

# Packages

**Spoken Tutorial Project**  
**<http://spoken-tutorial.org>**

**National Mission on Education through ICT**  
**<http://sakshat.ac.in>**

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# Learning Objectives

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- ▶ **create a package of classes**

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**In this tutorial, we are going to learn how to:**

- ▶ **create a package of classes**
- ▶ **reference classes in a package**
- ▶ **import a package**
- ▶ **use Modelica Library**

# System Requirements

- ▶ **OpenModelica 1.9.2**

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- ▶ **Ubuntu OS 14.04**

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- ▶ **gedit**



# Prerequisites

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- ▶ Prerequisite tutorials are mentioned on our website

[www.spoken-tutorial.org](http://www.spoken-tutorial.org)

- ▶ It is a specialized class in Modelica

# package

- ▶ It is a specialized class in Modelica
- ▶ A collection of classes

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- ▶ It is a specialized class in Modelica
- ▶ A collection of classes
- ▶ It can be stored as single file or directory

# Single file storage

- ▶ **All classes belonging to a package are written in single file**

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- ▶ **All classes belonging to a package are written in single file**
- ▶ **Not recommended as it may get lengthy**



# Directory storage

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# Directory storage

- ▶ **Classes are stored in separate files**
- ▶ **Name of directory is same as that of the package**
- ▶ **A file named 'package.mo' is to be included in the directory**
- ▶ **Each class starts with a **within** statement**

# Modelica Library

- ▶ **It is an open-source package**

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- ▶ It is an open-source package
- ▶ OMEdit automatically loads it for every session
- ▶ It has classes from mechanical, electrical and thermal domains
- ▶ Classes of this library can be referenced and used

# Assignment

**Declare variables 'h' and 'v' of 'freeFall' class as 'Length' and 'Velocity' types. These type definitions can be found in 'Slunits' package of 'Modelica' library**



# 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)

# Forum to answer questions

- ▶ **Do you have questions in 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/>



# 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://OM.fossee.in/Textbook-Companion-Project>**



# Lab Migration Project

- ▶ **The FOSSEE team helps migrate commercial simulator labs to OpenModelica**
- ▶ **We give honorarium and certificates to those who do this**

**For more details, please visit this site:**

**<http://OM.fossee.in/lab-migration-project>**



# 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>**



# Thanks!

<http://openmodelica.org>