

Experiment -14

```
# Dataset: [House Size (sqft), Bedrooms], Price
```

```
X = [
```

```
    [800, 2],
```

```
    [1000, 3],
```

```
    [1200, 3],
```

```
    [1500, 4],
```

```
    [1800, 4]
```

```
]
```

```
Y = [40000, 50000, 60000, 75000, 90000]
```

```
# Initialize weights and bias
```

```
w1, w2, b = 0.01, 0.01, 0
```

```
lr = 0.0000001
```

```
# Training using Gradient Descent
```

```
for _ in range(10000):
```

```
    for x, y in zip(X, Y):
```

```
        pred = w1*x[0] + w2*x[1] + b
```

```
        error = y - pred
```

```
        w1 += lr * error * x[0]
```

```
        w2 += lr * error * x[1]
```

```
        b += lr * error
```

```
# Prediction function
```

```
def predict(size, bedrooms):
```

```
    return w1*size + w2*bedrooms + b
```

```
# Test the model
```

```
size = 1400
```

```
bedrooms = 3
```

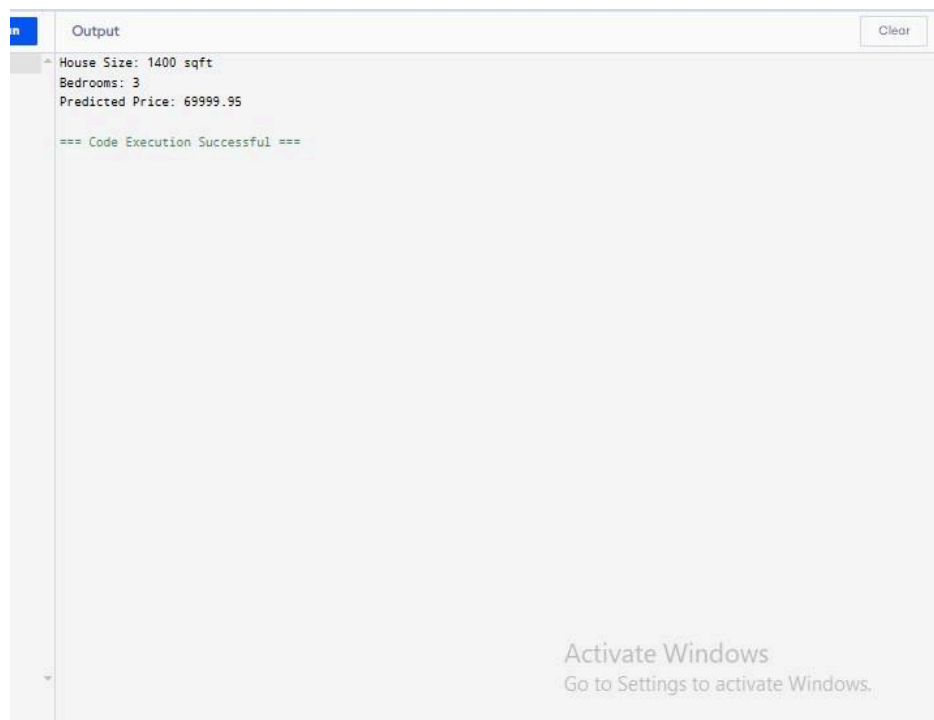
```
price = predict(size, bedrooms)
```

```
print("House Size:", size, "sqft")
```

```
print("Bedrooms:", bedrooms)
```

```
print("Predicted Price:", round(price, 2))
```

Output:



The image shows a software output window with a title bar labeled 'Output' and a 'Clear' button. The window contains the following text:

```
House Size: 1400 sqft  
Bedrooms: 3  
Predicted Price: 69999.95  
  
=== Code Execution Successful ===
```

At the bottom right of the window, there is a watermark that reads: 'Activate Windows Go to Settings to activate Windows.'