



Course Name: Information and Communication Technologies Lab Code: CEN1005

LAB # 3: Signal generation using MATLAB

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Date	Instructor's Name	Instructor's Signature
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Objectives:

- To study basic plotting functions.
- To implement continuous and discrete time signals.

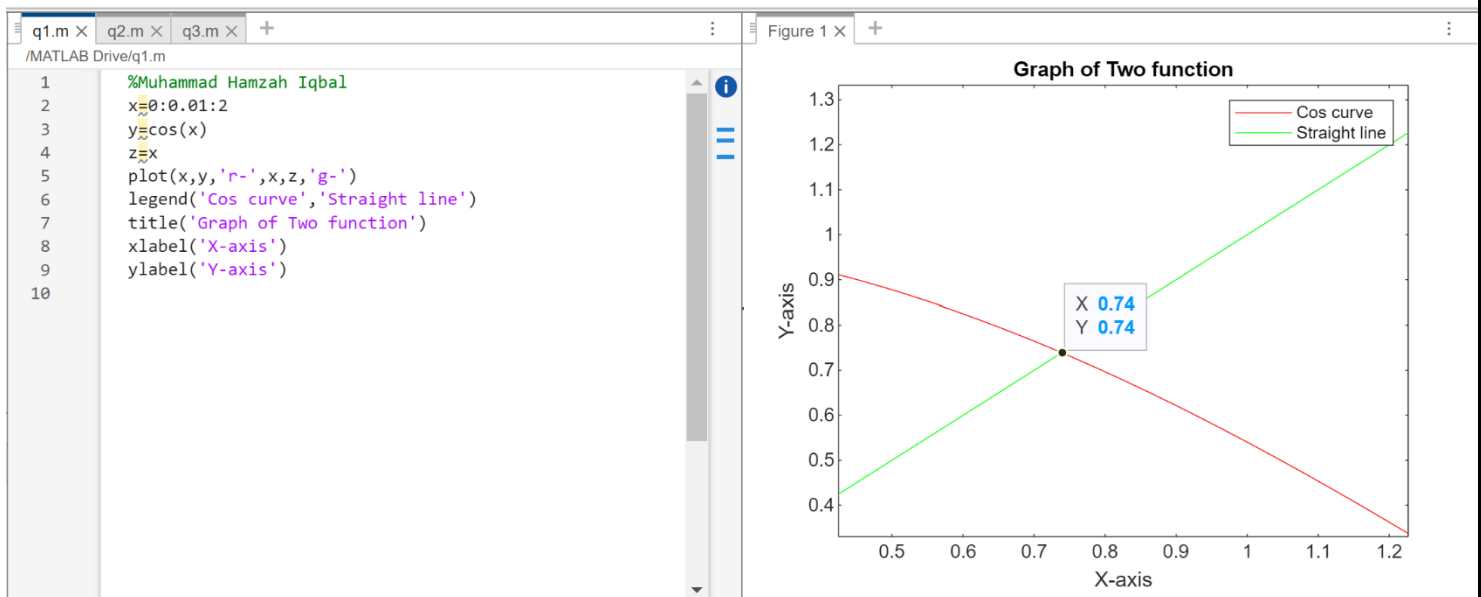
Lab tasks:

