

### How to run the code:

create a folder and put 'fashion-mnist\_test.csv' , 'fashion-mnist\_train.csv' and '1905092.ipynb' files that folder then simply run with python

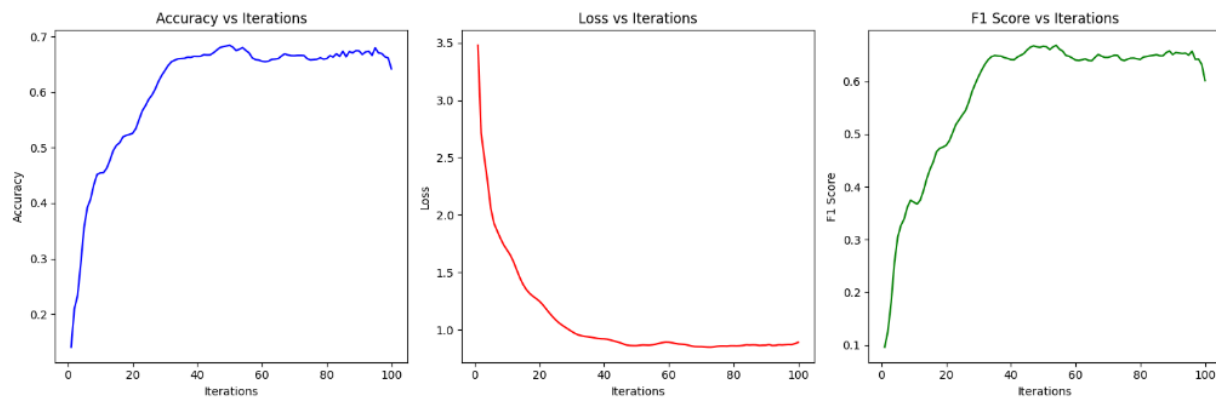
### For Learning Rate = 0.01

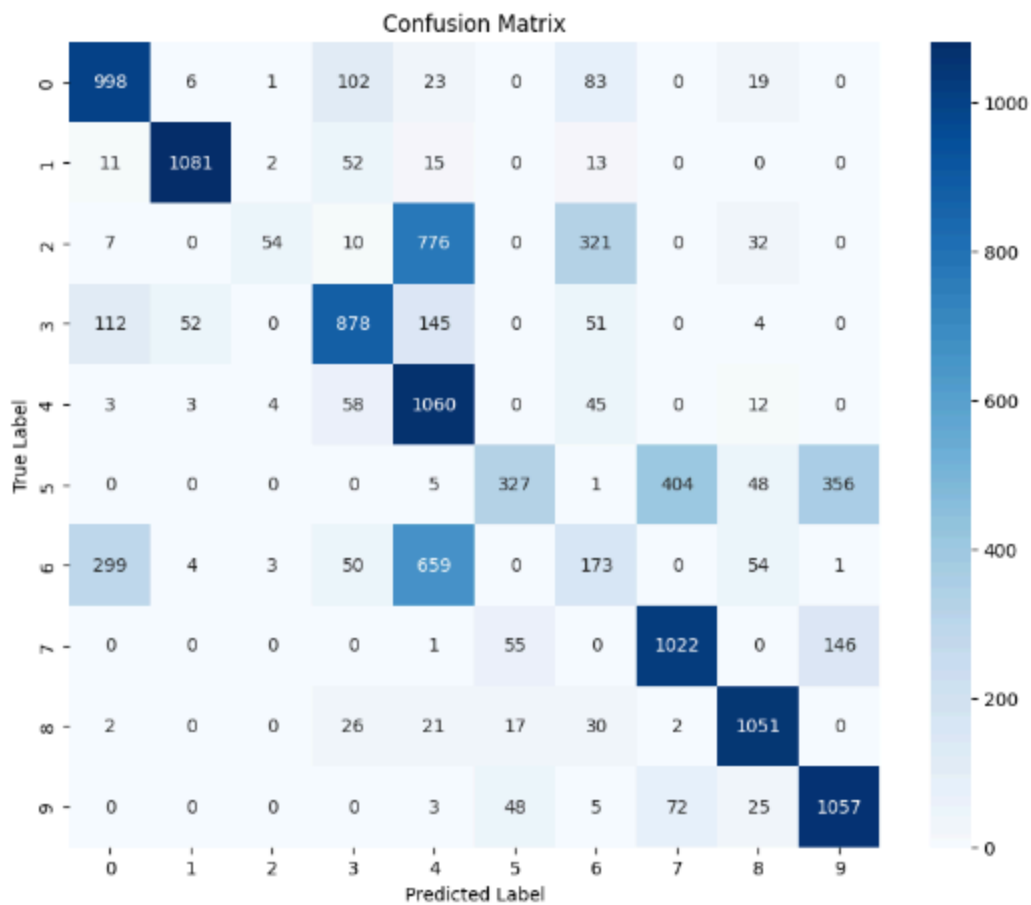
**Model-1:**(with hidden\_size=20)

