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1 View Project Execute Tools AStyle Window Help
C:\Users\Bimal Acharya\Desktop\NumericalMethod\Done lab\linear interpolation.exe - X
g1c Enter x0 and y0: 2
4
Def Enter x1 and y1: 6
12
Enter the value of x where you want to find y: 4
The interpolated value of y at x = 4.00 is: 8.00

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Process exited after 32.21 seconds with return value 0
Press any key to continue . . .
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1 View Project Execute Tools AStyle Window Help
C:\Users\Bimal Acharya\Desktop\NumericalMethod\Done lab\Langrage's Interpolation.e... - X
g1c Enter the number of data points: 3
Enter data points (x and y):
Def x[0] = 1
y[0] = 1
x[1] = 2
y[1] = 4
x[2] = 3
y[2] = 9
Enter the value of x for which y is to be found: 2.5

Interpolated value at x = 2.50 is y = 6.2500

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Process exited after 62.01 seconds with return value 0
Press any key to continue . . .
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```
(globals) C:\Users\Bimal Acharya\Desktop\NumericalMethod\Done lab\Straight Line curves fitting.exe
Enter number of data points: 4
Enter the values of x and y:
x[0] y[0]: 1
2
x[1] y[1]: 2
3
x[2] y[2]: 3
5
x[3] y[3]: 4
4

Equation of straight line is: y = 1.50 + 0.80x

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Process exited after 49.77 seconds with return value 0
Press any key to continue . . .
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```
C:\Users\Bimal Acharya\Desktop\NumericalMethod\Done lab\Transcendental Equation.exe
Enter number of data points: 4
Enter the values of x and y:
x[0] y[0]: 1
2.7
x[1] y[1]: 2
7.4
x[2] y[2]: 3
20.1
x[3] y[3]: 4
54.6

Fitted Transcendental Equation is:
y = 0.994e^(1.002x)

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Process exited after 48.17 seconds with return value 0
Press any key to continue . . .
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```
C:\Users\Bimal Acharya\Desktop\NumericalMethod\Done lab\1st and 2nd derivative continuous function.exe
Enter the value of x: 1
Enter step size h: 0.1

First derivative at x = 1.00 is 6.0100
Second derivative at x = 1.00 is 8.0000

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Process exited after 36 seconds with return value 0
Press any key to continue . . .
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C:\Users\Bimal Acharya\Desktop\NumericalMethod\Done lab\Trapezoidal Rule.cpp - [Executing] - Dev-C++ 5.11
C:\Users\Bimal Acharya\Desktop\NumericalMethod\Done lab\Trapezoidal Rule.exe
Enter lower limit a: 0
Enter upper limit b: 1
Enter number of sub-intervals n: 4

Value of integral using Trapezoidal Rule = 0.3438

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Process exited after 28.53 seconds with return value 0
Press any key to continue . . .
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C:\Users\Bimal Acharya\Desktop\NumericalMethod\Done lab\Simpsons (1_3 )Rule.cpp - [Executing] - Dev-C++ 5.11
C:\Users\Bimal Acharya\Desktop\NumericalMethod\Done lab\Simpsons (1_3 )Rule.exe

Enter lower limit a: 0
Enter upper limit b: 1
Enter number of sub-intervals n (even): 4
Value of integral using Simpson's 1/3 Rule = 0.3333

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Process exited after 67.24 seconds with return value 0
Press any key to continue . . .
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C:\Users\Bimal Acharya\Desktop\NumericalMethod\Done lab\Simpson's 3_8 Rule.cpp - [Executing] - Dev-C++ 5.11
C:\Users\Bimal Acharya\Desktop\NumericalMethod\Done lab\Simpson's 3_8 Rule.exe

Enter lower limit a: 0
Enter upper limit b: 1
Enter number of sub-intervals n (multiple of 3): 3
Value of integral using Simpson's 3/8 Rule = 0.3333

