In [ ]:
```
# Author : Amir Shokri
# github link : https://github.com/amirshnll/Cryotherapy
# dataset link : http://archive.ics.uci.edu/ml/datasets/Cryotherapy+Dataset+
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```

In [64]:
```
import matplotlib.pyplot as plt
import pandas as pd
from sklearn import datasets
from pandas.plotting import scatter_matrix
from sklearn.model_selection import train_test_split
```

In [65]:
```
col_names= ['Result_of_Treatment','sex', 'age', 'Time', 'Number_of_Warts', 'Ty
pe', 'Area' ]
cry= pd.read_csv("Cryotherapy.csv",header=None, names=col_names)
```

In [66]:
```
inputs =cry.drop('sex',axis='columns')
target =cry['Result_of_Treatment']
```

In [67]:
```
input_train, input_test, target_train, target_test = train_test_split(inputs,
target, test_size=0.3, random_state=1)
```

In [95]:
```
from sklearn.neural_network import MLPClassifier
mlp = MLPClassifier(hidden_layer_sizes=(7,6), max_iter=5000)
mlp.fit(input_train, target_train)
```

Out[95]:
```
MLPClassifier(hidden_layer_sizes=(7, 6), max_iter=5000)
```

In [96]:
```
from sklearn.metrics import accuracy_score
predictions_train =mlp.predict(input_train)
print("accuracy for train data: ", accuracy_score(predictions_train, target_tr
ain))
y_pred=mlp.predict(input_test)
print("accuracy for test data: ", accuracy_score(y_pred, target_test))
```

```
accuracy for train data:  1.0
accuracy for test data:  1.0
```

In [97]:
```
from sklearn.metrics import classification_report, confusion_matrix, accuracy_
score
result1 = classification_report(target_test, y_pred)
print("Classification Report:",)
print (result1)
result2 = accuracy_score(target_test,y_pred)
print("Accuracy:",result2)
```

```
Classification Report:
              precision    recall  f1-score   support

           0       1.00      1.00      1.00        14
           1       1.00      1.00      1.00        13

    accuracy                           1.00        27
   macro avg       1.00      1.00      1.00        27
weighted avg       1.00      1.00      1.00        27

Accuracy: 1.0
```