AIM :

PROGRAM

import pandas as pd

import matplotlib.pyplot as plt

import tensorflow as tf

from tensorflow import keras

np.random.seed(42)

# tf.set.random. seed(42)

fashion\_mnist = keras.datasets.fashion\_mnist

(X\_train, y\_train), (X\_test, y\_test) = fashion\_mnist.load\_data()

print(X\_train.shape, X\_test.shape)

X\_train = X\_train / 255.0

X\_test = X\_test / 255.0

plt.imshow(X\_train[1], cmap='binary')

plt.show()

np.unique(y\_test)

class\_names = ['T-Shirt/Top", Trouser', 'Pullover', 'Dress', 'Coat', 'Sandal', 'Shirt', 'Sneaker', '8ag', 'Ankle Boot']

n\_rows = 5

n\_cols = 10

plt.figure(figsize=(n\_cols \* 1.4, n\_rows \* 1.6))

for row in range(n\_rows):

for col in range(n\_cols):

index = n\_cols \* row + col

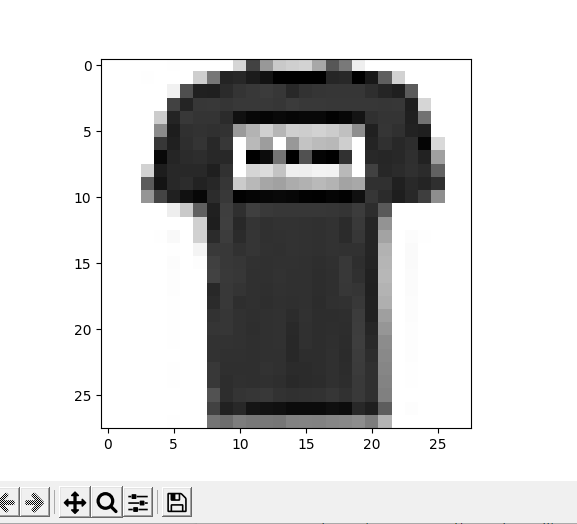
plt.subplot(n\_rows, n\_cols, index + 1)

plt.imshow(X\_train[index], cmap='binary', interpolation='nearest')

plt.axis('off')

plt.title(class\_names[y\_train[index]])

plt.show()



(60000, 28, 28) (10000, 28, 28)



