**Program:**

import pandas as pd

from sklearn.linear\_model import LinearRegression

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

import matplotlib.pyplot as plt

from sklearn.preprocessing import OneHotEncoder

from sklearn.compose import ColumnTransformer

import seaborn as sns

df = pd.read\_csv('bed.csv')

x = df[['Bedroom','Size','Age','Zipcode']]

y = df['Selling Price']

ct= ColumnTransformer(transformers=[('encoder',OneHotEncoder(),['Zipcode'])],remainder='passthrough')

xen=ct.fit\_transform(x)

xtr,xte,ytr,yte=train\_test\_split(xen,y,test\_size=0.2,random\_state=42)

model=LinearRegression()

model.fit(xtr,ytr)

ypr=model.predict(xte)

print(ypr)

coefficients =model.coef\_

intercept= model.intercept\_

print("Coefficients:",coefficients)

print("Intercept:",intercept)

plt.figure(figsize=(8,6))

sns.scatterplot(x=yte,y=ypr,color='blue',s=100)

plt.plot([min(yte),max(yte)],[min(yte),max(yte)],'r--')

plt.xlabel("Actual selling price")

plt.ylabel("Predicted Selling price")

plt.title("Actual Vs Predicted House Prices")

plt.grid(True)

plt.tight\_layout()

plt.show()

sns.heatmap(x.corr(),annot=True,cmap="coolwarm")

plt.title("Feature Correlation Heatmap")

plt.show()

**Output**:

