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COURSE: B.Sc(hons.)Physics

ROLL NO.: 81

**SOURCE CODE:**

clear;

clf;

clc;

function **ydox**=f(**x**, **y**)

**ydox**= **x**\***y**

endfunction

n=input("Enter the no. of points to be calculated for plotting=")

x=zeros(n+1,1)

y=zeros(n+1,1)

x(1)=input("enter x[1]=")

y(1)=input("enter y[1]=")

h=0.1

for i=1:n

x(i+1)=x(i) + h

y(i+1)=y(i) + h\*f(x(i),y(i))

end

disp("x=")

disp(x)

disp("y=")

disp(y)

xlabel("x","fontsize",4)

ylabel("y","fontsize",4)

a=gca()

a.x\_location="origin"

a.y\_location="origin"

title('euler method','fontsize',5)

plot(x,y)

**OUTPUT:**

Enter the no. of points to be calculated for plotting=6

enter x[1]=1

enter y[1]=5

x=

1.

1.1

1.2

1.3

1.4

1.5

1.6

y=

5.

5.5

6.105

6.8376

7.726488

8.8081963

10.129426