Accuracy : 0.64175

Loss: 0.8895936970492301

F1-score: 0.6016868650052304



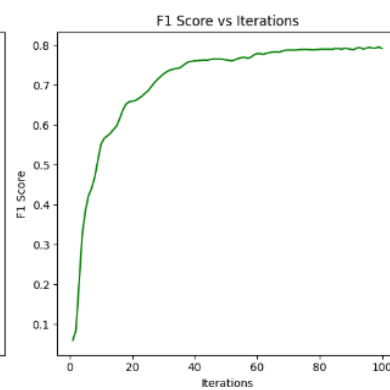
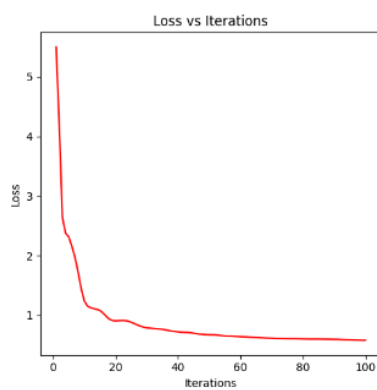
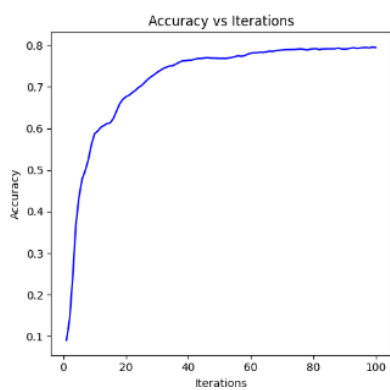


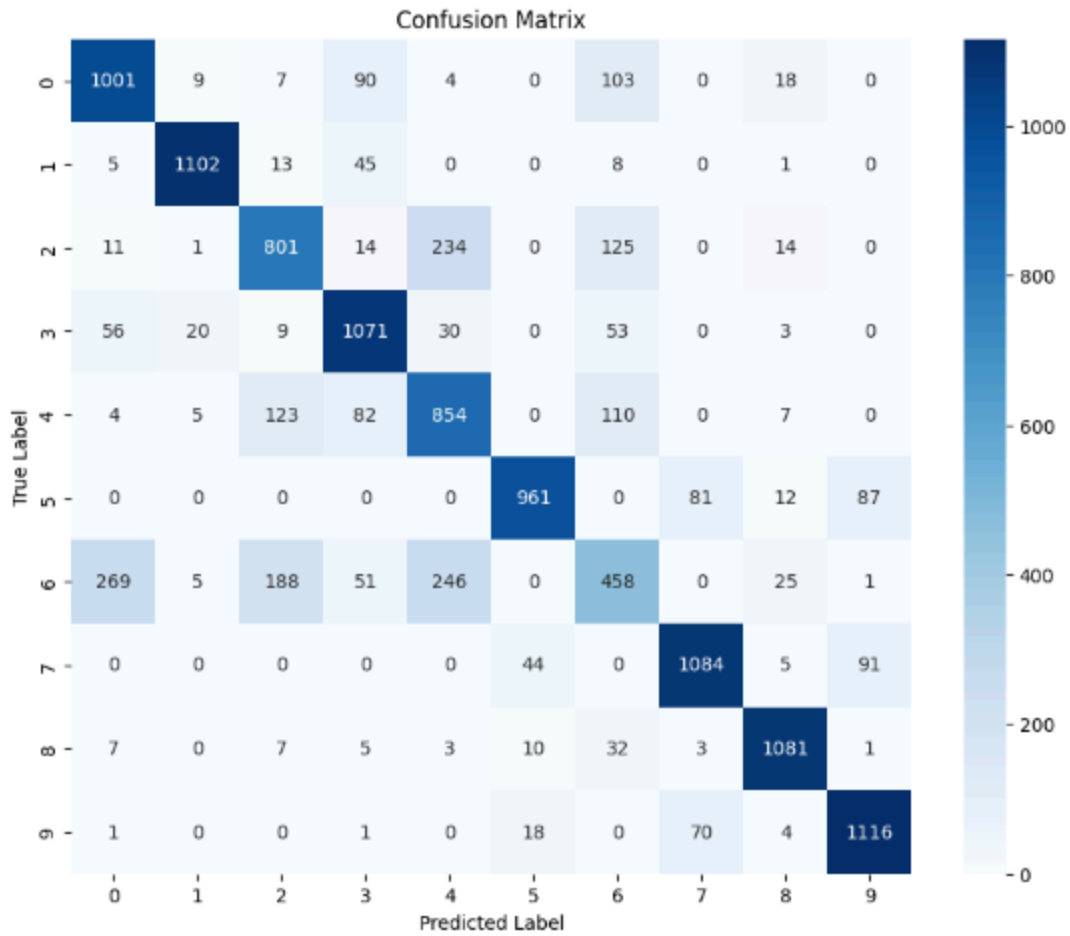
### Model 2: (with hidden\_size=50)

