```
# -*- coding: utf-8 -*-
"""Untitled10.ipynb

Automatically generated by Colab.

Original file is located at

https://colab.research.google.com/drive/1MUm2MusalgeD_KUycDs0m57NdWGCoUbv
"""

import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
from sklearn.linear_model import LinearRegression
from sklearn.model_selection import train_test_split
from sklearn.metrics import mean_squared_error,r2_score
import warnings
warnings.filterwarnings("ignore")

df=pd.read_csv("/content/sample_data/california_housing_test.csv")

df

df.head()

df.info()
df.describe()

df.isnull().sum()

x=df[['median_income']]
y=df['median_house_value']

x_train,x_test,y_train,y_test=train_test_split(x,y,test_size=0.2,random_s
tate=42)

linear_model=LinearRegression()
linear_model.fit(x_train,y_train)

y_pred=linear_model.predict(x_test)

y_pred

print("Mean Squared Error:",mean_squared_error(y_test,y_pred))
print("R2 Score:",r2_score(y_test,y_pred))

plt.scatter(x_test,y_test,color='blue')
plt.plot(x_test,y_pred,color='red',linewidth=2,label='regression line')
plt.xlabel('Median Income')
plt.ylabel('Median House Value')
plt.title('Linear Regression Model')
plt.legend()
plt.show()

median_income=float(input("Enter the median income:"))
predicted_median_house_value=linear_model.predict([[median_income]])
predicted_median_house_value
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predicted_median_house_value