813204
반복(Epoch): 73800, Generator 손실함수(g_loss): 1.947321, Discriminator 손실함수(d_loss): 0.777976
반복(Epoch): 73900, Generator 손실함수(g_loss): 1.750347, Discriminator 손실함수(d_loss): 0.806023
반복(Epoch): 74000, Generator 손실함수(g_loss): 2.061203, Discriminator 손실함수(d_loss): 0.716661
반복(Epoch): 74100, Generator 손실함수(g_loss): 2.059730, Discriminator 손실함수(d_loss): 0.942554
반복(Epoch): 74200, Generator 손실함수(g_loss): 2.140149, Discriminator 손실함수(d_loss): 0.662207
반복(Epoch): 74300, Generator 손실함수(g_loss): 2.275001, Discriminator 손실함수(d_loss): 0.558779
반복(Epoch): 74400, Generator 손실함수(g_loss): 2.146696, Discriminator 손실함수(d_loss): 0.683712
반복(Epoch): 74500, Generator 손실함수(g_loss): 2.100939, Discriminator 손실함수(d_loss): 0.696488
반복(Epoch): 74600, Generator 손실함수(g_loss): 1.745935, Discriminator 손실함수(d_loss): 0.859477
반복(Epoch): 74700, Generator 손실함수(g_loss): 1.756744, Discriminator 손실함수(d_loss): 0.733661
반복(Epoch): 74800, Generator 손실함수(g_loss): 2.089292, Discriminator 손실함수(d_loss): 0.745817
반복(Epoch): 74900, Generator 손실함수(g_loss): 2.014771, Discriminator 손실함수(d_loss): 0.605860
반복(Epoch): 75000, Generator 손실함수(g_loss): 1.950103, Discriminator 손실함수(d_loss): 0.775948
반복(Epoch): 75100, Generator 손실함수(g_loss): 2.238317, Discriminator 손실함수(d_loss): 0.798072
반복(Epoch): 75200, Generator 손실함수(g_loss): 2.166540, Discriminator 손실함수(d_loss): 0.784449
반복(Epoch): 75300, Generator 손실함수(g_loss): 2.032292, Discriminator 손실함수(d_loss): 0.706006
반복(Epoch): 75400, Generator 손실함수(g_loss): 1.941855, Discriminator 손실함수(d_loss): 0.826900
반복(Epoch): 75500, Generator 손실함수(g_loss): 2.189982, Discriminator 손실함수(d_loss): 0.786858
반복(Epoch): 75600, Generator 손실함수(g_loss): 1.990263, Discriminator 손실함수(d_loss): 0.658892
반복(Epoch): 75700, Generator 손실함수(g_loss): 2.188484, Discriminator 손실함수(d_loss): 0.494690
반복(Epoch): 75800, Generator 손실함수(g_loss): 2.052304, Discriminator 손실함수(d_loss): 0.753662
반복(Epoch): 75900, Generator 손실함수(g_loss): 2.408899, Discriminator 손실함수(d_loss): 0.647144
반복(Epoch): 76000, Generator 손실함수(g_loss): 1.974698, Discriminator 손실함수(d_loss): 0.829812
반복(Epoch): 76100, Generator 손실함수(g_loss): 2.219255, Discriminator 손실함수(d_loss): 0.494825
반복(Epoch): 76200, Generator 손실함수(g_loss): 2.030211, Discriminator 손실함수(d_loss): 0.

