```python
1   import torch
2   import torch.nn as nn
3   import torch.nn.functional as F
4   from torch.utils.data import DataLoader
5   from torchvision import datasets, transforms
6   from torchvision.utils import make_grid
7
8   import numpy as np
9   import pandas as pd
10  from sklearn.metrics import confusion_matrix
11  import matplotlib.pyplot as plt
12
13  %matplotlib inline
```

```python
1   # Convert MNIST Image Files into a Tensor of 4-Dimensions (# of images, Height, Width, Color Channel)
2   transform = transforms.ToTensor()
```

```python
1   # Train Data
2   train_data = datasets.MNIST(root='/cnn_data', train=True, download=True, transform=transform)
```

```python
1 # test Data
2 test_data = datasets.MNIST(root='/cnn_data', train=False, download=True, transform=transform)
```

```python
1 train_data
```

```
    Dataset MNIST
        Number of datapoints: 60000
        Root location: /cnn_data
        Split: Train
        StandardTransform
    Transform: ToTensor()
```

```python
1 test_data
```

```
    Dataset MNIST
        Number of datapoints: 10000
        Root location: /cnn_data
        Split: Test
        StandardTransform
    Transform: ToTensor()
```

```python
1 pwd
```

```
    '/content'
```

```python
1 ls
```

```
    sample_data/
```

```python
1 cd ../
```

```
    /
```

```python
1 ls
```

```
    bin@        cuda-keyring_1.0-1_all.deb    home/   libx32@             opt/        run/
    boot/       datalab/                      lib@    media/              proc/       sbin@
```

```
        cnn_data/  dev/                          lib32@  mnt/                       python-apt/  srv/
        content/   etc/                          lib64@  NGC-DL-CONTAINER-LICENSE   root/        sys/
```

```
1 cd cnn_data
```

```
    /cnn_data
```

```
1 ls
2
```

```
    MNIST/
```

```
1 cd /
2
```

```
    /
```

```
1 ls
```

```
    bin@        cuda-keyring_1.0-1_all.deb  home/   libx32@                    opt/         run/
    boot/       datalab/                    lib@    media/                     proc/        sbin@
    cnn_data/   dev/                        lib32@  mnt/                       python-apt/  srv/
    content/    etc/                        lib64@  NGC-DL-CONTAINER-LICENSE   root/        sys/
```

```
1 cd content/
```

```
    /content
```

```
1 ls -al
```

```
    total 16
    drwxr-xr-x 1 root root 4096 Oct 16 13:23 ./
    drwxr-xr-x 1 root root 4096 Oct 17 17:51 ../
    drwxr-xr-x 4 root root 4096 Oct 16 13:23 .config/
    drwxr-xr-x 1 root root 4096 Oct 16 13:23 sample_data/
```