1. Draw graphs of the functions

$$y = \cos(x)$$

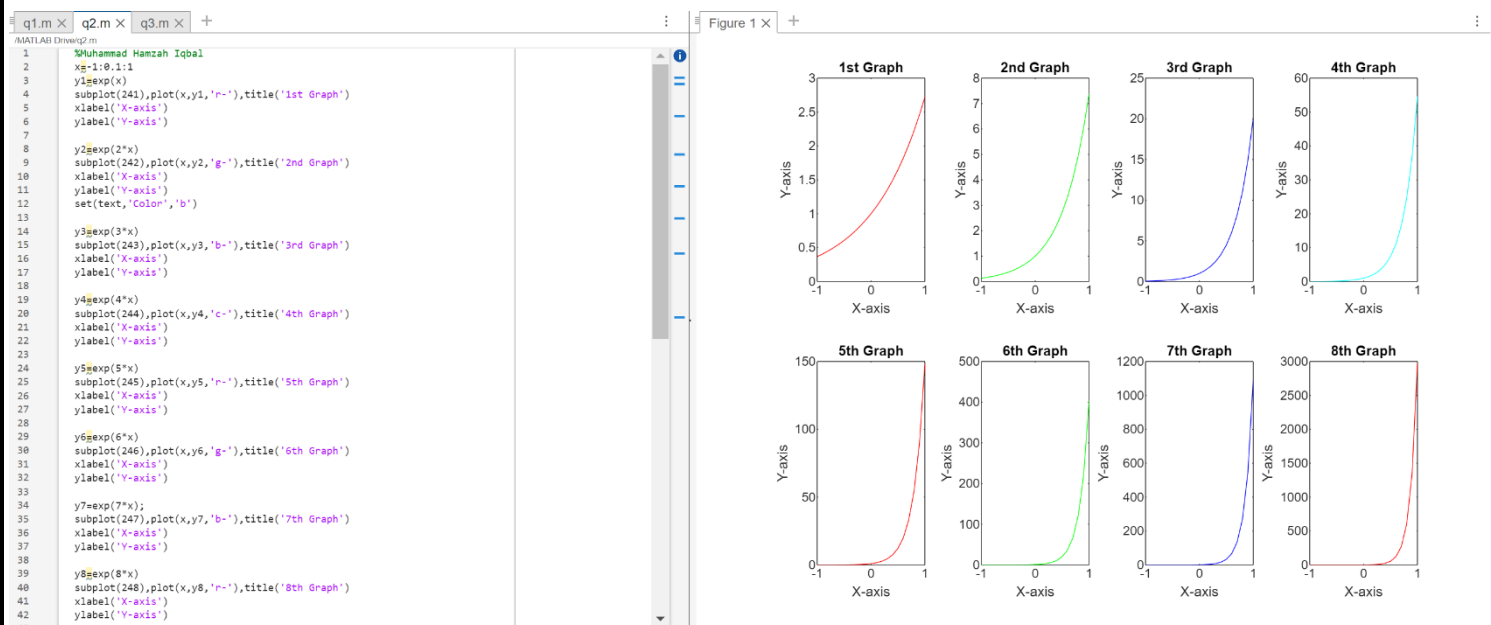
$$z = x$$

for $0 \leq x \leq 2$ in the same window. Use the zoom facility to determine the point of intersection of the two curves (and, hence the root $x = \cos(x)$) to two significant figures.

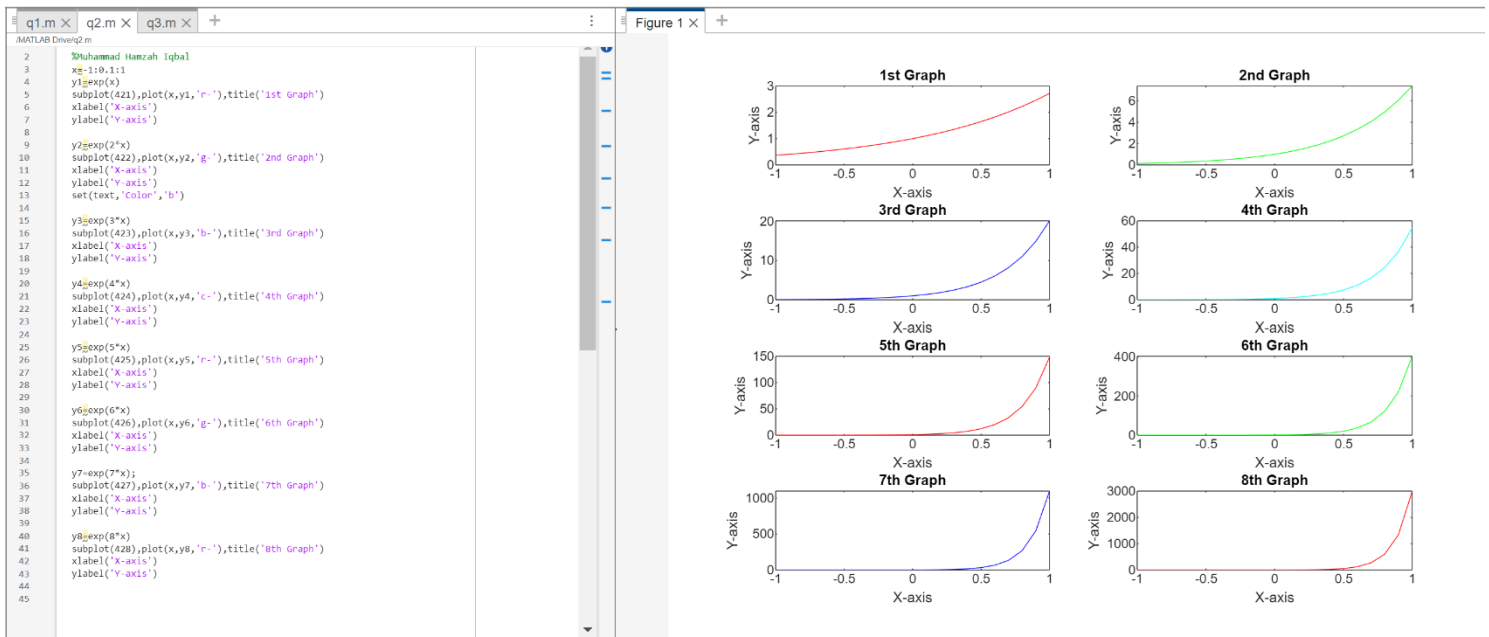


2. Draw graphs of $\exp(nx)$ on the interval $-1 \leq x \leq 1$ for $n=1, 2, \dots, 8$. Use Sub-plots!

First way of representing these Graph plots:



Second way of representing these Graph plots:



3. Make a function to generate:

$$y = t \cdot \sin(3 \cdot t)$$

where t is an input by the user to the function

```
q1.m x q2.m x q3.m x +
/MATLAB Drive/q3.m
1 %Muhammad Hamzah Iqbal
2 t=input('Input a value of t: ');
3 y=t.*sin(3.*t) % Answer will be in Radian
4

Command Window
>> q3
Input a value of t:
3

y =

1.2364
```