2 Requires CNF Conversion: ...
the algorithm...

Ex. No. 11

Implementing Artificial neural networks for application using python - Regression.

AIM

To implement Artificial Neural networks for application using python.

Source code:

```
from sklearn.neural_network import MLPRegressor ③
from sklearn.model_selection import train_test_split ②
from sklearn.datasets import make_regression ①
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
%matplotlib inline
X, y = make_regression(n_samples=1000, noise=0.05,
            n_features=100)
X.shape, y.shape = ((1000, 100), (1000,))
X_train, X_test, y_train, y_test = train_test_split(
            X, y, test_size=0.2, shuffle=True,
   random_state=42)
clf = MLPRegressor(max_iter=1000)
clf.fit(X_train, y_train)
print(f"R2 Score for Training Data={clf.score(
            X_train, y_train)}")
print(f"R2 Score for Test Date={clf.score(
            X_test, y_test)}")
```

Output:

R2 Score for Test Data = 0.9686558466 66

RESULT:

Thus above program is successfully executed & verified.