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반복(Epoch): 76300, Generator 손실함수(g_loss): 2.263074, Discriminator 손실함수(d_loss): 0.627583
반복(Epoch): 76400, Generator 손실함수(g_loss): 2.090696, Discriminator 손실함수(d_loss): 0.631374
반복(Epoch): 76500, Generator 손실함수(g_loss): 1.910264, Discriminator 손실함수(d_loss): 0.716087
반복(Epoch): 76600, Generator 손실함수(g_loss): 2.102853, Discriminator 손실함수(d_loss): 0.762646
반복(Epoch): 76700, Generator 손실함수(g_loss): 2.323815, Discriminator 손실함수(d_loss): 0.806908
반복(Epoch): 76800, Generator 손실함수(g_loss): 1.869322, Discriminator 손실함수(d_loss): 0.854053
반복(Epoch): 76900, Generator 손실함수(g_loss): 2.122386, Discriminator 손실함수(d_loss): 0.633180
반복(Epoch): 77000, Generator 손실함수(g_loss): 2.108971, Discriminator 손실함수(d_loss): 0.772379
반복(Epoch): 77100, Generator 손실함수(g_loss): 1.967360, Discriminator 손실함수(d_loss): 0.692850
반복(Epoch): 77200, Generator 손실함수(g_loss): 2.002449, Discriminator 손실함수(d_loss): 0.731419
반복(Epoch): 77300, Generator 손실함수(g_loss): 2.045412, Discriminator 손실함수(d_loss): 0.636407
반복(Epoch): 77400, Generator 손실함수(g_loss): 2.368810, Discriminator 손실함수(d_loss): 0.722049
반복(Epoch): 77500, Generator 손실함수(g_loss): 1.779916, Discriminator 손실함수(d_loss): 0.782119
반복(Epoch): 77600, Generator 손실함수(g_loss): 2.569332, Discriminator 손실함수(d_loss): 0.735122
반복(Epoch): 77700, Generator 손실함수(g_loss): 2.094238, Discriminator 손실함수(d_loss): 0.706966
반복(Epoch): 77800, Generator 손실함수(g_loss): 2.014728, Discriminator 손실함수(d_loss): 0.582550
반복(Epoch): 77900, Generator 손실함수(g_loss): 2.343689, Discriminator 손실함수(d_loss): 0.652572
반복(Epoch): 78000, Generator 손실함수(g_loss): 2.098300, Discriminator 손실함수(d_loss): 0.635217
반복(Epoch): 78100, Generator 손실함수(g_loss): 2.116886, Discriminator 손실함수(d_loss): 0.674388
반복(Epoch): 78200, Generator 손실함수(g_loss): 2.008024, Discriminator 손실함수(d_loss): 0.674230
반복(Epoch): 78300, Generator 손실함수(g_loss): 2.088445, Discriminator 손실함수(d_loss): 0.875618
반복(Epoch): 78400, Generator 손실함수(g_loss): 2.107424, Discriminator 손실함수(d_loss): 0.720682
반복(Epoch): 78500, Generator 손실함수(g_loss): 2.164644, Discriminator 손실함수(d_loss): 0.550813
반복(Epoch): 78600, Generator 손실함수(g_loss): 2.386390, Discriminator 손실함수(d_loss): 0.778670
반복(Epoch): 78700, Generator 손실함수(g_loss): 1.722830, Discriminator 손실함수(d_loss): 0.979593
반복(Epoch): 78800, Generator 손실함수(g_loss): 2.127788, Discriminator 손실함수(d_loss): 0.663285
반복(Epoch): 78900, Generator 손실함수(g_loss): 2.030646, Discriminator 손실함수(d_loss): 0.538637
반복(Epoch): 79000, Generator 손실함수(g_loss): 1.999169, Discriminator 손실함수(d_loss): 0.538942
반복(Epoch): 79100, Generator 손실함수(g_loss): 2.332162, Discriminator 손실함수(d_loss): 0.641000
반복(Epoch): 79200, Generator 손실함수(g_loss): 2.295082, Discriminator 손실함수(d_loss): 0.627237
반복(Epoch): 79300, Generator 손실함수(g_loss): 1.859633, Discriminator 손실함수(d_loss): 0.663695
반복(Epoch): 79400, Generator 손실함수(g_loss): 2.119411, Discriminator 손실함수(d_loss): 0.721354
반복(Epoch): 79500, Generator 손실함수(g_loss): 2.094761, Discriminator 손실함수(d_loss): 0.671777
반복(Epoch): 79600, Generator 손실함수(g_loss): 2.230608, Discriminator 손실함수(d_loss): 0.577808
반복(Epoch): 79700, Generator 손실함수(g_loss): 2.047955, Discriminator 손실함수(d_loss): 0.804112
반복(Epoch): 79800, Generator 손실함수(g_loss): 2.097906, Discriminator 손실함수(d_loss): 0.653755

