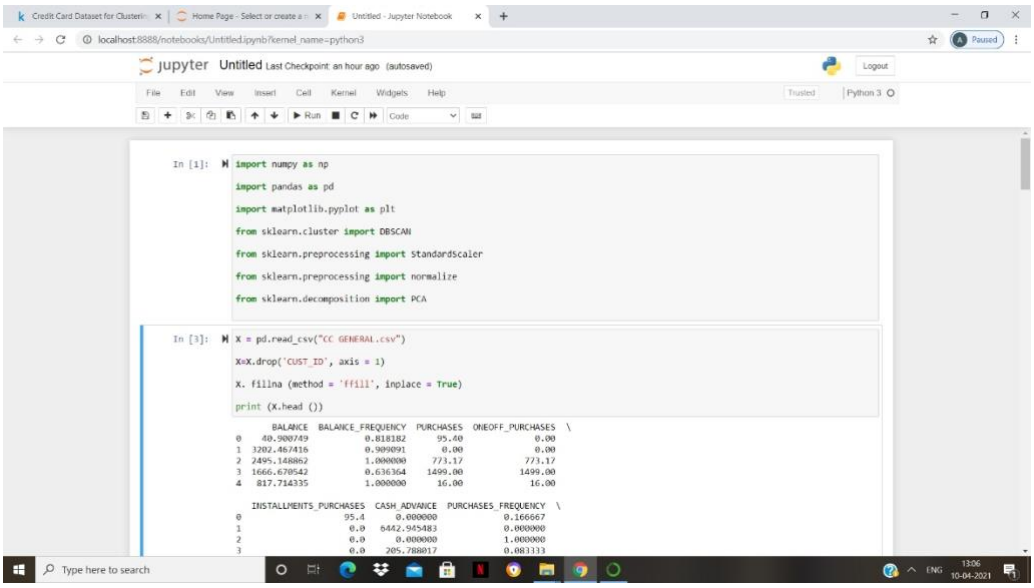
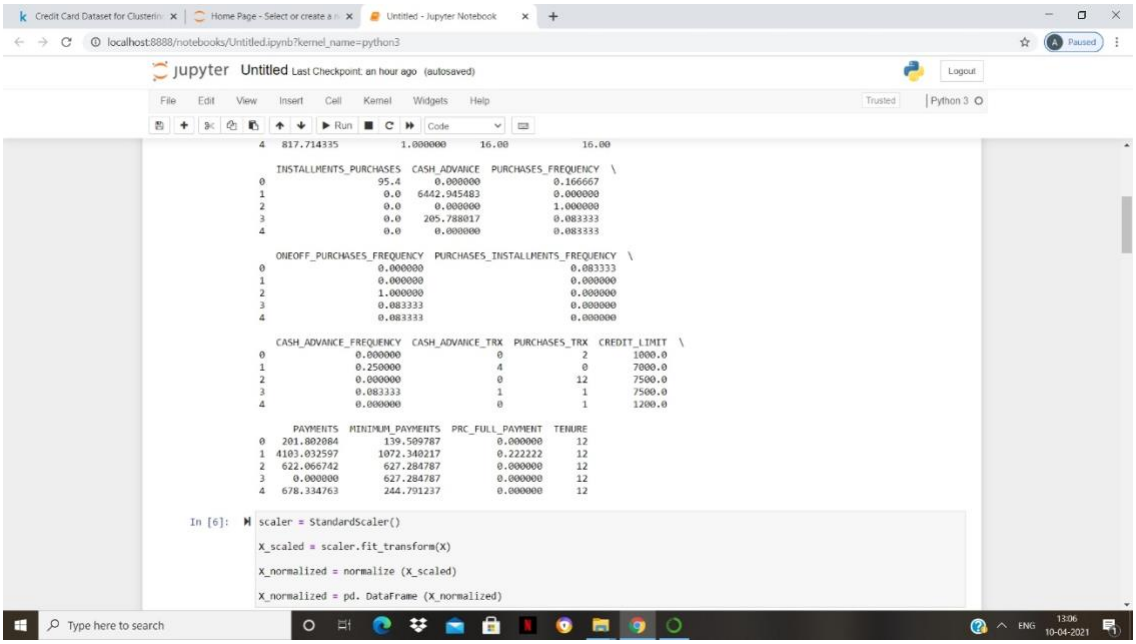
MODEL LAB-DWDM

-R.SRIJILL 18BCS034

1)BALANCE-NUMERIC, 2)BALANCE FREQUENCY-NUMERIC ,3)PURCHASES-NUMERIC, 4)ONEOFF_PURCHASES-NUMERIC, 5)INSTALLMENTS_PURCHASES-NUMERIC, 6)CASH ADVANCE-NUMERIC,7)PURCHASES FREQUENCY-NUMERIC

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Python 3
Run
Code
4 817.714335 1.000000 16.00 16.00
INSTALLMENTS_PURCHASES CASH_ADVANCE PURCHASES_FREQUENCY \
0 95.4 0.000000 0.166667
1 0.0 6442.945483 0.000000
2 0.0 0.000000 1.000000
3 0.0 205.788017 0.083333
4 0.0 0.000000 0.083333
ONEOFF_PURCHASES_FREQUENCY PURCHASES_INSTALLMENTS_FREQUENCY \
0 0.000000 0.083333
1 0.000000 0.000000
2 1.000000 0.000000
3 0.083333 0.000000
4 0.083333 0.000000
