Ex. No: 12 decision tree classification

Date:

Code:

```
from google.colab import drive
    drive.mount("/content/gdrive")
import pandas as pd
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_t
split (X,Y, test_size=0.2, shuffle=True,
    random_state=42)
clf = MLPRegressor (max_iter=1000)
clf.fit (X_train, y_train)
1, stop = X_set [:,0].max()+1, step=0.01
  np.arange (start = X_set [:,1].min()
1, stop = X_set [:,1].max()+1, step=0.0
```

```
plt.contourf(X1, X2, classifier.predict
(np.array([X1.ravel(), X2.ravel()]).T).
reshape(X1.shape), alpha = 0.75,
cmap = ListedColormap(('red', 'green'))
plt.xlim(X1.min(), X1.max())
plt.ylim(X2.min(), X2.max())
for i, j in enumerate(np.unique(y_set)):
plt.scatter(X_set[y_set == j, 0],
X_set[y_set == j, 1], c = ListedColormap
('red', 'green'))
plt.show()
```

o/p:

Images of that.

Result:

Thus the Program was successfully executed and the o/p is verified.