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반복(Epoch): 79900, Generator 손실함수(g_loss): 1.972721, Discriminator 손실함수(d_loss): 0.777370
반복(Epoch): 80000, Generator 손실함수(g_loss): 2.099366, Discriminator 손실함수(d_loss): 0.733702
반복(Epoch): 80100, Generator 손실함수(g_loss): 2.183594, Discriminator 손실함수(d_loss): 0.683491
반복(Epoch): 80200, Generator 손실함수(g_loss): 2.399953, Discriminator 손실함수(d_loss): 0.449140
반복(Epoch): 80300, Generator 손실함수(g_loss): 2.518565, Discriminator 손실함수(d_loss): 0.589974
반복(Epoch): 80400, Generator 손실함수(g_loss): 1.994738, Discriminator 손실함수(d_loss): 0.751112
반복(Epoch): 80500, Generator 손실함수(g_loss): 2.199935, Discriminator 손실함수(d_loss): 0.694804
반복(Epoch): 80600, Generator 손실함수(g_loss): 1.989955, Discriminator 손실함수(d_loss): 0.690490
반복(Epoch): 80700, Generator 손실함수(g_loss): 2.357698, Discriminator 손실함수(d_loss): 0.391090
반복(Epoch): 80800, Generator 손실함수(g_loss): 1.700318, Discriminator 손실함수(d_loss): 0.701408
반복(Epoch): 80900, Generator 손실함수(g_loss): 2.181744, Discriminator 손실함수(d_loss): 0.525528
반복(Epoch): 81000, Generator 손실함수(g_loss): 1.781849, Discriminator 손실함수(d_loss): 0.953548
반복(Epoch): 81100, Generator 손실함수(g_loss): 2.167614, Discriminator 손실함수(d_loss): 0.724265
반복(Epoch): 81200, Generator 손실함수(g_loss): 2.150410, Discriminator 손실함수(d_loss): 0.730205
반복(Epoch): 81300, Generator 손실함수(g_loss): 2.129320, Discriminator 손실함수(d_loss): 0.690503
반복(Epoch): 81400, Generator 손실함수(g_loss): 2.153897, Discriminator 손실함수(d_loss): 0.488087
반복(Epoch): 81500, Generator 손실함수(g_loss): 2.683682, Discriminator 손실함수(d_loss): 0.729949
반복(Epoch): 81600, Generator 손실함수(g_loss): 2.396442, Discriminator 손실함수(d_loss): 0.685865
반복(Epoch): 81700, Generator 손실함수(g_loss): 2.253450, Discriminator 손실함수(d_loss): 0.707711
반복(Epoch): 81800, Generator 손실함수(g_loss): 1.868116, Discriminator 손실함수(d_loss): 0.836927
반복(Epoch): 81900, Generator 손실함수(g_loss): 2.523496, Discriminator 손실함수(d_loss): 0.639380
반복(Epoch): 82000, Generator 손실함수(g_loss): 1.996105, Discriminator 손실함수(d_loss): 0.742265
반복(Epoch): 82100, Generator 손실함수(g_loss): 2.064996, Discriminator 손실함수(d_loss): 0.727390
반복(Epoch): 82200, Generator 손실함수(g_loss): 2.273870, Discriminator 손실함수(d_loss): 0.796160
반복(Epoch): 82300, Generator 손실함수(g_loss): 2.009262, Discriminator 손실함수(d_loss): 0.612553
반복(Epoch): 82400, Generator 손실함수(g_loss): 2.223575, Discriminator 손실함수(d_loss): 0.739802
반복(Epoch): 82500, Generator 손실함수(g_loss): 2.121977, Discriminator 손실함수(d_loss): 0.642098
반복(Epoch): 82600, Generator 손실함수(g_loss): 2.114207, Discriminator 손실함수(d_loss): 0.686485
반복(Epoch): 82700, Generator 손실함수(g_loss): 2.402525, Discriminator 손실함수(d_loss): 0.604890
반복(Epoch): 82800, Generator 손실함수(g_loss): 2.335223, Discriminator 손실함수(d_loss): 0.599018
반복(Epoch): 82900, Generator 손실함수(g_loss): 2.286145, Discriminator 손실함수(d_loss): 0.641366
반복(Epoch): 83000, Generator 손실함수(g_loss): 2.188138, Discriminator 손실함수(d_loss): 0.615358
반복(Epoch): 83100, Generator 손실함수(g_loss): 2.009387, Discriminator 손실함수(d_loss): 0.668310
반복(Epoch): 83200, Generator 손실함수(g_loss): 1.794491, Discriminator 손실함수(d_loss): 0.655035
반복(Epoch): 83300, Generator 손실함수(g_loss): 2.331983, Discriminator 손실함수(d_loss): 0.676329
반복(Epoch): 83400, Generator 손실함수(g_loss): 2.198252, Discriminator 손실함수(d_loss): 0.

반복(Epoch): 83500, Generator 손실함수(g_loss): 2.306671, Discriminator 손실함수(d_loss): 0.619428
반복(Epoch): 83600, Generator 손실함수(g_loss): 2.137938, Discriminator 손실함수(d_loss): 0.796011
반복(Epoch): 83700, Generator 손실함수(g_loss): 2.326257, Discriminator 손실함수(d_loss): 0.480595
반복(Epoch): 83800, Generator 손실함수(g_loss): 2.263891, Discriminator 손실함수(d_loss): 0.800714
반복(Epoch): 83900, Generator 손실함수(g_loss): 2.297237, Discriminator 손실함수(d_loss): 0.696900
반복(Epoch): 84000, Generator 손실함수(g_loss): 1.868319, Discriminator 손실함수(d_loss): 0.709123
반복(Epoch): 84100, Generator 손실함수(g_loss): 2.033155, Discriminator 손실함수(d_loss): 0.643035
반복(Epoch): 84200, Generator 손실함수(g_loss): 1.896006, Discriminator 손실함수(d_loss): 0.785551
반복(Epoch): 84300, Generator 손실함수(g_loss): 2.308982, Discriminator 손실함수(d_loss): 0.429663
반복(Epoch): 84400, Generator 손실함수(g_loss): 2.036349, Discriminator 손실함수(d_loss): 0.754578
반복(Epoch): 84500, Generator 손실함수(g_loss): 2.174817, Discriminator 손실함수(d_loss): 0.729509
반복(Epoch): 84600, Generator 손실함수(g_loss): 2.113969, Discriminator 손실함수(d_loss): 0.648641
반복(Epoch): 84700, Generator 손실함수(g_loss): 2.040937, Discriminator 손실함수(d_loss): 0.522387
반복(Epoch): 84800, Generator 손실함수(g_loss): 2.083652, Discriminator 손실함수(d_loss): 0.848363
반복(Epoch): 84900, Generator 손실함수(g_loss): 2.132866, Discriminator 손실함수(d_loss): 0.635276
반복(Epoch): 85000, Generator 손실함수(g_loss): 1.935372, Discriminator 손실함수(d_loss): 0.734684
반복(Epoch): 85100, Generator 손실함수(g_loss): 2.097769, Discriminator 손실함수(d_loss): 0.640288
반복(Epoch): 85200, Generator 손실함수(g_loss): 2.278783, Discriminator 손실함수(d_loss): 0.770153
반복(Epoch): 85300, Generator 손실함수(g_loss): 2.202728, Discriminator 손실함수(d_loss): 0.568560
반복(Epoch): 85400, Generator 손실함수(g_loss): 2.067990, Discriminator 손실함수(d_loss): 0.660362
반복(Epoch): 85500, Generator 손실함수(g_loss): 2.251331, Discriminator 손실함수(d_loss): 0.504420
반복(Epoch): 85600, Generator 손실함수(g_loss): 2.053517, Discriminator 손실함수(d_loss): 0.769599
반복(Epoch): 85700, Generator 손실함수(g_loss): 2.188391, Discriminator 손실함수(d_loss): 0.653051
반복(Epoch): 85800, Generator 손실함수(g_loss): 2.252607, Discriminator 손실함수(d_loss): 0.691691
반복(Epoch): 85900, Generator 손실함수(g_loss): 2.085574, Discriminator 손실함수(d_loss): 0.752009
반복(Epoch): 86000, Generator 손실함수(g_loss): 1.646815, Discriminator 손실함수(d_loss): 0.772587
반복(Epoch): 86100, Generator 손실함수(g_loss): 2.074489, Discriminator 손실함수(d_loss): 0.705714
반복(Epoch): 86200, Generator 손실함수(g_loss): 2.104794, Discriminator 손실함수(d_loss): 0.703109
반복(Epoch): 86300, Generator 손실함수(g_loss): 2.270875, Discriminator 손실함수(d_loss): 0.609254
반복(Epoch): 86400, Generator 손실함수(g_loss): 2.136549, Discriminator 손실함수(d_loss): 0.656710
반복(Epoch): 86500, Generator 손실함수(g_loss): 1.797557, Discriminator 손실함수(d_loss): 0.676696
반복(Epoch): 86600, Generator 손실함수(g_loss): 2.080556, Discriminator 손실함수(d_loss): 0.595916
반복(Epoch): 86700, Generator 손실함수(g_loss): 2.347137, Discriminator 손실함수(d_loss): 0.539034
반복(Epoch): 86800, Generator 손실함수(g_loss): 2.511660, Discriminator 손실함수(d_loss): 0.711358
반복(Epoch): 86900, Generator 손실함수(g_loss): 2.032301, Discriminator 손실함수(d_loss): 0.744623
반복(Epoch): 87000, Generator 손실함수(g_loss): 2.118329, Discriminator 손실함수(d_loss): 0.608241