Accuracy: 0.7940833333333334

Loss: 0.5811283330371421

F1-score: 0.791712704646328



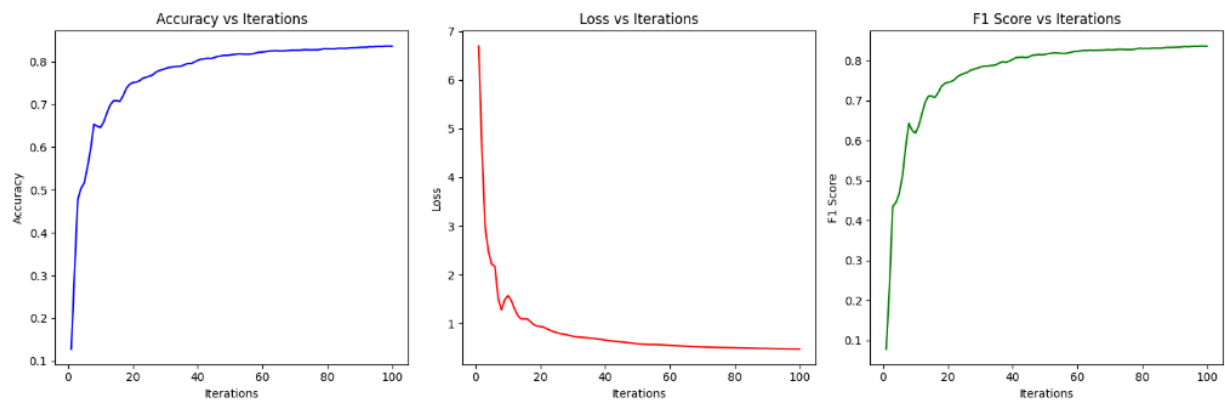


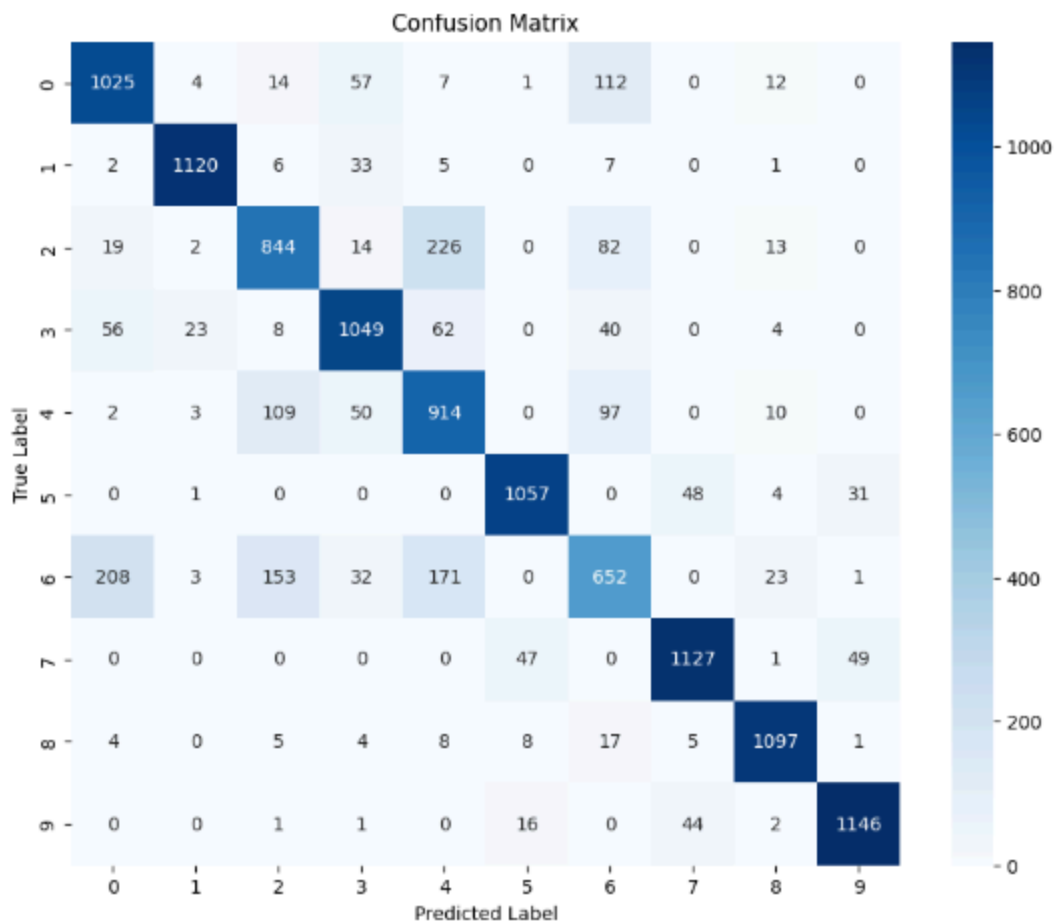
**Model-3:** (with hidden\_size=100)