CASH_ADVANCE_FREQUENCY CASH_ADVANCE_TRX PURCHASES_TRX CREDIT_LIMIT \
0 0.000000 0 2 1000.0
1 0.250000 4 0 7000.0
2 0.000000 0 12 7500.0
3 0.083333 1 1 7500.0
4 0.000000 0 1 1200.0
PAYMENTS MINIMUM_PAYMENTS PRC_FULL_PAYMENT TENURE
0 201.802084 139.509787 0.000000 12
1 4103.032597 1072.340217 0.222222 12
2 622.066742 627.284787 0.000000 12
3 0.000000 627.284787 0.000000 12
4 678.334763 244.791237 0.000000 12
In [6]:
scaler = StandardScaler()
X_scaled = scaler.fit_transform(X)
X_normalized = normalize (X_scaled)
X_normalized = pd. DataFrame (X_normalized)
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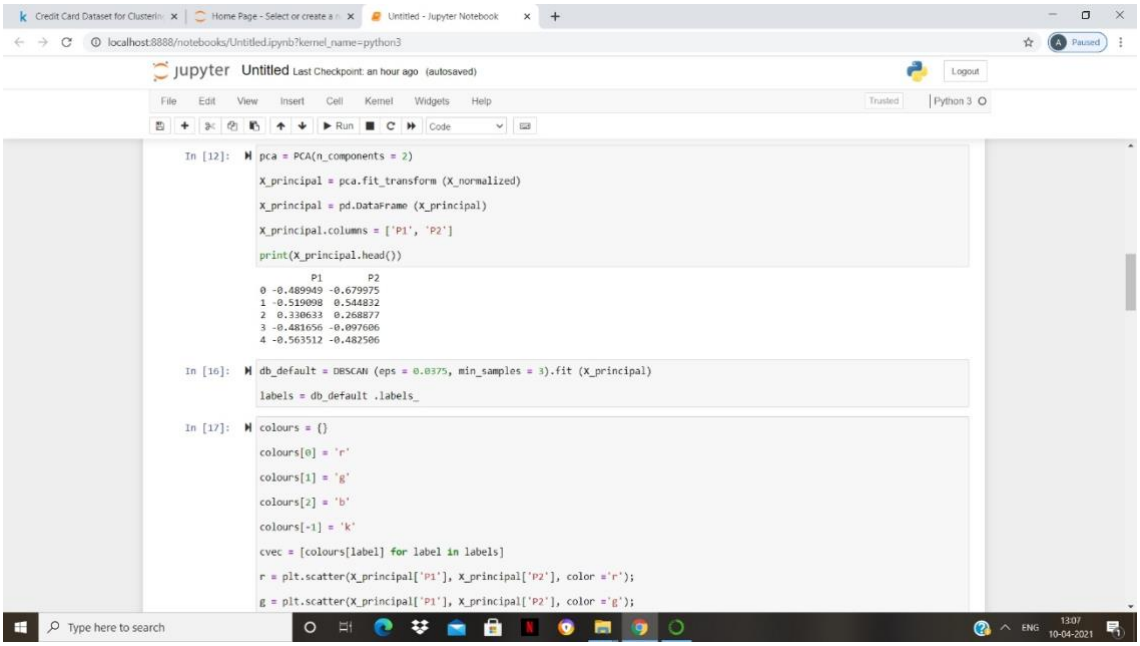
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Code
In [12]:
pca = PCA(n_components = 2)
X_principal = pca.fit_transform (X_normalized)
