

```

import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
from sklearn.datasets import load_diabetes
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LinearRegression
from sklearn.metrics import mean_squared_error

diabetes = load_diabetes()
data = pd.DataFrame(diabetes.data, columns=[f'feature_{i}' for i in range(diabetes.data.shape[1])])
data['target'] = diabetes.target

X = data.drop('target', axis=1)
y = data['target']

X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)

model = LinearRegression()
model.fit(X_train, y_train)

    ▾ LinearRegression
    LinearRegression()

y_pred = model.predict(X_test)

mse = mean_squared_error(y_test, y_pred)
print(f'Mean Squared Error: {mse}')

    Mean Squared Error: 2900.193628493482

sns.regplot(x=y_test, y=y_pred)
plt.xlabel("Actual Values")
plt.ylabel("Predicted Values")
plt.title("Actual vs Predicted Values")
plt.show()

```



