

In [2]:

```
from sklearn.tree import DecisionTreeClassifier
```

In [3]:

```
from sklearn.datasets import load_breast_cancer
```

In [4]:

```
cancer_dataset = load_breast_cancer()
```

In [5]:

```
from sklearn.model_selection import train_test_split
```

```
x_train,x_test,y_train,y_test = train_test_split(cancer_dataset.data,cancer_dataset.target,
```

In [6]:

```
dt=DecisionTreeClassifier(max_depth=30)
```

In [7]:

```
dt.fit(x_train,y_train)
```

Out[7]:

```
DecisionTreeClassifier(max_depth=30)
```

In [8]:

```
y_pred=dt.predict(x_test)
```

In [9]:

```
from sklearn.metrics import confusion_matrix  
cf_matrix = confusion_matrix(y_test,y_pred)  
print(cf_matrix)
```

```
[[49  3]  
 [ 8 83]]
```

In [10]:

```
import numpy as np  
cf_matrix=np.transpose(np.transpose(cf_matrix)/cf_matrix.astype(float).sum(axis=1))
```

In [11]:

```
cf_matrix
```

Out[11]:

```
array([[0.94230769, 0.05769231],  
       [0.08791209, 0.91208791]])
```