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반복(Epoch): 87100, Generator 손실함수(g_loss): 1.966498, Discriminator 손실함수(d_loss): 0.565892
반복(Epoch): 87200, Generator 손실함수(g_loss): 2.422188, Discriminator 손실함수(d_loss): 0.767568
반복(Epoch): 87300, Generator 손실함수(g_loss): 2.212720, Discriminator 손실함수(d_loss): 0.612934
반복(Epoch): 87400, Generator 손실함수(g_loss): 2.359482, Discriminator 손실함수(d_loss): 0.760396
반복(Epoch): 87500, Generator 손실함수(g_loss): 2.191065, Discriminator 손실함수(d_loss): 0.792029
반복(Epoch): 87600, Generator 손실함수(g_loss): 2.400232, Discriminator 손실함수(d_loss): 0.765026
반복(Epoch): 87700, Generator 손실함수(g_loss): 2.438061, Discriminator 손실함수(d_loss): 0.620495
반복(Epoch): 87800, Generator 손실함수(g_loss): 2.238232, Discriminator 손실함수(d_loss): 0.538709
반복(Epoch): 87900, Generator 손실함수(g_loss): 1.889277, Discriminator 손실함수(d_loss): 0.708965
반복(Epoch): 88000, Generator 손실함수(g_loss): 2.455628, Discriminator 손실함수(d_loss): 0.623565
반복(Epoch): 88100, Generator 손실함수(g_loss): 1.900025, Discriminator 손실함수(d_loss): 0.754558
반복(Epoch): 88200, Generator 손실함수(g_loss): 2.375938, Discriminator 손실함수(d_loss): 0.424543
반복(Epoch): 88300, Generator 손실함수(g_loss): 1.743141, Discriminator 손실함수(d_loss): 0.712552
반복(Epoch): 88400, Generator 손실함수(g_loss): 2.410841, Discriminator 손실함수(d_loss): 0.675245
반복(Epoch): 88500, Generator 손실함수(g_loss): 2.268750, Discriminator 손실함수(d_loss): 0.629402
반복(Epoch): 88600, Generator 손실함수(g_loss): 1.631223, Discriminator 손실함수(d_loss): 0.857298
반복(Epoch): 88700, Generator 손실함수(g_loss): 2.057958, Discriminator 손실함수(d_loss): 0.852805
반복(Epoch): 88800, Generator 손실함수(g_loss): 2.779800, Discriminator 손실함수(d_loss): 0.788635
반복(Epoch): 88900, Generator 손실함수(g_loss): 2.130582, Discriminator 손실함수(d_loss): 0.502467
반복(Epoch): 89000, Generator 손실함수(g_loss): 2.098919, Discriminator 손실함수(d_loss): 0.818420
반복(Epoch): 89100, Generator 손실함수(g_loss): 2.006786, Discriminator 손실함수(d_loss): 0.613133
반복(Epoch): 89200, Generator 손실함수(g_loss): 2.332349, Discriminator 손실함수(d_loss): 0.636419
반복(Epoch): 89300, Generator 손실함수(g_loss): 2.149528, Discriminator 손실함수(d_loss): 0.768696
반복(Epoch): 89400, Generator 손실함수(g_loss): 1.930817, Discriminator 손실함수(d_loss): 0.697356
반복(Epoch): 89500, Generator 손실함수(g_loss): 2.290095, Discriminator 손실함수(d_loss): 0.650438
반복(Epoch): 89600, Generator 손실함수(g_loss): 2.013589, Discriminator 손실함수(d_loss): 0.515127
반복(Epoch): 89700, Generator 손실함수(g_loss): 2.323166, Discriminator 손실함수(d_loss): 0.620362
반복(Epoch): 89800, Generator 손실함수(g_loss): 2.027598, Discriminator 손실함수(d_loss): 0.779881
반복(Epoch): 89900, Generator 손실함수(g_loss): 2.372978, Discriminator 손실함수(d_loss): 0.600380
반복(Epoch): 90000, Generator 손실함수(g_loss): 2.428199, Discriminator 손실함수(d_loss): 0.543942
반복(Epoch): 90100, Generator 손실함수(g_loss): 2.107318, Discriminator 손실함수(d_loss): 0.637824
반복(Epoch): 90200, Generator 손실함수(g_loss): 2.222974, Discriminator 손실함수(d_loss): 0.813139
반복(Epoch): 90300, Generator 손실함수(g_loss): 2.342026, Discriminator 손실함수(d_loss): 0.782275
반복(Epoch): 90400, Generator 손실함수(g_loss): 2.298141, Discriminator 손실함수(d_loss): 0.827069
반복(Epoch): 90500, Generator 손실함수(g_loss): 2.088858, Discriminator 손실함수(d_loss): 0.736189
반복(Epoch): 90600, Generator 손실함수(g_loss): 2.419786, Discriminator 손실함수(d_loss): 0.