X_principal = pd.DataFrame (X_principal)
X_principal.columns = ['P1', 'P2']
print(X_principal.head())
P1 P2
0 -0.489949 -0.679975
1 -0.519098 0.544832
2 0.330633 0.268877
3 -0.481656 -0.097606
4 -0.563512 -0.482506
In [16]:
db_default = DBSCAN (eps = 0.0375, min_samples = 3).fit (X_principal)
labels = db_default .labels_
In [17]:
colours = {}
colours[0] = 'r'
colours[1] = 'g'
colours[2] = 'b'
colours[-1] = 'k'
cvec = [colours[label] for label in labels]
r = plt.scatter(X_principal['P1'], X_principal['P2'], color ='r');
g = plt.scatter(X_principal['P1'], X_principal['P2'], color ='g');
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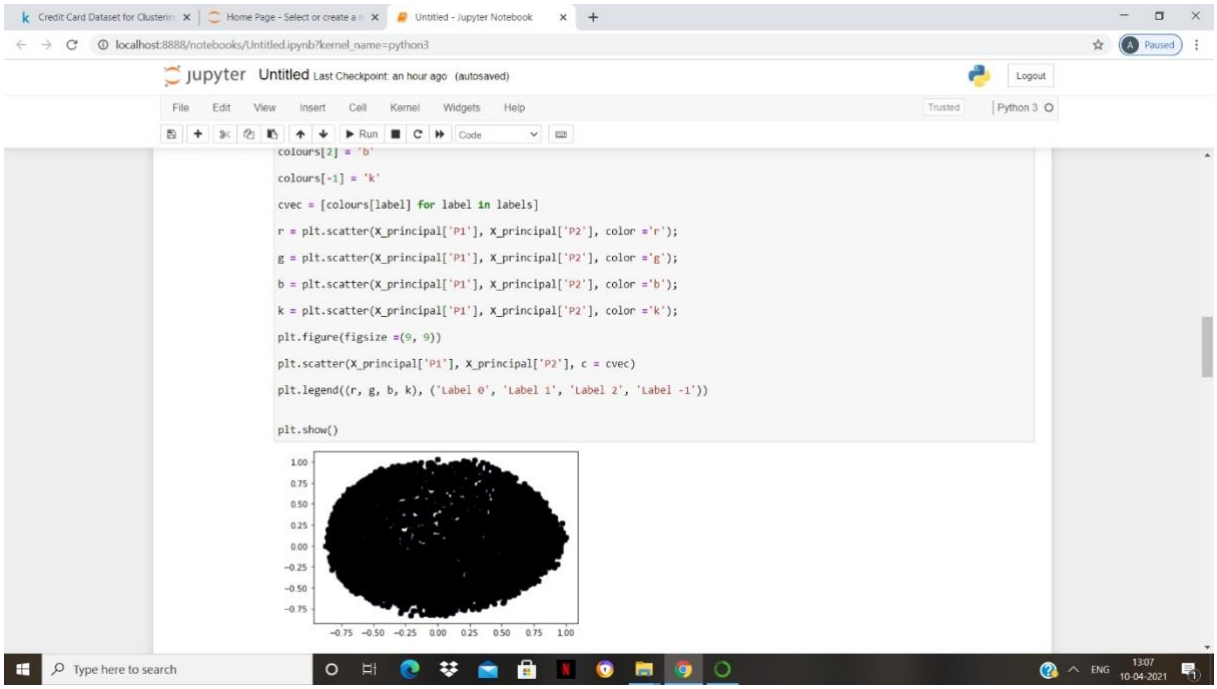
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Code
colours[2] = 'b'
colours[-1] = 'k'
