

Developing a Basic model in ASCEND

Talk to a Teacher

<http://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

Priya Bagde
IIT Bombay

21 October 2013



Learning Objectives

In this tutorial, we will learn how to



Learning Objectives

In this tutorial, we will learn how to

- ▶ **Build a basic model**



Learning Objectives

In this tutorial, we will learn how to

- ▶ Build a basic model
- ▶ Add methods to the basic model



Learning Objectives

In this tutorial, we will learn how to

- ▶ Build a basic model
- ▶ Add methods to the basic model
- ▶ Write dimensionally consistent equations



System Requirements



System Requirements

- ▶ **Ubuntu Linux OS v.12.04**



System Requirements

- ▶ **Ubuntu Linux OS v.12.04**
- ▶ **ASCEND v.0.9.8**



Pre-requisites

To know more about **ASCEND**,



Pre-requisites

To know more about ASCEND,

- ▶ Please visit ascend4.org



Pre-requisites

To know more about ASCEND,

- ▶ Please visit ascend4.org
- ▶ For relevant tutorials, please visit <http://spoken-tutorial.org>



Example

- ▶ **3 simultaneous equations with 3 unknowns**
- ▶ **Use text editor like gedit to write model**



Summary

How to install ASCEND in

- ▶ **Build a basic model**
- ▶ **Add methods to the basic model**
- ▶ **Write dimensionally consistent equations**



Assignment

- ▶ **Edit the model cylinder and make it dimensionally inconsistent**
- ▶ **For e.g. write m IS_A distance instead of mass**
- ▶ **Run this dimensionally inconsistent model and observe the output**
- ▶ **Add variables and equations to the model cylinder and solve**



About the Spoken Tutorial Project

- ▶ Watch the video available at http://spoken-tutorial.org/What_is_a_Spoken_Tutorial
- ▶ It summarizes the Spoken Tutorial project



About the Spoken Tutorial Project

- ▶ Watch the video available at http://spoken-tutorial.org/What_is_a_Spoken_Tutorial
- ▶ It summarizes 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



Acknowledgments

- ▶ 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>

