

EXPERIMENT – 9

OUTPUT:

The screenshot shows the Microsoft Visual Studio Code interface. On the left, the file tree displays a file named '09.py'. The code itself is as follows:

```
D: > College > Machine Learning > Experiments > Code Files > 09.py > ...
1  from sklearn.linear_model import LinearRegression
2  from sklearn.preprocessing import PolynomialFeatures
3  import numpy as np
4  X = np.array([1,2,3,4,5]).reshape(-1,1)
5  y = np.array([2,4,5,4,5])
6  model_linear = LinearRegression()
7  model_linear.fit(X, y)
8  poly = PolynomialFeatures(degree=2)
9  X_poly = poly.fit_transform(X)
10 model_poly = LinearRegression()
11 model_poly.fit(X_poly, y)
12 x_new = float(input("Enter X: "))
13 print("Linear prediction:", model_linear.predict([[x_new]]))
14 print("Polynomial prediction:", model_poly.predict(poly.fit_transform([[x_new]])))
```

The terminal tab at the bottom shows the execution of the script and its output:

```
PS D:\College\Machine Learning\Experiments\Code Files> d;; cd 'd:\College\Machine Learning\Experiments\Code Files'; & 'c:\Users\HARSHINI RN\AppData\Local\Microsoft\WindowsApps\python3.13.exe' 'c:\Users\HARSHINI RN\.vscode\extensions\ms-python.debugpy-2025.18.0-win32-x64\bundled\libs\debugpy\launcher' '56182' '--' 'd:\College\Machine Learning\Experiments\Code Files\09.py'
Enter X: 6
Linear prediction: 5.8
Polynomial prediction: 3.800000000000034
PS D:\College\Machine Learning\Experiments\Code Files>
```

The status bar at the bottom indicates the following settings: Spaces: 4, UTF-8, Python, 3.13.9 (Microsoft Store), Go Live.