```
import numpy as np
import pandas as pd
import tensorflow as tf
```

```
tf.__version__
```

```
'2.15.0'
```

```
from google.colab import drive
drive.mount('/content/gdrive')
```

```
Mounted at /content/gdrive
```

```
dataset = pd.read_csv('heart.csv')
```

```
np.random.seed(42)
X = np.random.rand(100, 3)
Y = np.random.randint(2, size=(100, 1))
```

```
print(X)
print(Y)
```

heart.csv

1 to 25 of 303 entries Filter

age	sex	cp	trestbps	chol	fbs	res
63	1	3	145	233	1	0
37	1	2	130	250	0	1
41	0	1	130	204	0	0
56	1	1	120	236	0	1
57	0	0	120	354	0	1
57	1	0	140	192	0	1
56	0	1	140	294	0	0
44	1	1	120	263	0	1
52	1	2	172	199	1	1
57	1	2	150	168	0	1
54	1	0	140	239	0	1
48	0	2	130	275	0	1
49	1	1	130	266	0	1
64	1	3	110	211	0	0
58	0	3	150	283	1	0
50	0	2	120	219	0	1
58	0	2	120	340	0	1
66	0	3	150	226	0	1
43	1	0	150	247	0	1
69	0	3	140	239	0	1
59	1	0	135	234	0	1
44	1	2	130	233	0	1
42	1	0	140	226	0	1
61	1	2	150	243	1	1
40	1	3	140	199	0	1

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1 2 10 13

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```
from sklearn.model_selection import train_test_split
X_train, X_test, Y_train, Y_test = train_test_split(X,
```

```
from sklearn.preprocessing import StandardScaler
sc = StandardScaler()
X_train = sc.fit_transform(X_train)
X_test = sc.transform(X_test)
```

```
ann = tf.keras.models.Sequential()
```

```
ann.add(tf.keras.layers.Dense(units=6,activation='relu
```

```
ann.add(tf.keras.layers.Dense(units=1,activation='sigm
```

```
ann.compile(optimizer='adam',loss='binary_crossentropy
```

```
ann.fit(X_train,Y_train,batch_size=32,epochs=100)
```

```
    Epoch 1/100
    3/3 [==============================] - 1s 9ms/s
    Epoch 2/100
```

```
3/3 [==============================] - 0s 6ms/s
Epoch 3/100
3/3 [==============================] - 0s 6ms/s
Epoch 4/100
3/3 [==============================] - 0s 7ms/s
Epoch 5/100
3/3 [==============================] - 0s 6ms/s
Epoch 6/100
3/3 [==============================] - 0s 6ms/s
Epoch 7/100
3/3 [==============================] - 0s 6ms/s
Epoch 8/100
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Epoch 9/100
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Epoch 10/100
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Epoch 11/100
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Epoch 12/100
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Epoch 13/100
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Epoch 14/100
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Epoch 15/100
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Epoch 16/100
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Epoch 27/100
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Epoch 28/100
3/3 [==============================] - 0s 5ms/s
```