POLYNOMIAL EVOLUATION

```
#include <stdio.h>
#include <math.h>

double Polynomial_Evoluation(int degree, float coefficients[], float x)
{
   float result = 0;
   for (int i = 0; i <= degree; i++)
   {
      result += coefficients[i] * pow(x, i);
   }
   return result;
}

int main()
{
   int degree;
   printf("Enter the degree of the polynomial: ");
   scanf("%d", &degree);
   float coefficients[degree + 1];
   printf("Enter the coefficients of the polynomial starting from the constant term: \n");
   for (int i = 0; i <= degree; i++)
   {
      printf("Coefficient for x^%d: ", i);
      scanf("%f", &coefficients[i]);
   }
   float x;
   printf("Enter the value of x for evaluation: ");
   scanf("%f", &x);
```

```
    float res = Polynomial_Evoluation(degree, coefficients, x);
    printf("Result of the polynomial evaluation for x = %.2f is: %.2f\n", x, res);
    return 0;
}
```

OUTPUT

```
Enter the degree of the polynomial: 4
Enter the coefficients of the polynomial starting from the constant term:
Coefficient for x^0: 1
Coefficient for x^1: 3
Coefficient for x^2: 0
Coefficient for x^3: 2
Enter the value of x for evaluation: 2
Result of the polynomial evaluation for x = 2.00 is: 23.00
```