Accuracy: 0.8359166666666666

Loss: 0.4734810444124014

F1-score: 0.8360678907002909





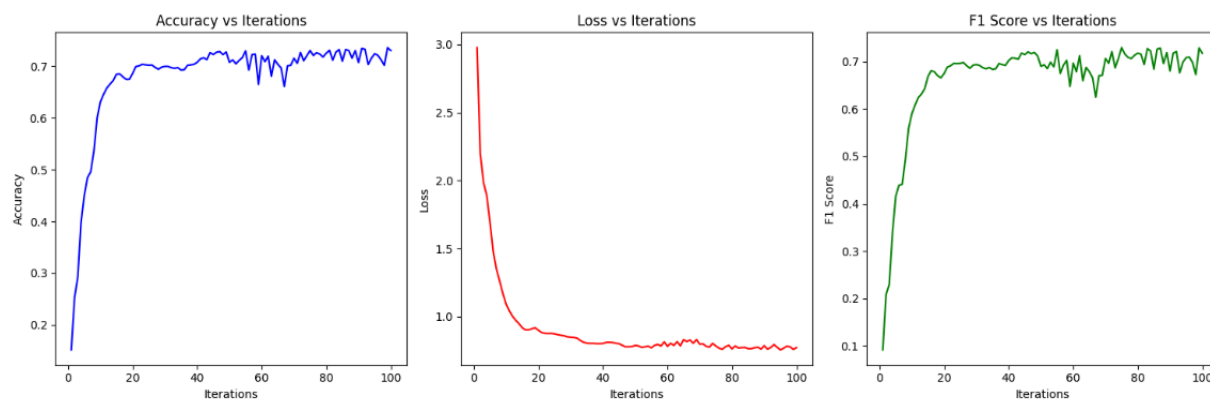
**For Learning Rate = 0.02**

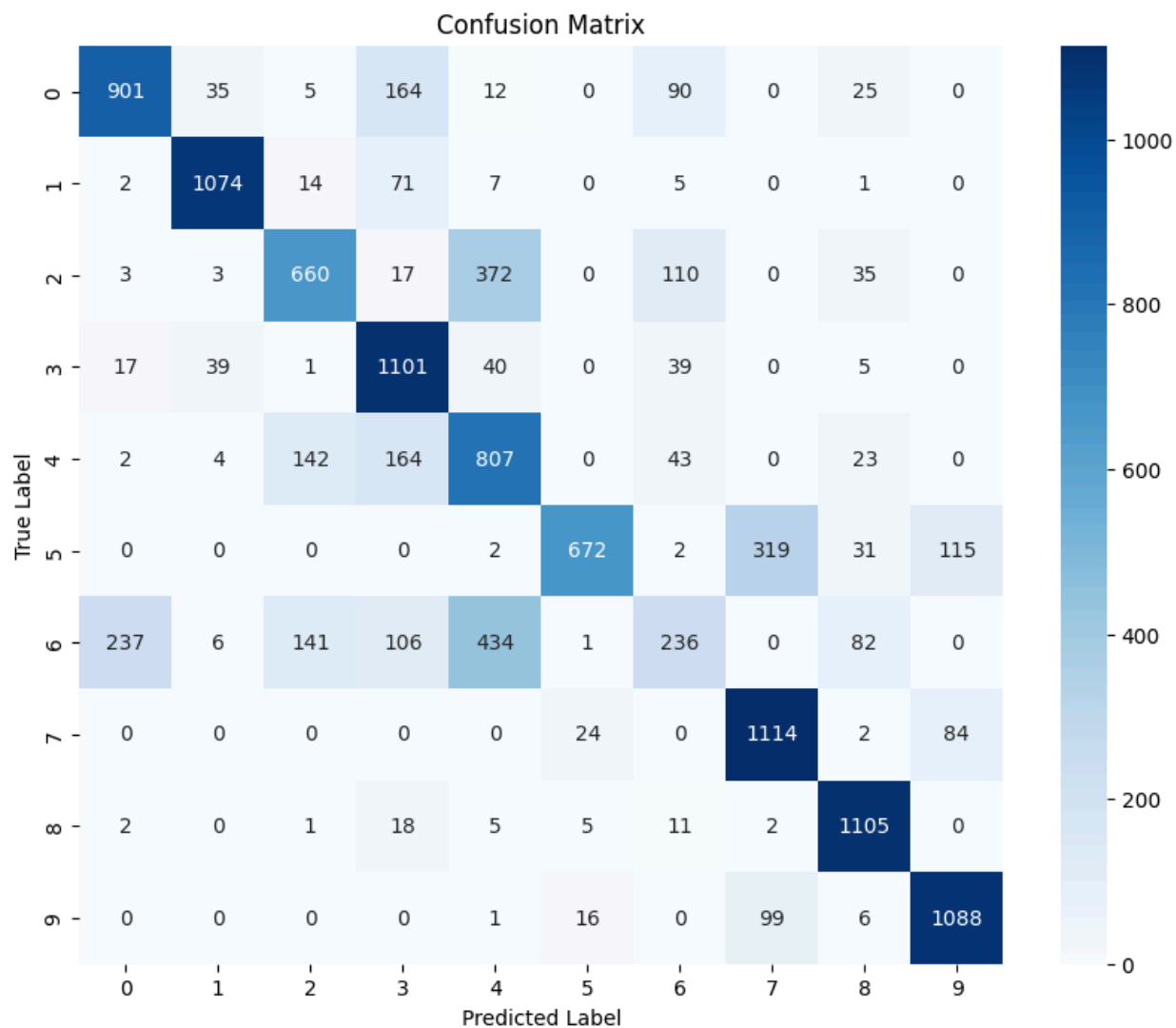