601204
반복(Epoch): 90700, Generator 손실함수(g_loss): 2.094491, Discriminator 손실함수(d_loss): 0.779199
반복(Epoch): 90800, Generator 손실함수(g_loss): 2.838858, Discriminator 손실함수(d_loss): 0.453797
반복(Epoch): 90900, Generator 손실함수(g_loss): 2.093161, Discriminator 손실함수(d_loss): 0.638848
반복(Epoch): 91000, Generator 손실함수(g_loss): 2.213071, Discriminator 손실함수(d_loss): 0.695008
반복(Epoch): 91100, Generator 손실함수(g_loss): 2.314790, Discriminator 손실함수(d_loss): 0.609905
반복(Epoch): 91200, Generator 손실함수(g_loss): 2.373529, Discriminator 손실함수(d_loss): 0.530033
반복(Epoch): 91300, Generator 손실함수(g_loss): 2.334359, Discriminator 손실함수(d_loss): 0.791962
반복(Epoch): 91400, Generator 손실함수(g_loss): 2.565013, Discriminator 손실함수(d_loss): 0.607986
반복(Epoch): 91500, Generator 손실함수(g_loss): 2.253211, Discriminator 손실함수(d_loss): 0.727082
반복(Epoch): 91600, Generator 손실함수(g_loss): 2.035417, Discriminator 손실함수(d_loss): 0.730340
반복(Epoch): 91700, Generator 손실함수(g_loss): 2.441329, Discriminator 손실함수(d_loss): 0.662761
반복(Epoch): 91800, Generator 손실함수(g_loss): 2.300395, Discriminator 손실함수(d_loss): 0.640725
반복(Epoch): 91900, Generator 손실함수(g_loss): 2.460277, Discriminator 손실함수(d_loss): 0.630056
반복(Epoch): 92000, Generator 손실함수(g_loss): 1.984392, Discriminator 손실함수(d_loss): 0.673542
반복(Epoch): 92100, Generator 손실함수(g_loss): 2.563430, Discriminator 손실함수(d_loss): 0.644959
반복(Epoch): 92200, Generator 손실함수(g_loss): 2.019951, Discriminator 손실함수(d_loss): 0.779290
반복(Epoch): 92300, Generator 손실함수(g_loss): 1.972018, Discriminator 손실함수(d_loss): 0.564800
반복(Epoch): 92400, Generator 손실함수(g_loss): 2.000413, Discriminator 손실함수(d_loss): 0.696317
반복(Epoch): 92500, Generator 손실함수(g_loss): 2.267811, Discriminator 손실함수(d_loss): 0.650196
반복(Epoch): 92600, Generator 손실함수(g_loss): 2.256204, Discriminator 손실함수(d_loss): 0.610910
반복(Epoch): 92700, Generator 손실함수(g_loss): 2.064961, Discriminator 손실함수(d_loss): 0.848969
반복(Epoch): 92800, Generator 손실함수(g_loss): 2.110919, Discriminator 손실함수(d_loss): 0.713339
반복(Epoch): 92900, Generator 손실함수(g_loss): 2.408291, Discriminator 손실함수(d_loss): 0.685991
반복(Epoch): 93000, Generator 손실함수(g_loss): 1.804126, Discriminator 손실함수(d_loss): 0.711770
반복(Epoch): 93100, Generator 손실함수(g_loss): 2.179640, Discriminator 손실함수(d_loss): 0.781426
반복(Epoch): 93200, Generator 손실함수(g_loss): 2.053477, Discriminator 손실함수(d_loss): 0.712141
반복(Epoch): 93300, Generator 손실함수(g_loss): 2.186187, Discriminator 손실함수(d_loss): 0.923825
반복(Epoch): 93400, Generator 손실함수(g_loss): 2.071864, Discriminator 손실함수(d_loss): 0.657565
반복(Epoch): 93500, Generator 손실함수(g_loss): 2.089487, Discriminator 손실함수(d_loss): 0.534874
반복(Epoch): 93600, Generator 손실함수(g_loss): 2.046156, Discriminator 손실함수(d_loss): 0.769733
반복(Epoch): 93700, Generator 손실함수(g_loss): 2.660202, Discriminator 손실함수(d_loss): 0.602289
반복(Epoch): 93800, Generator 손실함수(g_loss): 2.168975, Discriminator 손실함수(d_loss): 0.604375
반복(Epoch): 93900, Generator 손실함수(g_loss): 2.479575, Discriminator 손실함수(d_loss): 0.692952
반복(Epoch): 94000, Generator 손실함수(g_loss): 2.548140, Discriminator 손실함수(d_loss): 0.700487
반복(Epoch): 94100, Generator 손실함수(g_loss): 2.394606, Discriminator 손실함수(d_loss): 0.570763
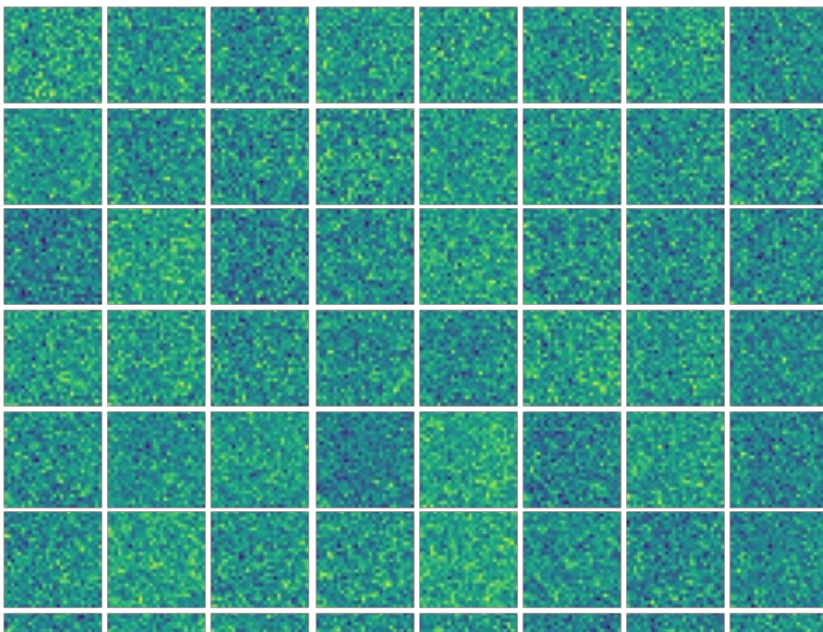반복(Epoch): 94200, Generator 손실함수(g_loss): 2.000337, Discriminator 손실함수(d_loss): 0.638706

