

Embellishing a Plot

Spoken Tutorial Project

<http://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

Script: Aditya Palaparth

Narration: Kiran Kishore

IIT Bombay

16 October 2015



Objectives

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



Objectives

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

- ▶ **Modify the attributes of the plot – color, line style,linewidth.**



Objectives

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 \LaTeX .**



Objectives

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 \LaTeX .**
- ▶ **Label x and y axes.**



Objectives

- ▶ **Add annotations to the plot.**



Objectives

- ▶ **Add annotations to the plot.**
- ▶ **Set and get the limits of axes.**



System Specifications



System Specifications

- ▶ **Ubuntu Linux 14.04**



System Specifications

- ▶ **Ubuntu Linux 14.04**
- ▶ **Python 2.7.6**



System Specifications

- ▶ **Ubuntu Linux 14.04**
- ▶ **Python 2.7.6**
- ▶ **IPython 4.0.0**



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?



Summary

In this tutorial, we have learnt to-



Summary

In this tutorial, we have learnt to-

- ▶ **Modify the attributes of a plot by passing additional arguments.**



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.**



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 \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.



Summary

- ▶ Label x and y axes using 'xlabel()' and 'ylabel()' commands.
- ▶ Add annotations to a plot using `annotate()` command.



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 cosine graph between -2π to 2π with line thickness 4.



Evaluation

1. Draw a plot of cosine graph between -2π to 2π with line thickness 4.
2. Read the documentation & find out is there 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

- ▶ Spoken Tutorial Project is a part of the Talk to a Teacher project
- ▶ 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/>

