```
%Name: Pawan Raju Baisane
%Class: TY - A - 03
%Euler's Method
clc;
clear all;
close all;
f=input('\nInput function (dy/dx)= ');
x0=input('\nEnter the initial value of x0= ');
y0=input('\nEnter the initial value of y0= ');
h=input('\nEnter the stpes h= ');
xg=input('\nEnter final value xg= ');
n=(xg-x0)/h;
for i=1:n
    yg=y0+h*f(x0,y0);
    x0=x0+h;
    y0=yg;
    fprintf('\n yg=%f',yg);
end
```

Output:

```
Input function (dy/dx)=
@(x,y)(x+2*y)
Enter the initial value of x0=
1
Enter the initial value of y0=
1
Enter the stpes h=
0.1
Enter final value xg=
1.4
 yg=1.300000
 yg=1.670000
 yg=2.124000
 yg=2.678800

[x,y]=ode45(f,[1:0.1:1.4],1)
x =
    1.0000
    1.1000
    1.2000
    1.3000
    1.4000
y =
    1.0000
    1.3375
    1.7607
    2.2887
    2.9447
```