

Output:

```
C:\csit\third sem Jonash\NM\ + ▾  
->Compiled by Jonash Chataut<-  
->Eulers method for function f(x,y)=2x+y  
  
Input initial values of x and y:0 1  
  
Input x at which y is required:0.4  
  
Input step-size h:0.1  
  
Value of y at x=0.400000 is 1.592300  
  
-----  
Process exited after 5.663 seconds with return value 0  
Press any key to continue . . . |
```

Output:

```
C:\csit\third sem Jonash\NM\ + ▾  
->Compiled by Jonash Chataut<-  
->Heun's method [f(x,y) = x^2+y]  
  
Input initial values of x and y: 0 1  
  
Input x at which y is required: 0.2  
  
Input step-size h: 0.05  
  
Value of y at A = 0.200000 is 1.224184  
  
-----  
Process exited after 19.45 seconds with return value 0  
Press any key to continue . . . |
```

Output:

```
C:\csit\third sem Jonash\NM\ + ▾  
->Compiled by Jonash Chataut<-  
->Taylor Series [f(x, y) = x + y]  
Enter initial value of x (x0): 1  
Enter initial value of y (y0): 1  
Enter step size (h): 0.5  
Enter number of steps: 4  
  
Step-by-step values:  
x y  
1.5000 2.375000  
2.0000 4.921875  
2.5000 9.373047  
3.0000 16.918701  
  
-----  
Process exited after 8.149 seconds with return value 0  
Press any key to continue . . . |
```

Output:

```
C:\csit\third sem Jonash\NM\ ->Compiled by Jonash Chataut<-  
->Runge Kutta Method [f(x,y) = x^2 + y^2]  
  
Input initial values of x and y: 0 0  
  
Input x at which y is required: 0.4  
  
Input step-size h: 0.2  
  
Value of y at x= 0.400000 is 0.021360  
  
-----  
Process exited after 19.36 seconds with return value 0  
Press any key to continue . . . |
```

Output:

```
C:\csit\third sem Jonash\NM\ ->Compiled by Jonash Chataut<-  
->Solving System of Differential equation  
  
Enter the initial point x: 0  
  
Enter the value of y_1(x): 1  
  
Enter the value of y_2(x): 1  
  
Enter the step length: 0.1  
  
Enter the point x at which y(x) is required: 0.5  
  
Calculation of y_1(0.500000) and y_2(0.500000):  
  
x y_1(x) y _2(x)  
0.000000 1.000000 1.000000  
0.100000 1.226000 1.222500  
0.200000 1.517211 1.509198  
0.300000 1.896075 1.900606  
0.400000 2.396132 2.469704  
0.500000 3.069613 3.359306  
  
Do you want to approximate at another point?(y/n): n  
  
-----  
Process exited after 34.7 seconds with return value 0  
Press any key to continue . . . |
```