

# Embellishing a Plot

**Spoken Tutorial Project**

**<http://spoken-tutorial.org>**

**National Mission on Education through ICT**

**<http://sakshat.ac.in>**

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**At the end of this tutorial, we will learn to-**

- ▶ **Modify the attributes of the plot – color, line style, linewidth.**
- ▶ **Add a title to the plot with embedded  $\text{\LaTeX}$ .**
- ▶ **Label x and y axes.**



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- ▶ **Add annotations to the plot.**



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- ▶ **Set and get the limits of axes.**



# System Specifications





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- ▶ **Ubuntu Linux 14.04**



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- ▶ **IPython 5.1.0**



# Pre-requisites

To practice this tutorial, you should know how to

- ▶ run basic Python commands on the ipython console
- ▶ use Plots interactively.

If not, see the pre-requisite Python tutorials on <http://spoken-tutorial.org>



# Exercise 1

**Plot the curve of  $x$  vs  $\cos(x)$  in red dashed line and linewidth 3**



# Exercise 2

- ▶ Make an annotation called “root” at the point  $(-4, 0)$ .
- ▶ What happens to the first annotation?



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- ▶ **Add title to a plot using 'title' command.**



# Summary

In this tutorial, we have learnt to-

- ▶ Modify the attributes of a plot by passing additional arguments.
- ▶ Add title to a plot using 'title' command.
- ▶ Incorporate  $\text{\LaTeX}$  style formatting by adding a \$ sign before and after the part of the string.



# Summary

- ▶ Label x and y axes using 'xlabel()' and 'ylabel()' commands.



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# Summary

- ▶ Label x and y axes using `'xlabel()'` and `'ylabel()'` commands.
- ▶ Add annotations to a plot using `annotate()` command.
- ▶ Get and set the limits of axes using `'xlim()'` and `'ylim()'` commands.



# Evaluation

1. Draw a plot of a cosine graph between  $-2\pi$  to  $2\pi$  with a line thickness of 4.



# Evaluation

1. Draw a plot of a cosine graph between  $-2\pi$  to  $2\pi$  with a line thickness of 4.
2. Read the documentation & find out if there is a way to modify the alignment of text in the command “ylabel”. ( Yes or No)



# Solutions

1. `x = linspace(-2*pi, 2*pi)`  
`plot(x, cos(x), linewidth=4)`
2. No





# Forum to answer questions

- ▶ Do you have questions on THIS Spoken Tutorial?
- ▶ Choose the minute and second where you have the question.
- ▶ Explain your question briefly.
- ▶ Someone from the FOSSEE team will answer them. Please visit

<http://forums.spoken-tutorial.org/>



# Forum to answer questions

- ▶ Questions not related to the Spoken Tutorial?
- ▶ Do you have general / technical questions on the Software?
- ▶ Please visit the FOSSEE Forum  
<http://forums.fossee.in/>
- ▶ Choose the Software and post your question.



# Textbook Companion Project

- ▶ The FOSSEE team coordinates coding of solved examples of popular books
- ▶ We give honorarium and certificate to those who do this

For more details, please visit this site:

<http://tbc-python.fossee.in/>



# Acknowledgements

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- ▶ It is supported by the National Mission on Education through ICT, MHRD, Government of India
- ▶ More information on this Mission is available at:

<http://spoken-tutorial.org/NMEICT-Intro>



# THANK YOU!

For more Information, visit our website  
<http://fossee.in/>

