

Spoken Tutorial

Creating simple geometry in OpenFOAM

Talk to a Teacher

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

National Mission on Education through ICT

<http://spoken-tutorial.org>

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Talk to a Teacher

Learning Objectives

- How to create a simple geometry



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Learning Objectives

- How to create a simple geometry



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Learning Objectives

- How to create a simple geometry
- How to view geometry in paraview



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System Requirement

- **Linux Operating System Ubuntu version 10.04**



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System Requirement

- **Linux Operating System Ubuntu version 10.04**



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System Requirement

- **Linux Operating System Ubuntu version 10.04**
- **OpenFOAM version 2.1.0**



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System Requirement

- **Linux Operating System Ubuntu version 10.04**
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System Requirement

- **Linux Operating System Ubuntu version 10.04**
- **OpenFOAM version 2.1.0**
- **ParaView version 3.12.0**



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System Requirement

- The tutorials were recorded using the versions specified in previous slide.
- Subsequently the tutorials were edited to latest versions.
- To install latest system requirements go to Installation Sheet.



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For OpenFOAM v 5.0

To source the OpenFOAM version 5, type:

```
$of5
```

To go to the run folder, type:

```
$cd $FOAM_RUN
```

To open the cavity case directory, type:

```
$cd tutorials/incompressible/icoFoam/cavity/cavity
```

To list the contents of cavity directory, type:

```
$ls
```



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For OpenFOAM v 5.0

To list the contents of cavity directory, type:

```
$ls
```

```
0 constant system
```

To open the system directory, type:

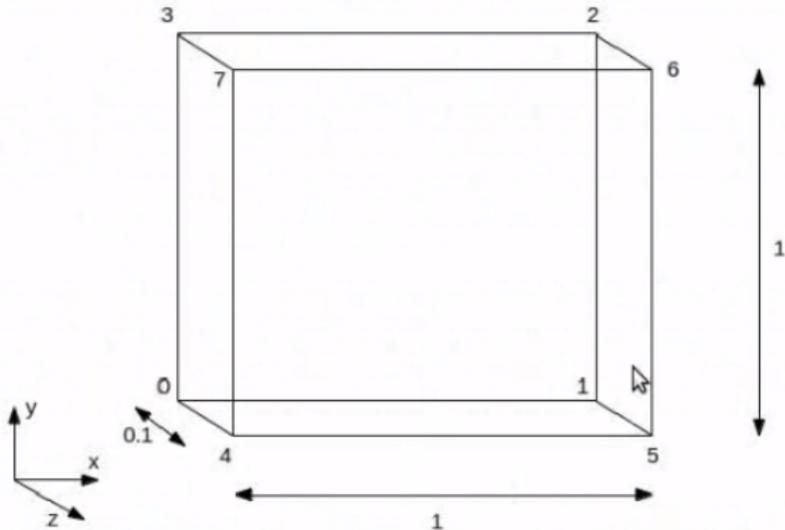
```
$cd system
```

To list the contents of system directory, type:

```
$ls
```

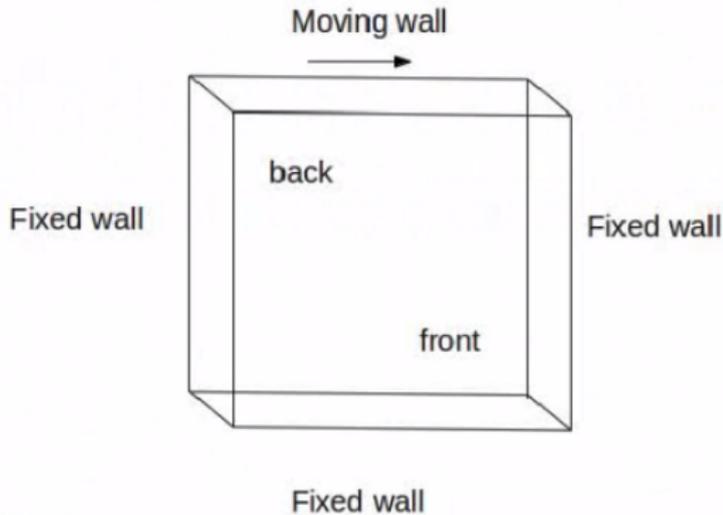
```
blockMeshDict controlDict fvSchemes fvSolution
```

Geometry



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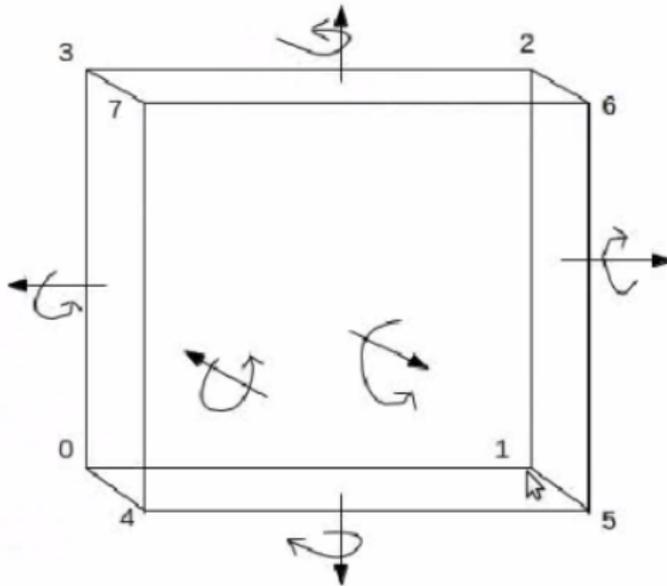
Geometry



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Geometry



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Summary

- In this tutorial we learnt



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Summary

- In this tutorial we learnt



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Summary

- In this tutorial we learnt
 - Creating a simple geometry in OpenFOAM



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Summary

- In this tutorial we learnt
 - Creating a simple geometry in OpenFOAM



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Summary

- In this tutorial we learnt
 - Creating a simple geometry in OpenFOAM
 - Viewing the geometry in paraview



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Assignment

- Change the dimension of lid driven cavity



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Assignment

- **Change the dimension of lid driven cavity**



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Assignment

- **Change the dimension of lid driven cavity**
- **Change the grid size to (50 50 1)**



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Assignment

- **Change the dimension of lid driven cavity**
- **Change the grid size to (50 50 1)**



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Assignment

- Change the dimension of lid driven cavity
- Change the grid size to (50 50 1)
- View the geometry in paraview



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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



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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



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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/>



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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.



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Lab Migration Project

- We coordinate migration from commercial CFD software like ANSYS to OpenFOAM
- We conduct free Workshops and provide solutions to CFD Problem Statements in OpenFOAM

For more details, please visit this site:

<http://cfd.fossee.in/>



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Case Study Project

- The FOSSEE team coordinates solving past, current or new CFD projects using OpenFOAM
- We give honorarium and certificate to those who do this

For more details, please visit this site:

<http://cfd.fossee.in/>



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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>



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