AIM. Python Program to Compute a Polynomial Equation given that the Coefficients of the Polynomial are stored in a List

Student Name: **UID:**
Branch: BE-CSE BD **Section/Group:**
Semester: 4th **Date of Performance:**
Subject Name: Programming in python lab

1. Tasks to be done:

The program takes the coefficients of the polynomial equation and the value of x and gives the value of the polynomial.

2. Steps for practical: (Mention the steps for each and every task)

1. Import the math module.

2. Take in the coefficients of the polynomial equation and store it in a list.

3. Take in the value of x.

4. Use a for loop and while loop to compute the value of the polynomial expression for the first three terms and store it in a sum variable.

5. Add the fourth term to the sum variable.

6. Print the computed value.

7. Exit.

3.Code:

```
import math

print("Enter the coefficients of the form ax^3 + bx^2 + cx + d")

lst=[]

for i in range(0,4):

a=int(input("Enter coefficient:"))

lst.append(a)

x=int(input("Enter the value of x:"))

sum1=0

j=3

for i in range(0,3):

while(j>0):

sum1=sum1+(lst[i]*math.pow(x,j))

break

j=j-1

sum1=sum1+lst[3]

print("The value of the polynomial is:",sum1)
```

4. Screenshots:

```
[1]  import math
```

```
[2]  print("Enter the coefficient in form of ax^3+bx^2+c")
```

```
lst=[]
for i in range (0,4):
  a=int(input("Enter coefficient "))
  lst.append(a)

x=int(input("enter value of x "))
sum1=0
j=3
for i in range(0,3):
 while j>0:
  sum1=sum1+(lst[i]*math.pow(x,j))
  break

j=j-1
sum1=sum1+lst[3]
print("The value of the polynomial is:",sum1)
```

```
Enter coefficient 1
Enter coefficient 1
Enter coefficient 1
Enter coefficient 1
enter value of x 1
The value of the polynomial is: 4.0
```

5. Result:

```
Enter coefficient 1
Enter coefficient 1
Enter coefficient 1
Enter coefficient 1
enter value of x 1
      The value of the polynomial is: 4.0
```

Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			