Exno: Implementing artificial neural
Date network for an application
using python - classification

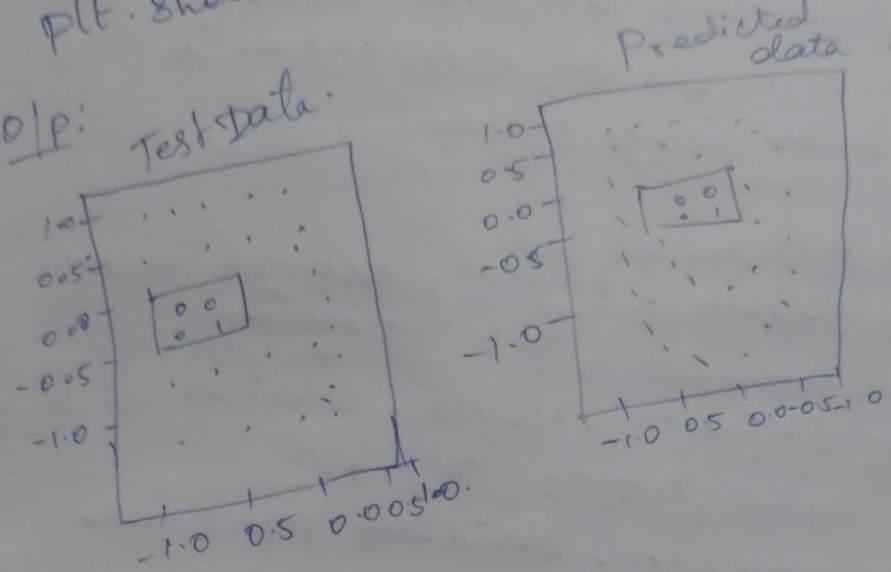
Aim:
To implement artificial neural networks for an application in classification using python.

Source code:

```
sklearn.model_selection import
train_test_split
from sklearn.datasets import make_
circles
import from sklearn.neural_network
import mlp classifier.
from numpy as np.
import matplotlib.pyplot as plt
import seaborn as sns.
%. matplotlib inline
x_train. y_train = make_circles.
(n_samples = 700, noise
=0.05)
x_test. y_test = make_circles(n_
samples = 300, noise
=0.05)
sns.scatterplot(x_train[:,0]
x_train[:,1], hue = y_train)
plt.title("train data")
plt.show()
clf = MLP classifier(max_iter=1000)
clf.fit(x_train.y_train)
```

```
y_pred = clf.predict(x_test)
fig, ax = plt.subplots(1, 2)
sns.scatterplot(x_test[:, 0],
x_test[:, 1], hue = y_pred, ax = ax[0])
plt.show()
```

O/P:



Result:

The program was successfully executed and output is verified.