**Model-1:(with hidden\_size=20)**

Accuracy: 0.7298333333333333

Loss: 0.7730126864033854

F1-score: 0.7173601194375016



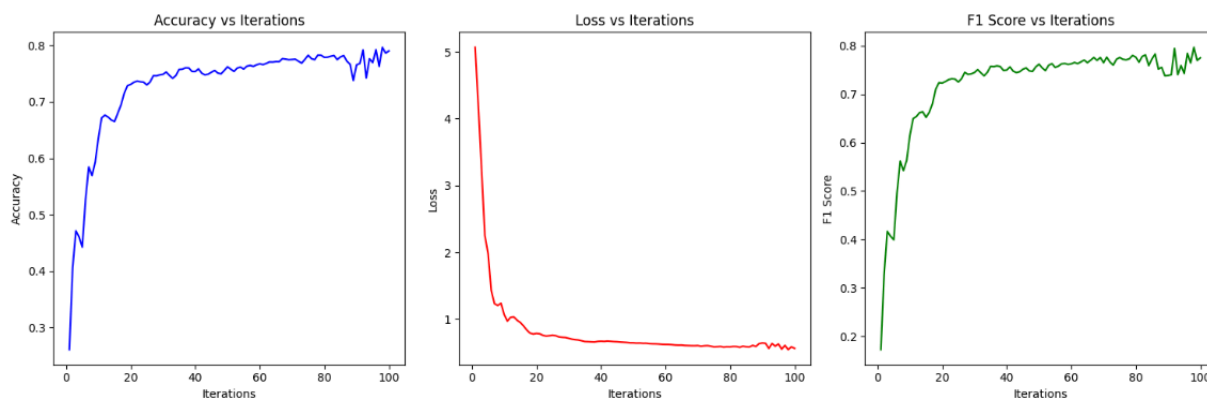


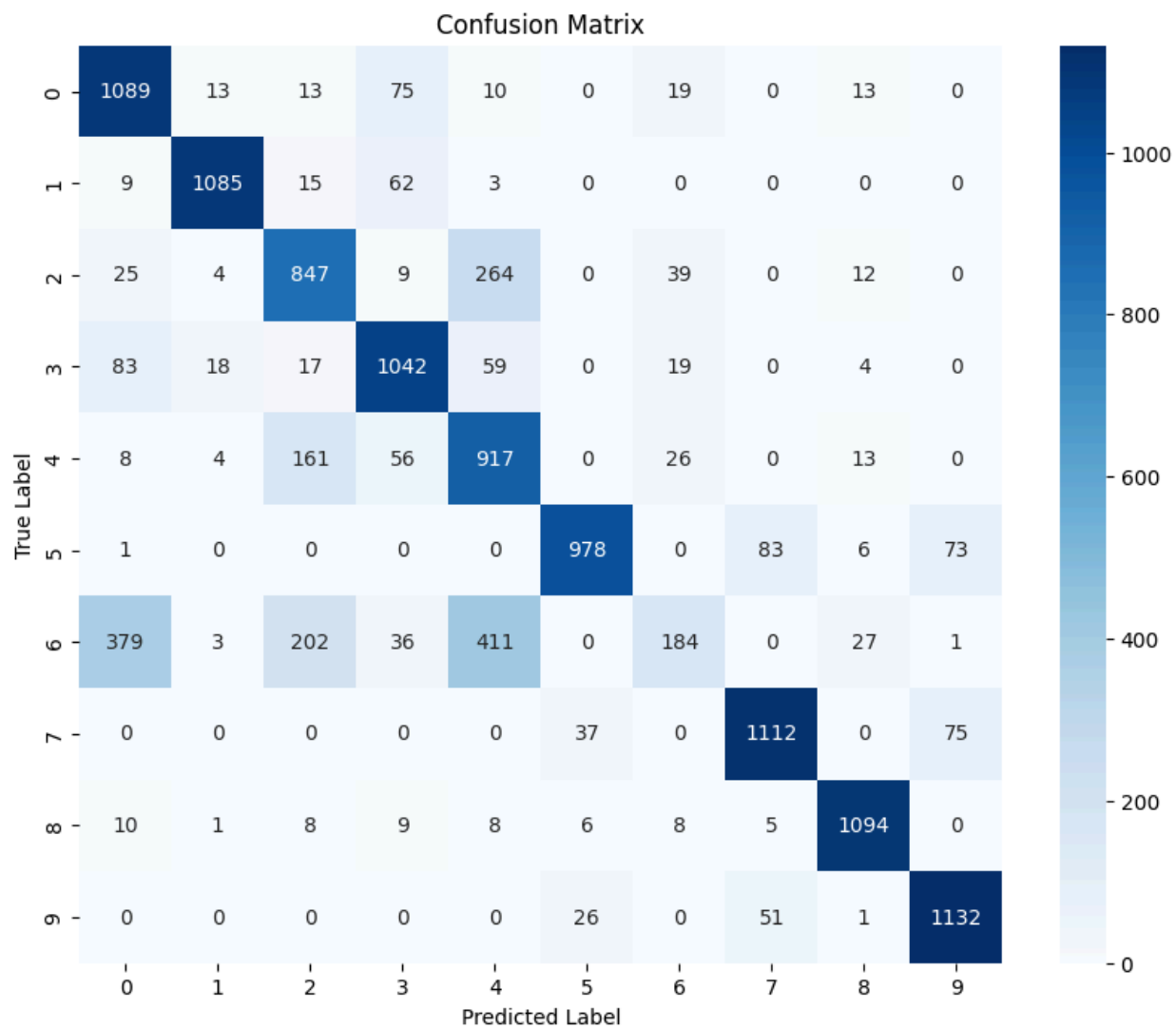
### Model 2: (with hidden\_size=50)

