

# Using PyFoam Utilities

**Spoken Tutorial Project**

**<http://spoken-tutorial.org>**

**National Mission on Education through ICT**

**<http://sakshat.ac.in>**

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# Learning Objectives

- Learn about PyFoam Utilities



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- Learn about PyFoam Utilities
- Learn how to use PyFoam Utilities



# Learning Objectives

- Learn about PyFoam Utilities
- Learn how to use PyFoam Utilities
- Run and plot data for the Shock Tube case using PyFoam



# System Requirement

- **Ubuntu Linux Operating system 14.04**



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- **OpenFOAM v2.3.0**



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- **OpenFOAM v2.3.0**
- **PyFoam-0.6.5**



# Pre-requisite

- User should have basic knowledge of Linux terminal usage



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- **User should have basic knowledge of Linux terminal usage**
- **User should have some experience running and analyzing OpenFOAM cases**



# PyFoam Utilities

- Utilities are Python programs which come inbuilt with PyFoam



# PyFoam Utilities

- **Utilities are Python programs which come inbuilt with PyFoam**
- **Each utility has a specific function**



# PyFoam Utilities

- Utilities are Python programs which come inbuilt with PyFoam
- Each utility has a specific function
- Utilities are executed from the command line



# List of Utilities

- The list of Utilities can be viewed using Tab completion



# List of Utilities

- **The list of Utilities can be viewed using Tab completion**
- **Each Utility comes with the -help command.**



# List of Utilities

- The list of Utilities can be viewed using Tab completion
- Each Utility comes with the -help command.
- To find out what it does and its options



# Using Utilities

We are going to use the below  
PyFoam Utilities to run the shock  
tube case

- [PyFoamRunner.py](#)



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We are going to use the below  
PyFoam Utilities to run the shock  
tube case

- PyFoamRunner.py
- PyFoamSamplePlot.py



# PyFoamRunner.py

- **PyFoamRunner.py** can be used to run cases.



# PyFoamRunner.py

- **PyFoamRunner.py can be used to run cases.**
- **It also generates the log files for later use**



# PyFoamSamplePlot.py

- **This utility is used to plot the various data obtained from the previously set-up sampleDict.**



# Problem Definition

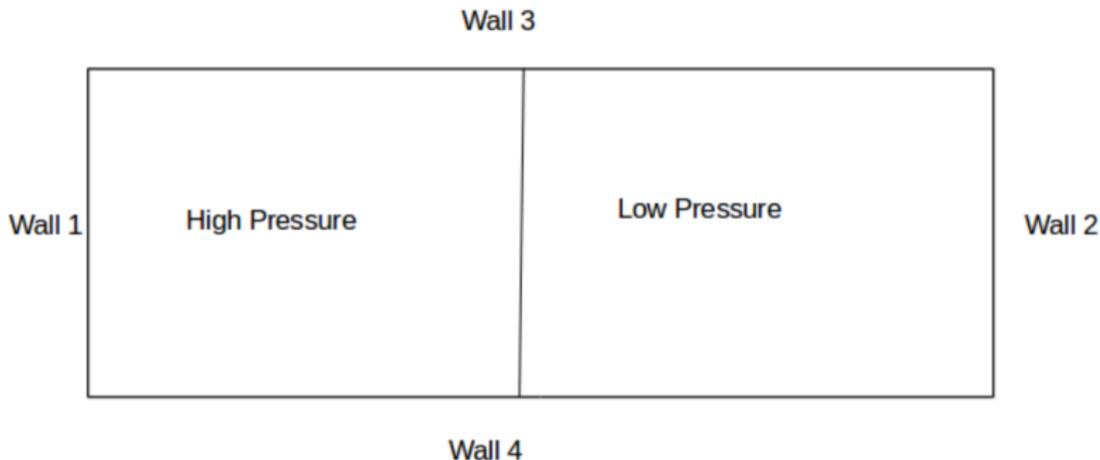


Figure : shocktube



# Summary

- Check for various pyFoam utilities
- `pyFoamRunner.py` to run the solver
- `pyFoamSamplePlot` utility to generate a png file



# 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://cfd.fossee.in/>



# Acknowledgements

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- **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](http://spoken-tutorial.org/NMEICT-Intro)



# THANK YOU!

For more information, visit our website  
<http://fossee.in/>

