

EXPERIMENT – 8

PROGRAM:

```
print("Enter number of data
points:")
n = int(input())

print("Enter x y pairs:")
X = []
y = []

for _ in range(n):
    x_val, y_val = map(float,
input().split())
    X.append(x_val)
    y.append(y_val)

sum_x = sum(X)
sum_y = sum(y)
sum_xy = sum(x * y for x, y in zip(X,
y))
sum_x2 = sum(x * x for x in X)

slope = (n * sum_xy - sum_x *
sum_y) / (n * sum_x2 - sum_x *
sum_x)
intercept = (sum_y - slope * sum_x)
/ n

print("Enter x value to predict:")
test_x = float(input())
prediction = slope * test_x +
intercept
print("Predicted y:", prediction)
```