Accuracy: 0.79

Loss: 0.5659487287387795

F1-score: 0.7747949630730459



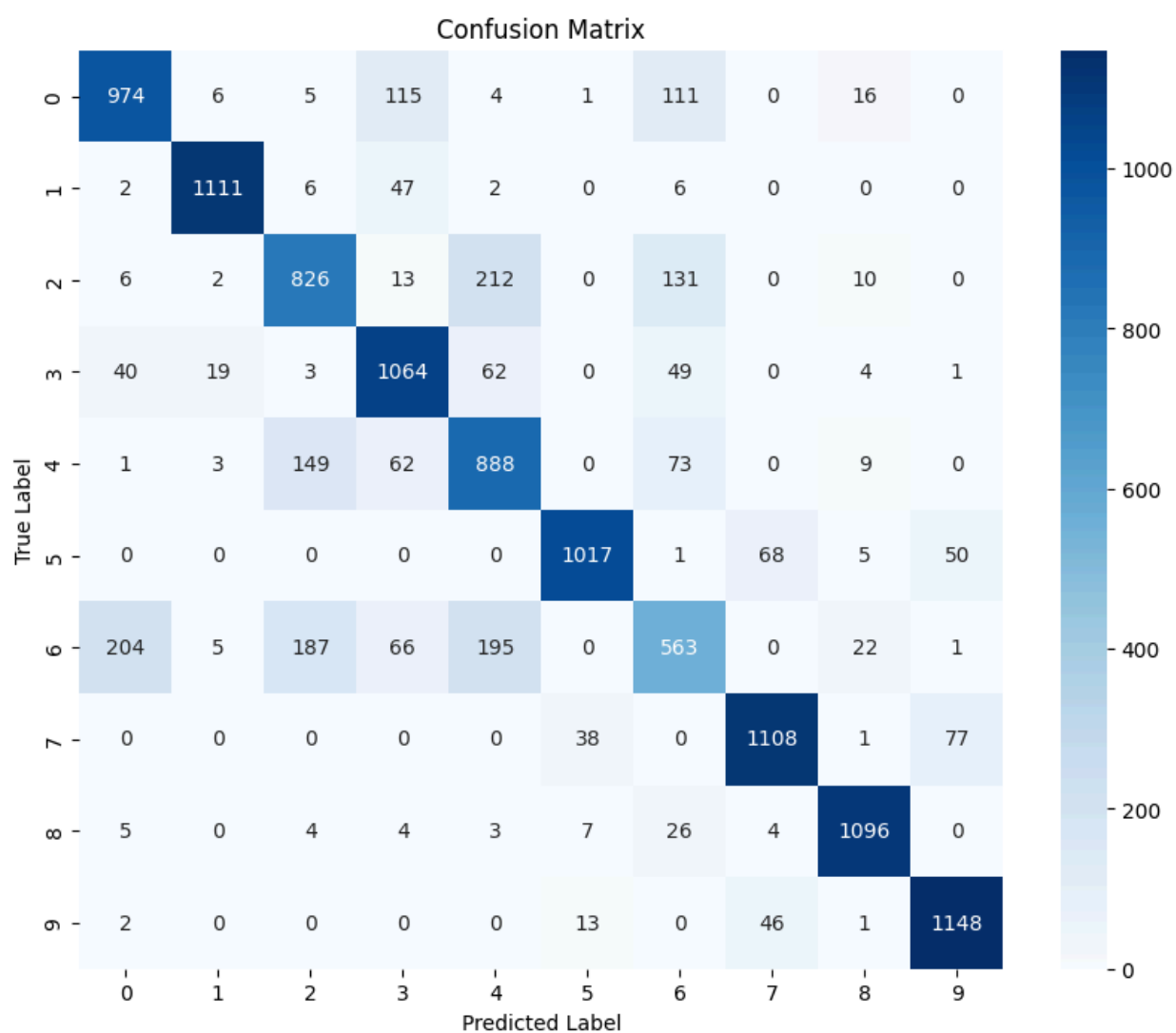
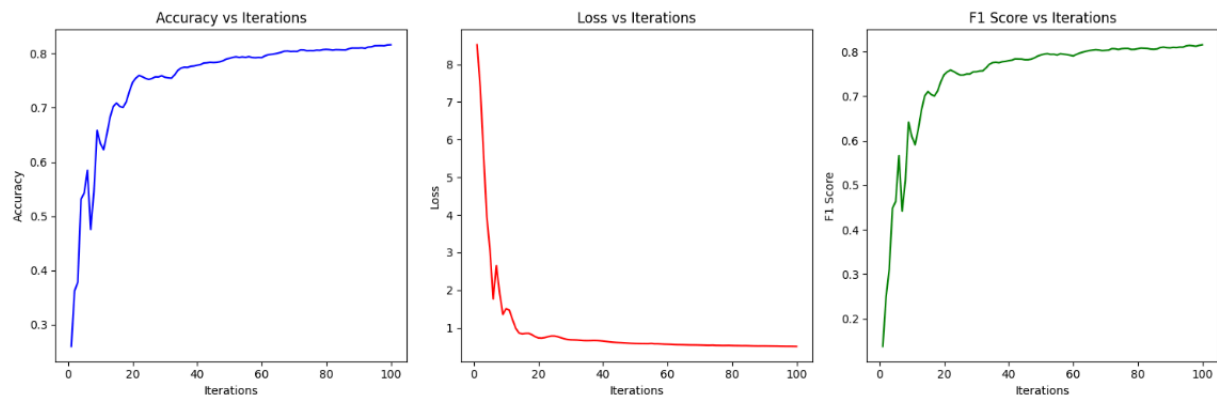


