In [1]:
```
import tensorflow as tf
from tensorflow import keras
```

In [2]:
```
!pip install matplotlib
import numpy as np
import matplotlib.pyplot as plt
```

```
Requirement already satisfied: matplotlib in c:\users\ram1\anaconda3\envs\tenso
rflow\lib\site-packages (3.1.0)
Requirement already satisfied: python-dateutil>=2.1 in c:\users\ram1\anaconda3
\envs\tensorflow\lib\site-packages (from matplotlib) (2.8.0)
Requirement already satisfied: cycler>=0.10 in c:\users\ram1\anaconda3\envs\ten
sorflow\lib\site-packages (from matplotlib) (0.10.0)
Requirement already satisfied: pyparsing!=2.0.4,!=2.1.2,!=2.1.6,>=2.0.1 in c:\u
sers\ram1\anaconda3\envs\tensorflow\lib\site-packages (from matplotlib) (2.4.0)
Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\ram1\anaconda3\env
s\tensorflow\lib\site-packages (from matplotlib) (1.1.0)
Requirement already satisfied: numpy>=1.11 in c:\users\ram1\anaconda3\envs\tens
orflow\lib\site-packages (from matplotlib) (1.16.4)
Requirement already satisfied: six>=1.5 in c:\users\ram1\anaconda3\envs\tensorf
low\lib\site-packages (from python-dateutil>=2.1->matplotlib) (1.12.0)
Requirement already satisfied: setuptools in c:\users\ram1\anaconda3\envs\tenso
rflow\lib\site-packages (from kiwisolver>=1.0.1->matplotlib) (41.0.1)
```

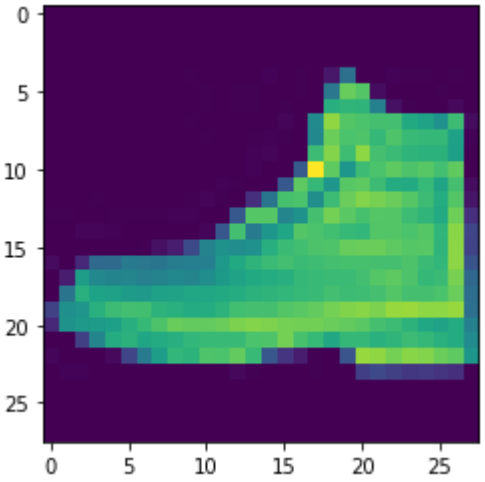
In [3]:
```
fashion_mnist = keras.datasets.fashion_mnist
```

In [4]:
```
fashion_data = fashion_mnist.load_data()
```

In [5]:
```
(train_images,train_labels),(test_images,test_labels) = fashion_data
```

In [6]:
```
plt.imshow(train_images[50000])
```

Out[6]:
```
<matplotlib.image.AxesImage at 0x8af33df518>
```



In [7]:
```
train_images.shape
```

Out[7]:
```
(60000, 28, 28)
```

In [8]:
```
train_labels[1:10]
```

Out[8]:
```
array([0, 0, 3, 0, 2, 7, 2, 5, 5], dtype=uint8)
```

In [9]:
```
class_names = ['T-shirt/top','Trouser','Pullover','Dress','Coat',
               'Sandal','Shirt','Sneaker','Bag','Ankle boot']
```

In [10]:
```
len(train_labels)
```

Out[10]:
```
60000
```

In [11]:
```
test_images.shape
```

Out[11]:
```
(10000, 28, 28)
```

In [ ]:

In [ ]: