In [1]:
```
# first neural network with keras tutorial
from numpy import loadtxt
from keras.models import Sequential
from keras.layers import Dense
```

In [2]:
```
# name of data set : pima-indians-diabetes.csv
```

In [3]:
```
# load the dataset
dataset = loadtxt("data/pima-indians-diabetes.data.csv", delimiter=',')
# split into input (X) and output (y) variables
X = dataset[:,0:8]
y = dataset[:,8]
```

In [4]:
```
# define the keras model
model = Sequential()
model.add(Dense(12, input_dim=8, activation='relu'))
model.add(Dense(44, activation='relu'))
model.add(Dense(26, activation='relu'))
model.add(Dense(44, activation='relu'))
model.add(Dense(1, activation='sigmoid'))
```

In [5]:
```
# compile the keras model
model.compile(loss='binary_crossentropy', optimizer='adam', metrics=['accuracy'])
```

In [6]:
```
# fit the keras model on the dataset
model.fit(X, y, epochs=450, batch_size=15)
```

```
52/52 [==============================] - 0s 2ms/step - loss: 0.5406 - accurac
y: 0.7174
Epoch 25/450
52/52 [==============================] - 0s 2ms/step - loss: 0.5326 - accurac
y: 0.7357
Epoch 26/450
52/52 [==============================] - 0s 2ms/step - loss: 0.5315 - accurac
y: 0.7318
Epoch 27/450
52/52 [==============================] - 0s 2ms/step - loss: 0.5324 - accurac
y: 0.7396
Epoch 28/450
52/52 [==============================] - 0s 2ms/step - loss: 0.5322 - accurac
y: 0.7214
Epoch 29/450
52/52 [==============================] - 0s 2ms/step - loss: 0.5466 - accurac
y: 0.7109
Epoch 30/450
52/52 [==============================] - 0s 2ms/step - loss: 0.5319 - accurac
```

In [7]:
```
# evaluate the keras model
_, accuracy = model.evaluate(X, y)
print('Accuracy: %.2f' % (accuracy*100))
```

```
24/24 [==============================] - 0s 2ms/step - loss: 0.1401 - accuracy:
0.9401
Accuracy: 94.01
```

In [ ]:
```

```