**Model-3:** (with hidden\_size=100)

Accuracy: 0.81625

Loss: 0.5073293849775868

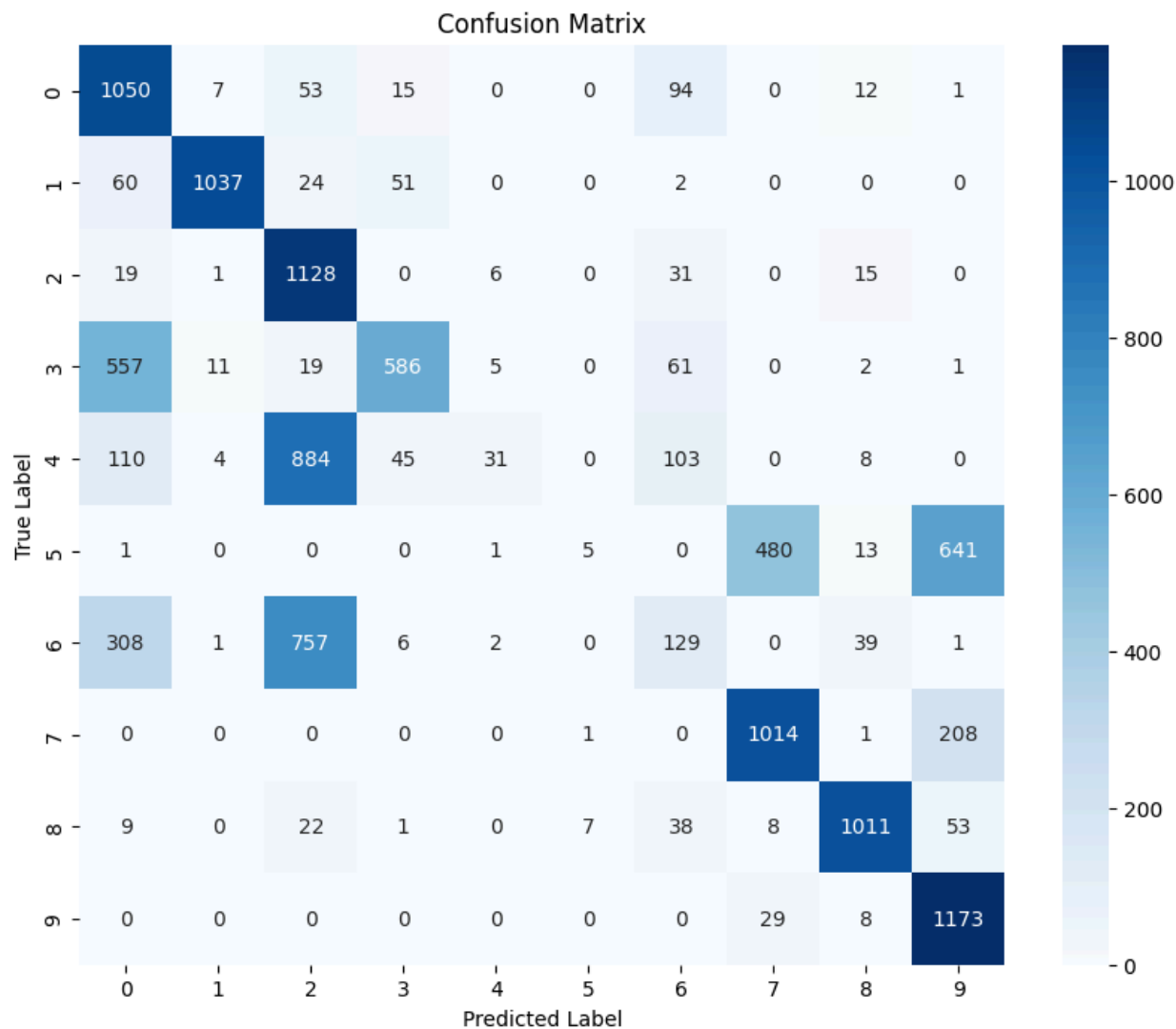
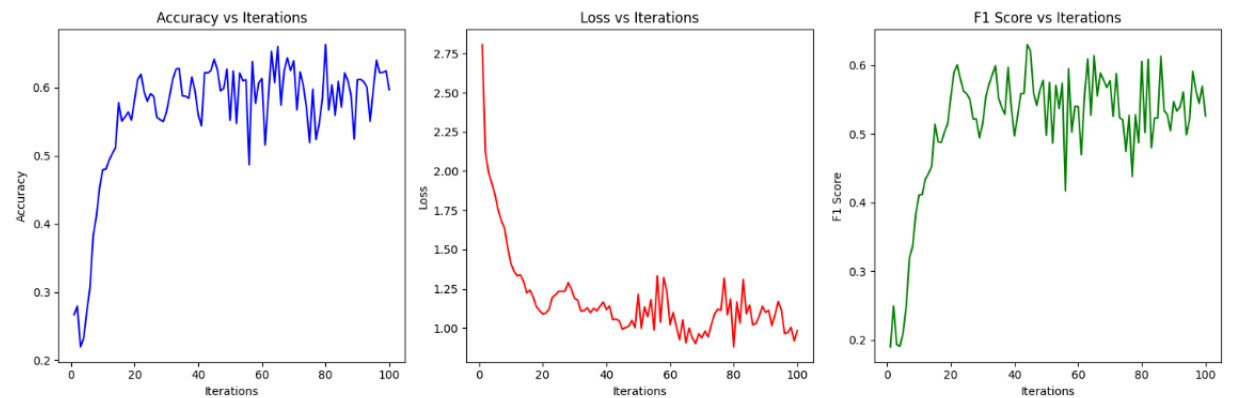
F1-score:0.8156361301615462



