In [1]:

```
import pandas as pd
```

In [36]:

```
url="https://archive.ics.uci.edu/ml/machine-learning-databases/iris/iris.data"
```

In [37]:

```
names = ['sepal-length', 'sepal-width', 'petal-length', 'petal-width', 'Class']
```

In [38]:

```
irisdata = pd.read_csv(url, names=names)
```

In [48]:

```
irisdata.head()
```

Out[48]:

	sepal-length	sepal-width	petal-length	petal-width	Class
0	5.1	3.5	1.4	0.2	Iris-setosa
1	4.9	3.0	1.4	0.2	Iris-setosa
2	4.7	3.2	1.3	0.2	Iris-setosa
3	4.6	3.1	1.5	0.2	Iris-setosa
4	5.0	3.6	1.4	0.2	Iris-setosa

In [49]:

```
X = irisdata.iloc[:, 0:4]
y = irisdata.select_dtypes(include=[object])
```

In [50]:

```
y.head()
```

Out[50]:

	Class
0	Iris-setosa
1	Iris-setosa
2	Iris-setosa
3	Iris-setosa
4	Iris-setosa

In [51]:

```
y.Class.unique()
```

Out[51]:

```
array(['Iris-setosa', 'Iris-versicolor', 'Iris-virginica'], dtype=object)
```

In [52]:

```
from sklearn import preprocessing
le = preprocessing.LabelEncoder()

y = y.apply(le.fit_transform)
```

In [53]:

```
from sklearn.preprocessing import StandardScaler
scaler = StandardScaler()
scaler.fit(X_train)

X_train = scaler.transform(X_train)
X_test = scaler.transform(X_test)
```

In [54]:

```
from sklearn.neural_network import MLPClassifier
mlp = MLPClassifier(hidden_layer_sizes=(10, 10, 10), max_iter=1000)
mlp.fit(X_train, y_train.values.ravel())
```

Out[54]:

```
MLPClassifier(hidden_layer_sizes=(10, 10, 10), max_iter=1000)
```

In [55]:

```
predictions = mlp.predict(X_test)
```

In [56]:

```
from sklearn.metrics import classification_report, confusion_matrix
print(confusion_matrix(y_test,predictions))
print(classification_report(y_test,predictions))
```

```
[[11  0  0]
 [ 0  8  1]
 [ 0  0 10]]
              precision    recall  f1-score   support

           0       1.00      1.00      1.00        11
           1       1.00      0.89      0.94         9
           2       0.91      1.00      0.95        10

    accuracy                           0.97        30
   macro avg       0.97      0.96      0.96        30
weighted avg       0.97      0.97      0.97        30
```

In [ ]:

```

```