PROGRAM:

```python
print("Enter number of data
points:")

n = int(input())


print("Enter polynomial degree:")

degree = 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)


# Linear Regression

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
```

```python
linear_pred = [slope * x + intercept
for x in X]

linear_error = sum((y[i] -
linear_pred[i])**2 for i in range(n))
/ n


print("Linear MSE:", linear_error)
```