**For Learning Rate = 0.03**

**Model-1:(with hidden\_size=20)**

Accuracy: 0.597  
Loss: 0.9842851111663592  
F1-score: 0.5265684475106417



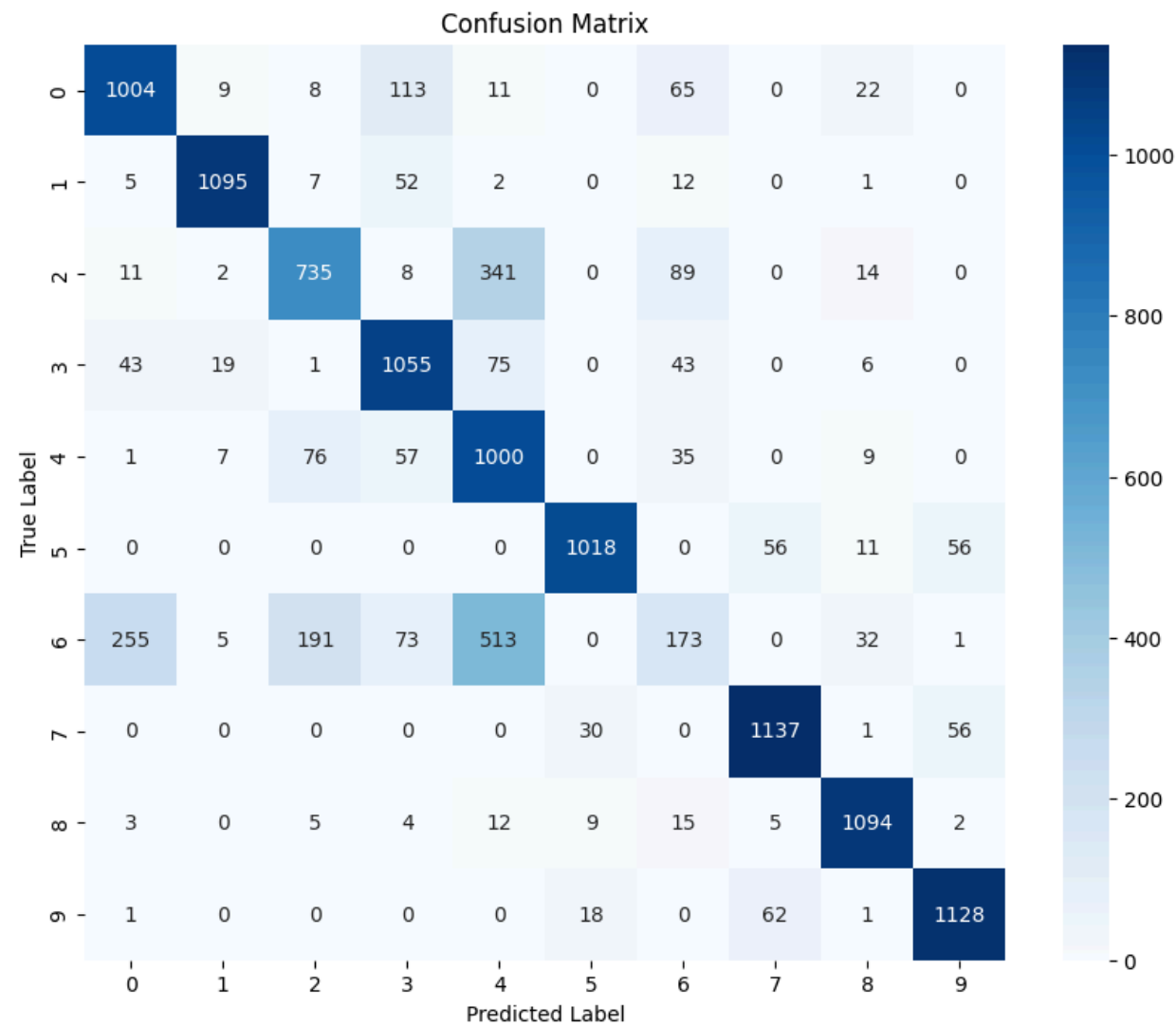
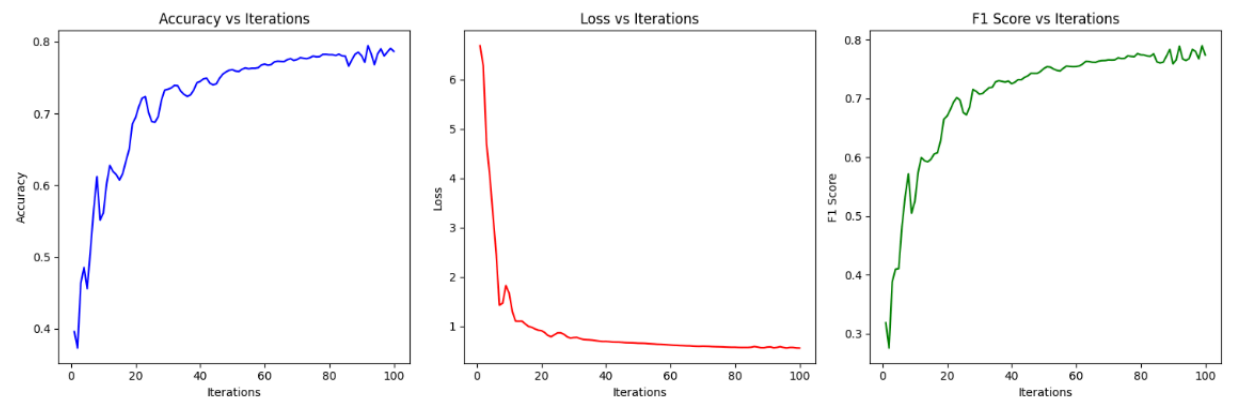


**Model 2: (with hidden\_size=50)**

Accuracy: 0.7865833333333333

Loss:0.5593917642240399

F1-score: 0.7737789271317966



**Model-3:** (with hidden\_size=100)

Accuracy: 0.8046666666666666

Loss: 0.5491236104391447

F1-score: 0.8026965733150154