cvec = [colours[label] for label in labels]
r = plt.scatter(X_principal['P1'], X_principal['P2'], color ='r');
g = plt.scatter(X_principal['P1'], X_principal['P2'], color ='g');
b = plt.scatter(X_principal['P1'], X_principal['P2'], color ='b');
k = plt.scatter(X_principal['P1'], X_principal['P2'], color ='k');
plt.figure(figsize =(9, 9))
plt.scatter(X_principal['P1'], X_principal['P2'], c = cvec)
plt.legend((r, g, b, k), ('Label 0', 'Label 1', 'Label 2', 'Label -1'))
plt.show()
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−0.75 −0.50 −0.25 0.00 0.25 0.50 0.75 1.00
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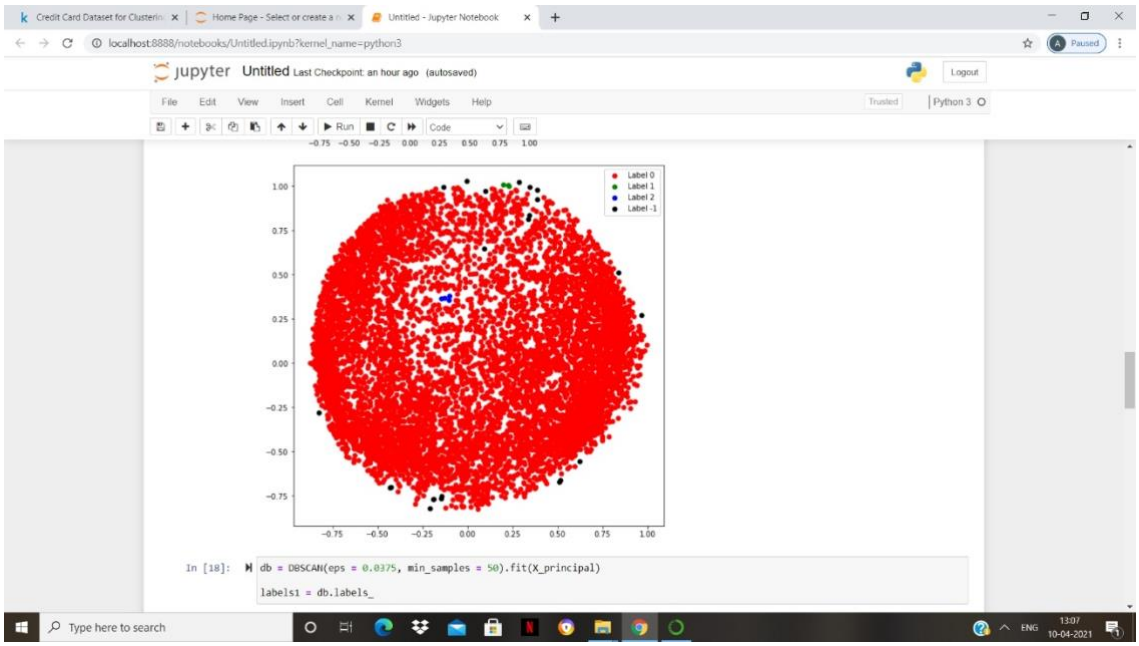
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Code
−0.75 −0.50 −0.25 0.00 0.25 0.50 0.75 1.00