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Process exited after 39.97 seconds with return value 0
Press any key to continue . . .
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File Edit Search View Project Execute Tools AStyle Window Help
C:\Users\Bimal Acharya\Desktop\NumericalMethod\Done lab\Gauss Elimination Method.exe
Enter number of unknowns: 3
Enter augmented matrix:
Pr2
1
-1
8
-3
-1
2
-11
-2
1
2
-3

Solution:
x1 = 2.000
x2 = 3.000
x3 = -1.000

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Process exited after 61.88 seconds with return value 0
Press any key to continue . . .
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```
C:\Users\Bimal Acharya\Desktop\NumericalMethod\Done lab\Gauss-Jordan Method.exe
Enter number of unknowns: 3
Enter augmented matrix:
2 1 -1 8
-3 -1 2 -11
-2 1 2 -3

Solution:
x1 = 2.000
x2 = 3.000
x3 = -1.000

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Process exited after 141.2 seconds with return value 0
Press any key to continue . . .
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```
C:\Users\Bimal Acharya\Desktop\NumericalMethod\Done lab\Jacobi Iteration Method.exe
Enter number of unknowns: 3
Enter coefficients of equations:
4 1 1
1 3 1
1 1 5
Enter constant terms:
7
-8
6
Enter tolerance: 0.0001
Enter maximum iterations: 25

Solution:
x1 = 2.3600
x2 = -3.9600
x3 = 1.5200

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Process exited after 65.68 seconds with return value 0
Press any key to continue . . .
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```
C:\Users\Bimal Acharya\Desktop\NumericalMethod\Done lab\Gauss-Seidel Method.exe
Enter number of unknowns: 3
Enter coefficients of equations:
4 1 1
1 3 1
1 1 5
Enter constant terms:
7
-8
6
Enter tolerance: 0.0001
Enter maximum iterations: 25

Solution:
x1 = 2.3600
x2 = -3.9600
x3 = 1.5200

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Process exited after 61.3 seconds with return value 0
Press any key to continue . . .
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```
C:\Users\Bimal Acharya\Desktop\NumericalMethod\Done lab\Taylor Series Method.... - X
Enter initial x and y: 0 1
Enter step size h: 0.1
Enter value of x for which y is required: 0.2

Value of y at x = 0.20 is 1.24281

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Process exited after 44.74 seconds with return value 0
Press any key to continue . . .
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```
C:\Users\Bimal Acharya\Desktop\NumericalMethod\Done lab\Euler&Es Method.exe
Enter initial value of x and y: 0 1
Enter step size h: 0.1
Enter final value of x: 0.2

Step      x          y
1         0.10      1.10000
2         0.20      1.22000

Approximate value of y at x = 0.20 is 1.22000

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Process exited after 43.86 seconds with return value 0
Press any key to continue . . .
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```
S C:\Users\Bimal Acharya\Desktop\NumericalMethod\Done lab\Heun's Method.exe
Enter initial value of x and y: 0 1
Enter step size h: 0.1
Enter final value of x: 0.2
Step      x      y
1        0.10    1.11000
2        0.20    1.24205

Approximate value of y at x = 0.20 is 1.24205

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Process exited after 26.34 seconds with return value 0
Press any key to continue . . .
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```
C:\Users\Bimal Acharya\Desktop\NumericalMethod\Done lab\Runge-Kutta 4th Order (RK-4) Method.cpp - [Executing] - Dev-C++ 5.11
C:\Users\Bimal Acharya\Desktop\NumericalMethod\Done lab\Runge-Kutta 4th Order (RK-4) Method.exe
Enter initial value of x and y: 0 1
Enter step size h: 0.1
Enter final value of x: 0.2
Step      x      y
1        0.10    1.11034
2        0.20    1.24281

Approximate value of y at x = 0.20 is 1.24281

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Process exited after 28.78 seconds with return value 0
Press any key to continue . . . ■
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