import numpy as np

# Function to predict house rent

defpredict\_rent(location, bedrooms, floor, sqft, current\_price\_per\_sqft):

# Hypothetical coefficients for a linear regression model

coeff\_location = {'urban': 1.2, 'rural': 0.8}

coeff\_bedrooms = 300

coeff\_floor = 100

base\_price = 500

# Calculate expected price per sqft based on location

expected\_price\_per\_sqft = base\_price \* coeff\_location[location.lower()] + bedrooms \* coeff\_bedrooms + floor \* coeff\_floor

# Predict rent

expected\_rent = sqft \* expected\_price\_per\_sqft

current\_rent = sqft \* current\_price\_per\_sqft

# Output the prediction and comparison

print("\nPredicted Rent Details:")

print(f"Location: {location.capitalize()}")

print(f"Bedrooms: {bedrooms}")

print(f"Floor: {floor}")

print(f"Square Feet: {sqft} sq ft")

print(f"Current Price per Sq Ft: {current\_price\_per\_sqft:.2f}")

print(f"Expected Price per Sq Ft: {expected\_price\_per\_sqft:.2f}")

print(f"Current Rent: {current\_rent:.2f}")

print(f"Expected Rent: {expected\_rent:.2f}")

if current\_rent > expected\_rent:

print("Current rent is higher than expected.")

else:

print("Current rent is lower than expected.")

# Collecting user inputs

location = input("Enter the location (Urban/Rural): ")

bedrooms = int(input("Enter the number of bedrooms: "))

floor = int(input("Enter the floor number: "))

sqft = int(input("Enter the square footage: "))

current\_price\_per\_sqft = float(input("Enter the current price per square foot: "))

# Calling the prediction function

predict\_rent(location, bedrooms, floor, sqft, current\_price\_per\_sqft)