628706
반복(Epoch): 94300, Generator 손실함수(g_loss): 2.032677, Discriminator 손실함수(d_loss): 0.667539
반복(Epoch): 94400, Generator 손실함수(g_loss): 2.311116, Discriminator 손실함수(d_loss): 0.654493
반복(Epoch): 94500, Generator 손실함수(g_loss): 2.318729, Discriminator 손실함수(d_loss): 0.548133
반복(Epoch): 94600, Generator 손실함수(g_loss): 2.013232, Discriminator 손실함수(d_loss): 0.732370
반복(Epoch): 94700, Generator 손실함수(g_loss): 1.894886, Discriminator 손실함수(d_loss): 0.635343
반복(Epoch): 94800, Generator 손실함수(g_loss): 1.922770, Discriminator 손실함수(d_loss): 0.579694
반복(Epoch): 94900, Generator 손실함수(g_loss): 1.886928, Discriminator 손실함수(d_loss): 0.820084
반복(Epoch): 95000, Generator 손실함수(g_loss): 2.489310, Discriminator 손실함수(d_loss): 0.608456
반복(Epoch): 95100, Generator 손실함수(g_loss): 2.184742, Discriminator 손실함수(d_loss): 0.788435
반복(Epoch): 95200, Generator 손실함수(g_loss): 2.365263, Discriminator 손실함수(d_loss): 0.655204
반복(Epoch): 95300, Generator 손실함수(g_loss): 2.298226, Discriminator 손실함수(d_loss): 0.762316
반복(Epoch): 95400, Generator 손실함수(g_loss): 2.385125, Discriminator 손실함수(d_loss): 0.608514
반복(Epoch): 95500, Generator 손실함수(g_loss): 2.187300, Discriminator 손실함수(d_loss): 0.489800
반복(Epoch): 95600, Generator 손실함수(g_loss): 2.196383, Discriminator 손실함수(d_loss): 0.466528
반복(Epoch): 95700, Generator 손실함수(g_loss): 2.001107, Discriminator 손실함수(d_loss): 0.907254
반복(Epoch): 95800, Generator 손실함수(g_loss): 2.237758, Discriminator 손실함수(d_loss): 0.685039
반복(Epoch): 95900, Generator 손실함수(g_loss): 2.043408, Discriminator 손실함수(d_loss): 0.639066
반복(Epoch): 96000, Generator 손실함수(g_loss): 2.064203, Discriminator 손실함수(d_loss): 0.501732
반복(Epoch): 96100, Generator 손실함수(g_loss): 2.250784, Discriminator 손실함수(d_loss): 0.663769
반복(Epoch): 96200, Generator 손실함수(g_loss): 2.319334, Discriminator 손실함수(d_loss): 0.544730
반복(Epoch): 96300, Generator 손실함수(g_loss): 2.279832, Discriminator 손실함수(d_loss): 0.752458
반복(Epoch): 96400, Generator 손실함수(g_loss): 2.412433, Discriminator 손실함수(d_loss): 0.545991
반복(Epoch): 96500, Generator 손실함수(g_loss): 2.510801, Discriminator 손실함수(d_loss): 0.530169
반복(Epoch): 96600, Generator 손실함수(g_loss): 2.081882, Discriminator 손실함수(d_loss): 0.844824
반복(Epoch): 96700, Generator 손실함수(g_loss): 1.925896, Discriminator 손실함수(d_loss): 0.819753
반복(Epoch): 96800, Generator 손실함수(g_loss): 2.210034, Discriminator 손실함수(d_loss): 0.725965
반복(Epoch): 96900, Generator 손실함수(g_loss): 2.377815, Discriminator 손실함수(d_loss): 0.666570
반복(Epoch): 97000, Generator 손실함수(g_loss): 2.340874, Discriminator 손실함수(d_loss): 0.656235
반복(Epoch): 97100, Generator 손실함수(g_loss): 2.229044, Discriminator 손실함수(d_loss): 0.679744
반복(Epoch): 97200, Generator 손실함수(g_loss): 2.087198, Discriminator 손실함수(d_loss): 0.653603
반복(Epoch): 97300, Generator 손실함수(g_loss): 2.145068, Discriminator 손실함수(d_loss): 0.645710
반복(Epoch): 97400, Generator 손실함수(g_loss): 2.025412, Discriminator 손실함수(d_loss): 0.692466
반복(Epoch): 97500, Generator 손실함수(g_loss): 2.312388, Discriminator 손실함수(d_loss): 0.760618
반복(Epoch): 97600, Generator 손실함수(g_loss): 2.160110, Discriminator 손실함수(d_loss): 0.547306
반복(Epoch): 97700, Generator 손실함수(g_loss): 2.018870, Discriminator 손실함수(d_loss): 0.738582
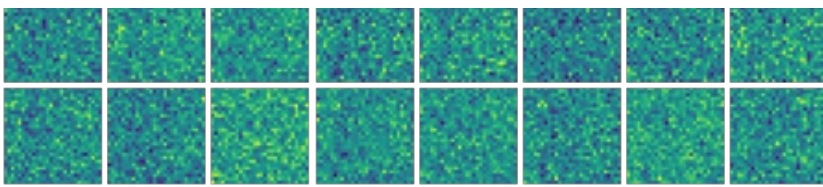반복(Epoch): 97800, Generator 손실함수(g_loss): 2.095052, Discriminator 손실함수(d_loss): 0.582700