Label 0
Label 1
Label 2
Label -1
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−0.75 −0.50 −0.25 0.00 0.25 0.50 0.75 1.00
In [18]:
db = DBSCAN(eps = 0.0375, min_samples = 50).fit(X_principal)
labels1 = db.labels_
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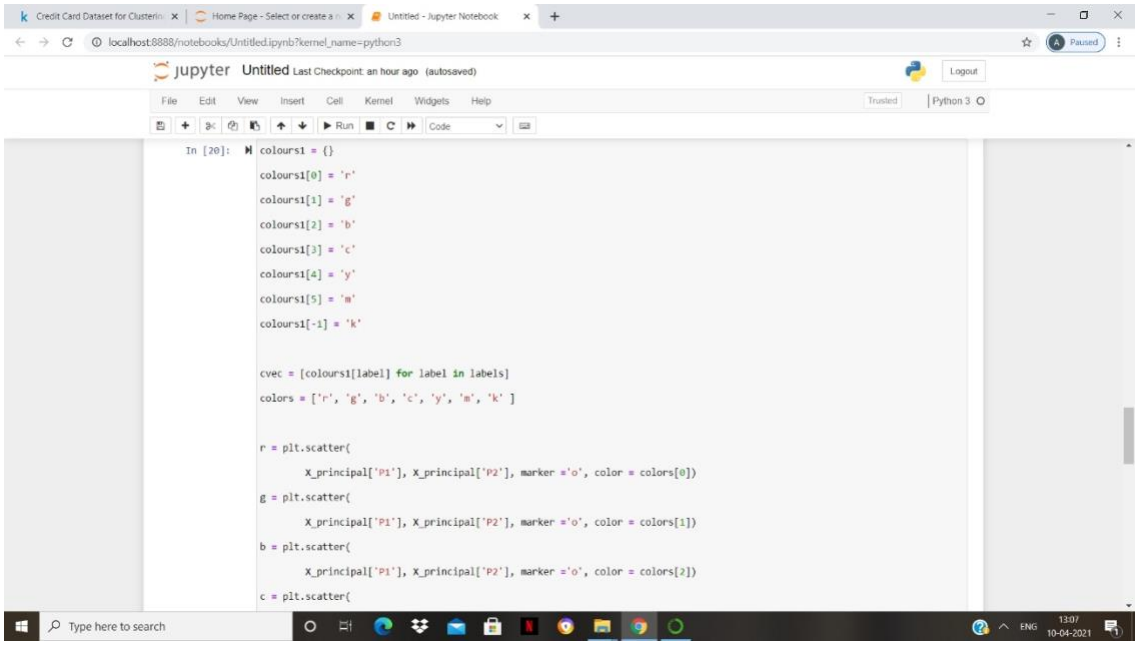
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Run
Code
In [20]:
colours1 = {}
colours1[0] = 'r'
colours1[1] = 'g'
colours1[2] = 'b'
colours1[3] = 'c'
colours1[4] = 'y'
colours1[5] = 'm'
colours1[-1] = 'k'
cvec = [colours1[label] for label in labels]
colors = ['r', 'g', 'b', 'c', 'y', 'm', 'k']
r = plt.scatter(
X_principal['P1'], X_principal['P2'], marker ='o', color = colors[0])
g = plt.scatter(
X_principal['P1'], X_principal['P2'], marker ='o', color = colors[1])
