Program:

Import pandas as pd

Import matplotlib.pyplot as plt

Import seaborn as sns

Dataset = pd.read\_excel(“HousePricePrediction.xlsx”)

# Printing first 5 records of the dataset

Print(dataset.head(5))

Dataset.shape

# Feature Selection

# Example: Using correlation analysis to select relevant features

Correlation\_matrix = dataset.corr()

Correlation\_with\_target = correlation\_matrix[‘HousePrice’] # Assuming ‘HousePrice’ is your target variable

Relevant\_features = correlation\_with\_target[abs(correlation\_with\_target) > 0.2].index.tolist()

Selected\_data = dataset[relevant\_features]

# Model Training

From sklearn.model\_selection import train\_test\_split

From sklearn.linear\_model import LinearRegression

# Split the data into training and testing sets

X = selected\_data.drop(‘HousePrice’, axis=1)

Y = selected\_data[‘HousePrice’]

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y, test\_size=0.2, random\_state=42)

# Train a linear regression model

Model = LinearRegression()

Model.fit(X\_train, y\_train)

# Evaluation

From sklearn.metrics import mean\_squared\_error, r2\_score

# Make predictions

Y\_pred = model.predict(X\_test)

# Calculate evaluation metrics

Mse = mean\_squared\_error(y\_test, y\_pred)

R2 = r2\_score(y\_test, y\_pred)

# Print the results

Print(f”Mean Squared Error: {mse}”)

Print(f”R-squared (R2): {r2}”)

```python

# Import necessary libraries

Import pandas as pd

From sklearn.model\_selection import train\_test\_split

From sklearn.linear\_model import LinearRegression

From sklearn.metrics import mean\_squared\_error, r2\_score

# Load the dataset (assuming you have a CSV file)

Data = pd.read\_csv(‘house\_data.csv’)

# Split the data into features (X) and the target variable (y)

X = data[[‘SquareFeet’, ‘Bedrooms’, ‘Bathrooms’, ‘Location’]]

Y = data[‘Price’]

# Split the data into training and testing sets

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y, test\_size=0.2, random\_state=42)

# Create a Linear Regression model

Model = LinearRegression()

# Train the model on the training data

Model.fit(X\_train, y\_train)

# Make predictions on the test data

Y\_pred = model.predict(X\_test)

# Evaluate the model

Mse = mean\_squared\_error(y\_test, y\_pred)

R2 = r2\_score(y\_test, y\_pred)

Print(f’Mean Squared Error: {mse}’)

Print(f’R-squared: {r2}’)

# Now you can use the trained model to predict house prices for new data

New\_data = pd.DataFrame({‘SquareFeet’: [1500], ‘Bedrooms’: [3], ‘Bathrooms’: [2], ‘Location’: [‘Suburb’]})

Predicted\_price = model.predict(new\_data)

Print(f’Predicted Price: {predicted\_price[0]}’)