582709
반복(Epoch): 97900, Generator 손실함수(g_loss): 2.389356, Discriminator 손실함수(d_loss): 0.682118
반복(Epoch): 98000, Generator 손실함수(g_loss): 2.240285, Discriminator 손실함수(d_loss): 0.628360
반복(Epoch): 98100, Generator 손실함수(g_loss): 2.565526, Discriminator 손실함수(d_loss): 0.520955
반복(Epoch): 98200, Generator 손실함수(g_loss): 2.329719, Discriminator 손실함수(d_loss): 0.606040
반복(Epoch): 98300, Generator 손실함수(g_loss): 2.330637, Discriminator 손실함수(d_loss): 0.782018
반복(Epoch): 98400, Generator 손실함수(g_loss): 2.435232, Discriminator 손실함수(d_loss): 0.627169
반복(Epoch): 98500, Generator 손실함수(g_loss): 2.412552, Discriminator 손실함수(d_loss): 0.604945
반복(Epoch): 98600, Generator 손실함수(g_loss): 2.467780, Discriminator 손실함수(d_loss): 0.584091
반복(Epoch): 98700, Generator 손실함수(g_loss): 2.149572, Discriminator 손실함수(d_loss): 0.655931
반복(Epoch): 98800, Generator 손실함수(g_loss): 2.114558, Discriminator 손실함수(d_loss): 0.561314
반복(Epoch): 98900, Generator 손실함수(g_loss): 2.089449, Discriminator 손실함수(d_loss): 0.629978
반복(Epoch): 99000, Generator 손실함수(g_loss): 2.135314, Discriminator 손실함수(d_loss): 0.571704
반복(Epoch): 99100, Generator 손실함수(g_loss): 2.561892, Discriminator 손실함수(d_loss): 0.509146
반복(Epoch): 99200, Generator 손실함수(g_loss): 1.906324, Discriminator 손실함수(d_loss): 0.688343
반복(Epoch): 99300, Generator 손실함수(g_loss): 2.106466, Discriminator 손실함수(d_loss): 0.557582
반복(Epoch): 99400, Generator 손실함수(g_loss): 2.317899, Discriminator 손실함수(d_loss): 0.596928
반복(Epoch): 99500, Generator 손실함수(g_loss): 1.898903, Discriminator 손실함수(d_loss): 0.669133
반복(Epoch): 99600, Generator 손실함수(g_loss): 2.350893, Discriminator 손실함수(d_loss): 0.499073
반복(Epoch): 99700, Generator 손실함수(g_loss): 2.366946, Discriminator 손실함수(d_loss): 0.546734
반복(Epoch): 99800, Generator 손실함수(g_loss): 2.083472, Discriminator 손실함수(d_loss): 0.779088
반복(Epoch): 99900, Generator 손실함수(g_loss): 2.475806, Discriminator 손실함수(d_loss): 0.562965
훈련시간: 478732 마이크로초
훈련시간: 750 초