b = plt.scatter(
X_principal['P1'], X_principal['P2'], marker ='o', color = colors[2])
c = plt.scatter(
Type here to search
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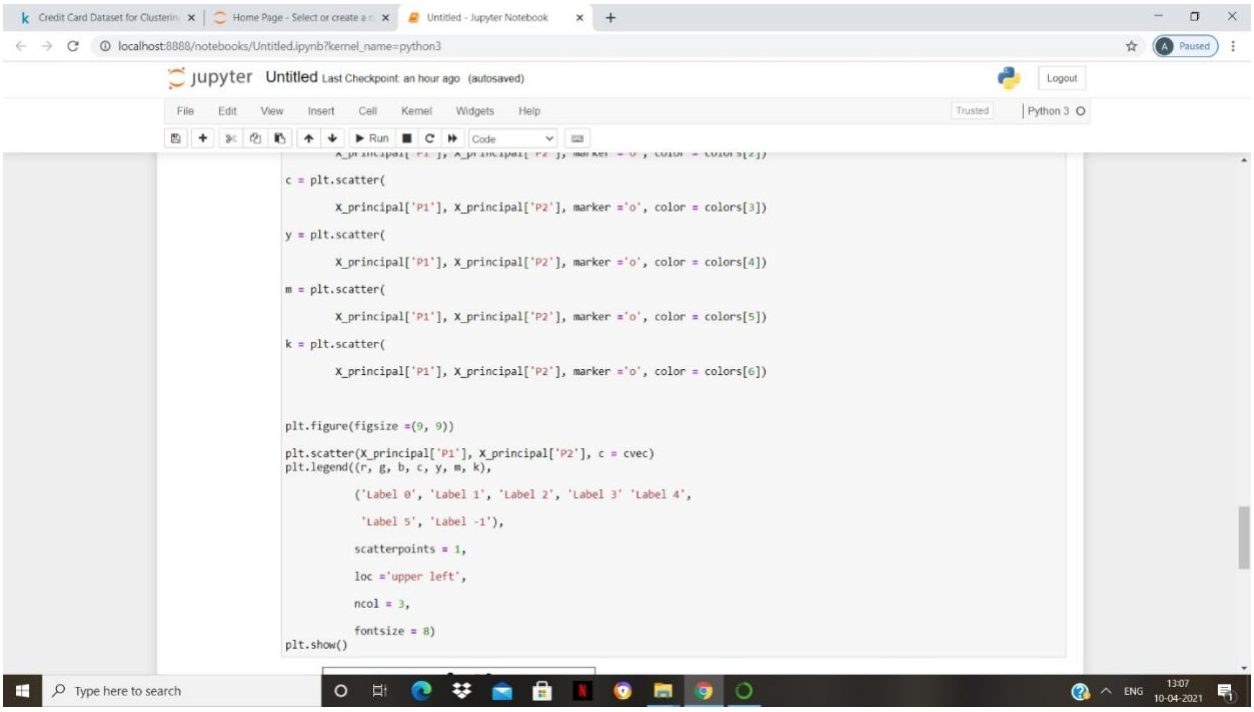
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Python 3
Run
Code
c = plt.scatter(
X_principal['P1'], X_principal['P2'], marker ='o', color = colors[3])
y = plt.scatter(
X_principal['P1'], X_principal['P2'], marker ='o', color = colors[4])
m = plt.scatter(
X_principal['P1'], X_principal['P2'], marker ='o', color = colors[5])
k = plt.scatter(
X_principal['P1'], X_principal['P2'], marker ='o', color = colors[6])
plt.figure(figsize =(9, 9))
plt.scatter(X_principal['P1'], X_principal['P2'], c = cvec)
plt.legend((r, g, b, c, y, m, k),
('Label 0', 'Label 1', 'Label 2', 'Label 3' 'Label 4',
'Label 5', 'Label -1'),
scatterpoints = 1,
loc ='upper left',
ncol = 3,
fontsize = 8)
plt.show()
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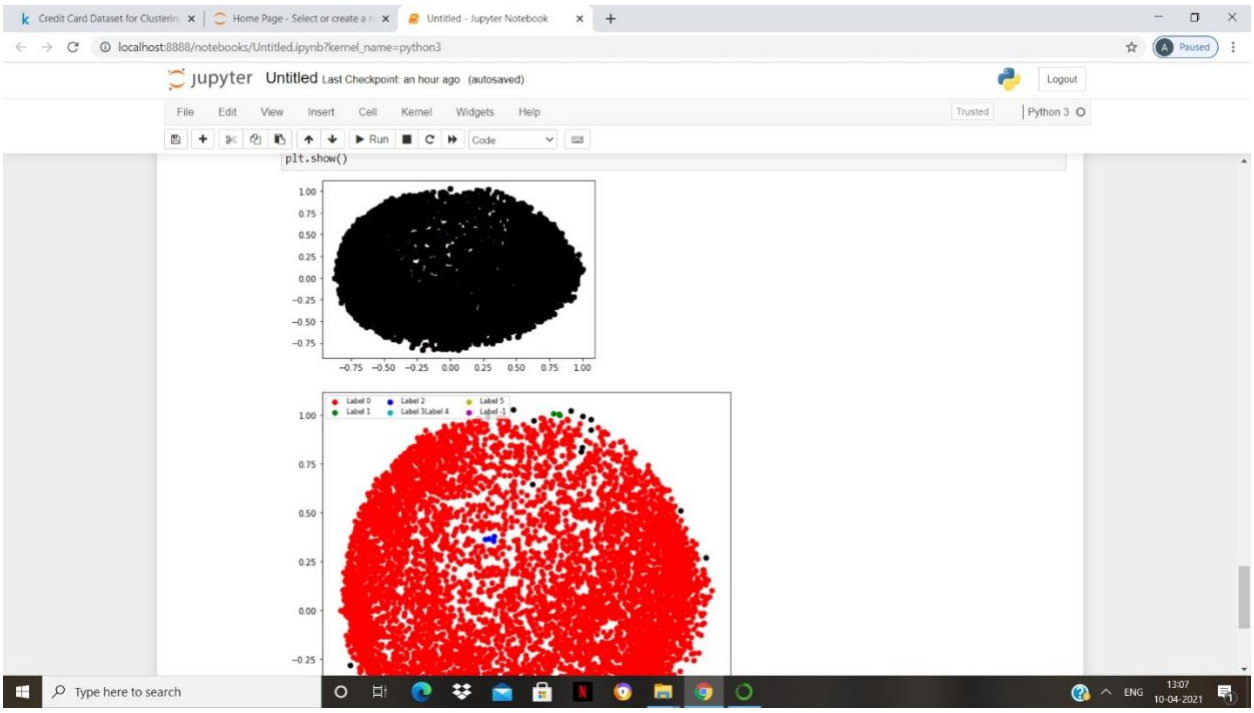
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Run
Code
plt.show()
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−0.75 −0.50 −0.25 0.00 0.25 0.50 0.75 1.00
Label 0
Label 1
Label 2
Label 3
Label 4
Label 5
Label -1
1.00
0.75
0.50
0.25
0.00
−0.25
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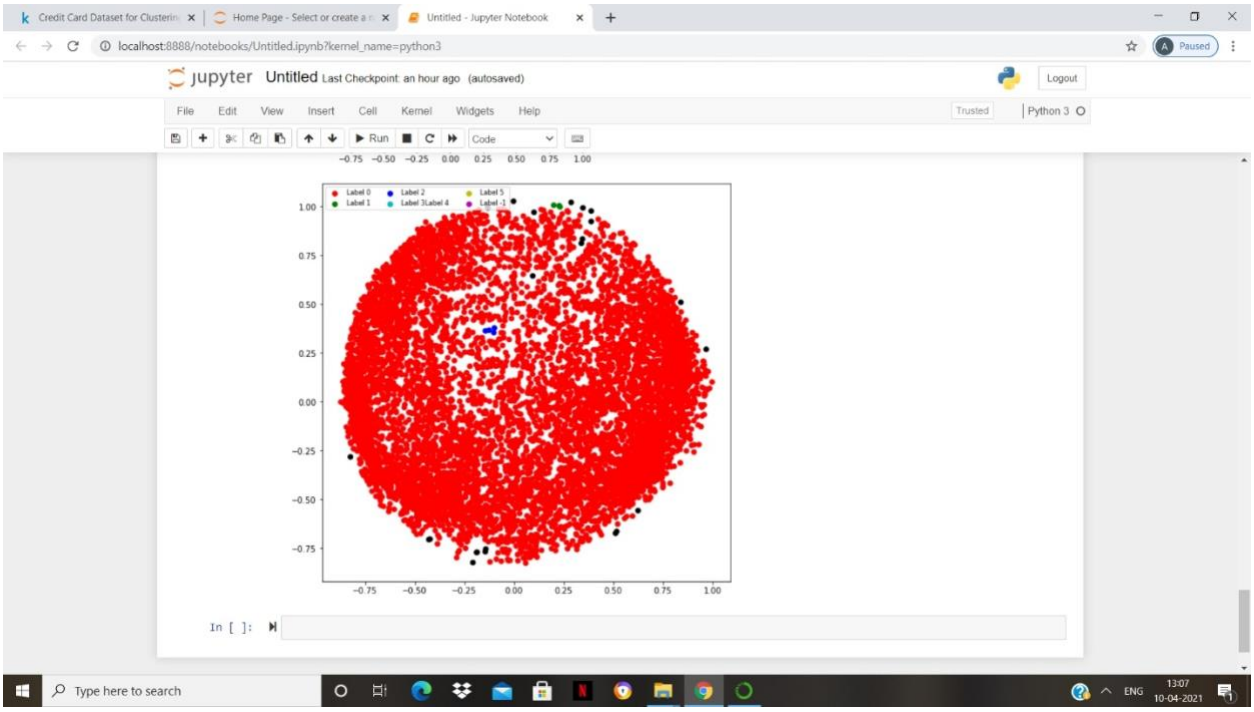
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Python 3
Run
Code
Label 0
Label 1
Label 2
Label 3
Label 4
Label 5
Label -1
In [ ]:
Type here to search
ENG
13:07
10-04-2021