



EXPERIMENT - 7

APPLIED MATHEMATICS LAB

Aim

To solve ordinary differential equations using Euler's method.

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4C7

EXPERIMENT – 7

Aim:

To solve ordinary differential equations using Euler's method.

Source Code:

```
clc; clear; close;
```

```
printf('\n\n Name - Syeda Reeha Quasar \n Enrolment No. - 14114802719 \n  
Group - C7 \n\n')
```

```
deff ('z = f(x,y)', 'z = (y-x)/(y+x)')
```

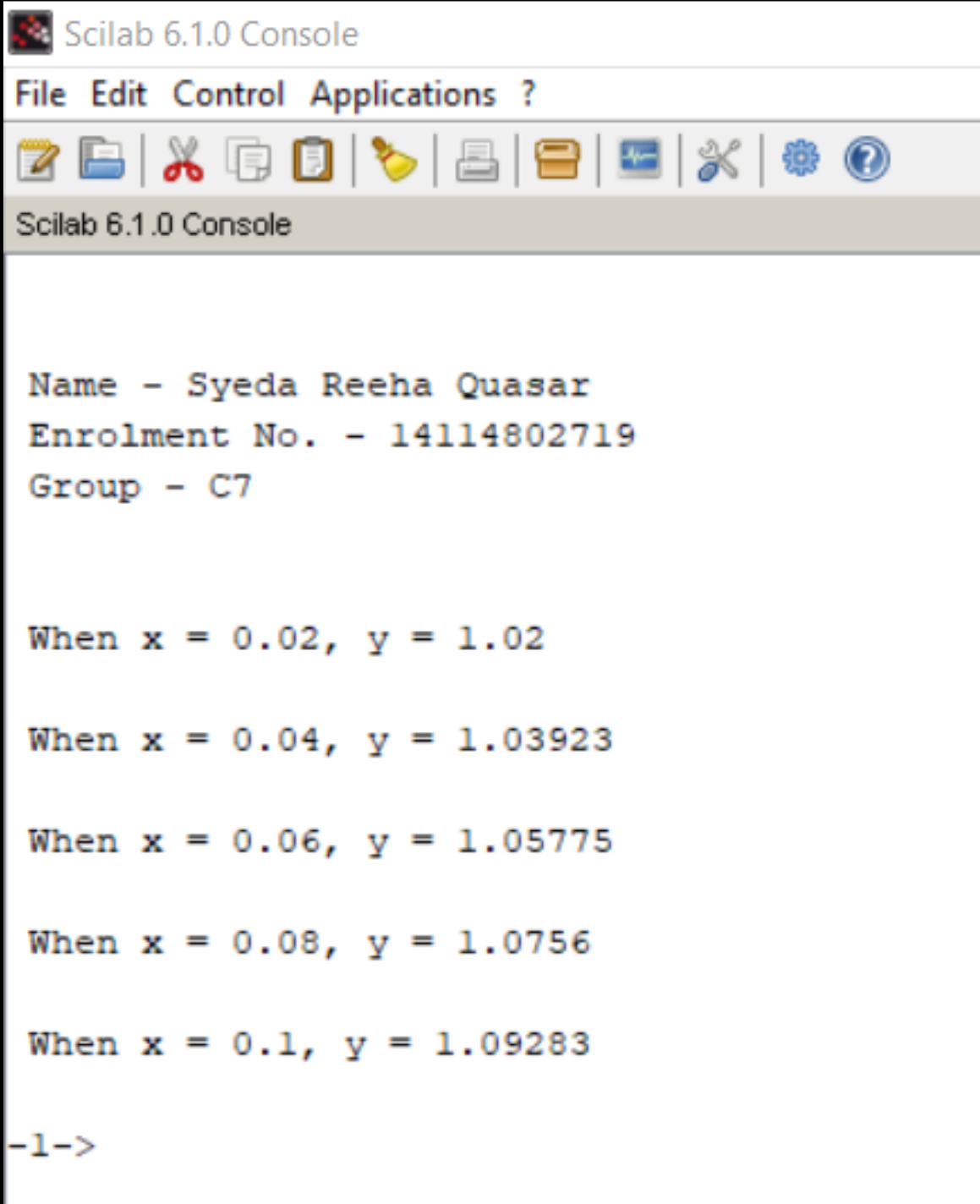
```
x0 = 0;  
y0 = 1;  
xn = 0.1;  
h = 0.02;  
x = x0;  
y = y0;
```

```
while x ~= xn  
    y = y + h * f(x,y);  
    x=x+h;
```

```
printf("\n When x = %g, y = %g\n" ,x ,y)
```

```
end
```

Output:



Scilab 6.1.0 Console

File Edit Control Applications ?

Scilab 6.1.0 Console

```
Name - Syeda Reeha Quasar  
Enrolment No. - 14114802719  
Group - C7  
  
When x = 0.02, y = 1.02  
  
When x = 0.04, y = 1.03923  
  
When x = 0.06, y = 1.05775  
  
When x = 0.08, y = 1.0756  
  
When x = 0.1, y = 1.09283  
  
-1->
```