نگین طالبی

تمرین تشخیص اعداد زوج و فرد با استفاده از شبکه مصنوعی با زبان پایتون

```
import tensorflow as tf import numpy as np

 # Generate training data

x_train = np.array([i for i in range(0, 100)])

 y_train = np.array([(1 if i % 2 == 0 else 0) for i in x_train])

 # Define the model

model = tf.keras.Sequential([ tf.keras.layers.Dense(16, activation='relu', input_shape=(1,)),
tf.keras.layers.Dense(16, activation='relu'), tf.keras.layers.Dense(1, activation='sigmoid') ])

 # Compile the model

model.compile(optimizer='adam', loss='binary_crossentropy', metrics=['accuracy'])

# Train the model

model.fit(x_train, y_train, epochs=50, verbose=1)

 # Generate some test data

x_test = np.array([100, 101, 102, 103, 104])

 y_test = np.array([(1 if i % 2 == 0 else 0) for i in x_test])

# Evaluate the model

 loss, accuracy = model.evaluate(x_test, y_test, verbose=0)

 print(f'Test loss: {loss:.3}')

 print(f'Test accuracy: {accuracy:.3}')
```