In [19]:

```python
Image('generated_output/000.png')
```
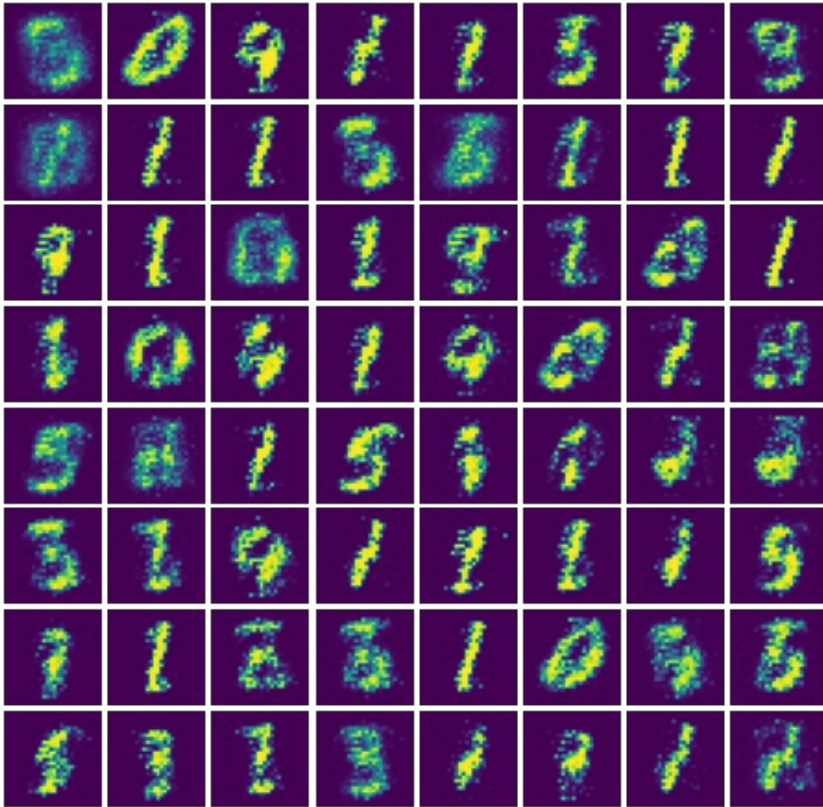
Out[19]:

In [24]:

```
Image('generated_output/009.png')
```
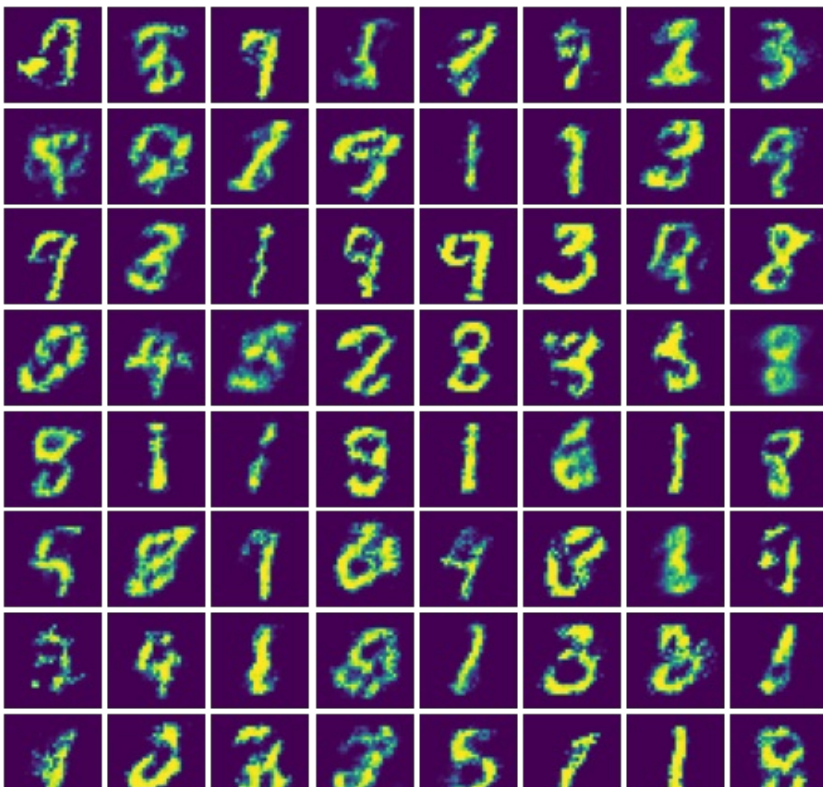
Out[24]:

In [25]:

```
Image('generated_output/049.png')
```

Out[25]:

In [26]:

```
Image('generated_output/099.png')
```

Out[26]:

In [27]:

```
Image('generated_output/199.png')
```

Out[27]:

In [ ]: