

Digital Signal Processing using Scilab

Talk to a Teacher

<http://sakshat.ac.in>

National Mission on Education through ICT

<http://spoken-tutorial.org>

Script: Manas, FOSSEE Team

**Video: Spoken Tutorial Team
IIT Bombay**

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Learning Objectives



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- **How to generate different kinds of signals**



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- How to generate different kinds of signals
- How to perform different operations to analyse signals



System Requirements



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- OS: Ubuntu 11.04



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- Scilab 5.3.3



Prerequisites



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Different types of Signals



Different types of Signals

- Plotting continuous and discrete sine wave



Different types of Signals

- Plotting continuous and discrete sine wave
- Plotting Step function



Different types of Signals

- Plotting continuous and discrete sine wave
- Plotting Step function
- Plotting Ramp function



Convolution

- **Convolution between two signals**



Discrete Fourier Transform

- **Discrete Fourier Transform
between two signals using `dft()`**



Inverse Discrete Fourier Transform

- **Inverse Discrete Fourier Transform between two signals using `dft()`**



Discrete Fourier Transform

- **Discrete Fourier Transform and Inverse Discrete Fourier Transform between two signals using `fft()`**



Correlation

- **Correlation between two signals**



Sampling

- **Sampling of the given signal**



Summary

- To Plot sine, step and ramp signal
- To perform Linear Convolution by `convol()`
- To perform DFT and IDFT by `dft()`
- To perform FFT by `fft()`
- To find out the Correlation by `corr()`
- To do sampling



About the Spoken Tutorial Project

- Watch the video available at http://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, write to contact@spoken-tutorial.org



Acknowledgement

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

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

