

Building GUI to graph a Linear Equation

Spoken Tutorial Project

<https://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

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Video: Amandeepsingh Siddhu

FOSSEE Team

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Learning Objectives

In this tutorial, we will learn:



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In this tutorial, we will learn:

- **About the Axes.**



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In this tutorial, we will learn:

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- **How to plot the linear equation of a line using GUI.**



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To record this tutorial, I am using



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- **Windows 10 OS**



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The process demonstrated in this tutorial is similar in Linux OS.



Pre-requisites

To follow this tutorial:



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- **The learner must have basic knowledge of Scilab and GUI Builder toolbox.**



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- For pre-requisite Scilab tutorials please visit <https://spoken-tutorial.org>



Code Files

- **The files used in this tutorial are provided in the Code files link.**



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- **Make a copy and then use them while practising.**



What is the Linear Equation of a line?

- **General form: $Ax + By = C$**



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What are Axes?

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- **It displays graphs and images.**



Objects for graphing Linear equation

- **Three Edit boxes for A, B and C.**



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- **Two Text boxes to display slope and y-intercept.**
- **One Pushbutton to calculate and plot.**
- **One Axes for displaying the graph.**



Summary

In this tutorial, we have learnt:

- **About the Axes.**
- **How to plot a linear equation of a line using GUI.**



Assignment

Create a GUI to,

- **Plot an equation of $y = e^{Ax}$.**
- **Take 'A' as input from the user.**
- **Consider, x varies from 0 to 2π .**



About Spoken Tutorial Project

- Watch the video available at https://spoken-tutorial.org/What_is_a_Spoken_Tutorial
- It summarises the Spoken Tutorial Project.
- If you do not have good bandwidth, you can download and watch it.



Spoken Tutorial Workshops

The Spoken Tutorial Project Team

- Conducts workshops using spoken tutorials.
- Gives certificates to those who pass an online test.
- For more details, please write to contact@spoken-tutorial.org



Answers for THIS Spoken Tutorial

- Questions in THIS Spoken Tutorial?
- Visit <https://forums.spoken-tutorial.org/>
- Choose the minute and second where you have the question.
- Explain your question briefly.
- The Spoken Tutorial project will ensure an answer.
- You will have to register to ask questions.



- For any general or technical questions on Scilab, visit the FOSSEE forum and post your question.

<https://forums.fossee.in/>



Textbook Companion Project

- The FOSSEE team coordinates the Textbook Companion project.
- We give Certificates and Honorarium to the contributors.
- For more details, please visit:
[https://scilab.in/
Textbook_Companion_Project](https://scilab.in/Textbook_Companion_Project)



Lab Migration

- The FOSSEE team coordinates the Lab Migration project.
- For more details, please visit:
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- **The Spoken Tutorial project is funded by the Ministry of Education, Government of India.**



Thank you

- **This is Amandeepsingh Siddhu, a FOSSEE intern 2021, IIT Bombay signing off.**
- **Thanks for joining.**

