

# Super Blocks in Xcos

**Spoken Tutorial Project**

<https://spoken-tutorial.org>

**National Mission on Education through ICT**

<http://sakshat.ac.in>

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**Video: Anandajith TS**

**FOSSEE TEAM**

**1 July 2021**



# Learning Objectives

**In this tutorial, we will learn how to:**



# Learning Objectives

**In this tutorial, we will learn how to:**

- ▶ **Use super block in Xcos**



# System Requirements

**To record this tutorial, I am using:**



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**To record this tutorial, I am using:**

► **Windows 10 OS**



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- ▶ **Windows 10 OS**
- ▶ **Scilab 6.1.0**



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**The process demonstrated in this tutorial is identical in Linux OS also**





# Pre-requisites

**Before practising this tutorial, a learner should have:**



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**Before practising this tutorial, a learner should have:**

- ▶ **Basic knowledge of Scilab and Xcos**



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**If not, for relevant tutorials please visit  
<https://spoken-tutorial.org>**



# Code Files



# Code Files

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



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- ▶ **The files used in this tutorial are provided in the Code files link**
- ▶ **Please download and extract the files**



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





# Use of Super Blocks



# Use of Super Blocks

- Xcos diagrams can grow with increasing complexity



# Use of Super Blocks

- ▶ **Xcos diagrams can grow with increasing complexity**
- ▶ **Larger more complicated Xcos diagrams are difficult to manage**



# Use of Super Blocks

- ▶ **Xcos diagrams can grow with increasing complexity**
- ▶ **Larger more complicated Xcos diagrams are difficult to manage**
- ▶ **Super blocks help to organize the complicated Xcos diagrams**



# What is a Super Block?



# What is a Super Block?

- ▶ A block that can represent a group of connected blocks



# What is a Super Block?

- ▶ **A block that can represent a group of connected blocks**
- ▶ **A complicated Xcos diagram can be represented with few super blocks**



# What is a super block?

- ▶ Super block can contain another super block providing deeper simplification





# Advantages of Super Blocks



# Advantages of Super Blocks

- We can segregate operations using super blocks



# Advantages of Super Blocks

- ▶ **We can segregate operations using super blocks**
- ▶ **In case of multiple operations each operation can be represented by super blocks**



# Advantages of Super Blocks

- ▶ **We can segregate operations using super blocks**
- ▶ **In case of multiple operations each operation can be represented by super blocks**
- ▶ **It will help to keep the diagram neat and understandable**



# Summary

**In this tutorial, we have learnt to:**

- ▶ **Use super blocks in Xcos**



# Assignment

- ▶ Open the **super-initial.xcos** file
- ▶ Add an operation to multiply the output of the **POWBLK\_f** block by 3



# Assignment

- ▶ Transfer the squaring and multiplication operations inside the **SUPER\_f** block
- ▶ Save and execute the **super-initial.xcos** file

Hint: Use the **GAIN\_f** block to multiply the output by 3



# About Spoken Tutorial project

- ▶ Watch the video available at [https://spoken-tutorial.org/What\\_is\\_a\\_Spoken\\_Tutorial](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](mailto: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.**



- 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:**  
**[https://scilab.in/  
Lab\\_Migration\\_Project](https://scilab.in/Lab_Migration_Project)**



# Acknowledgements

- ▶ **The Spoken Tutorial project is funded by MoE, Government of India.**



# Thank you

- ▶ **This is Anandajith TS, FOSSEE intern 2021, IIT Bombay signing off.**
- ▶ **Thanks for joining.**

