

Spoken Tutorial

Creating curved 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

- Steps for creating a curved geometry in OpenFOAM



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Learning Objectives

- **Steps for creating a curved geometry in OpenFOAM**



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Learning Objectives

- Steps for creating a curved geometry in OpenFOAM
- Viewing the results 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**
- **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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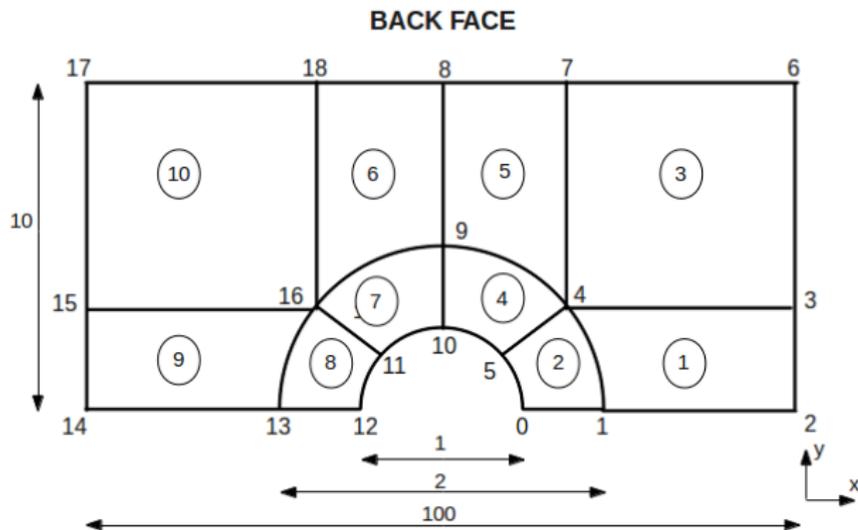
System Requirement

- 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.



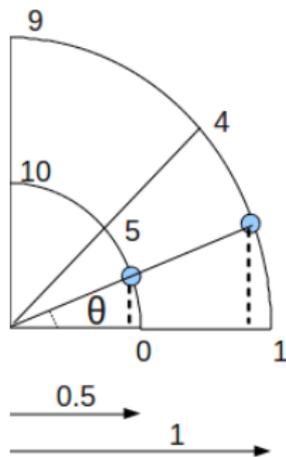
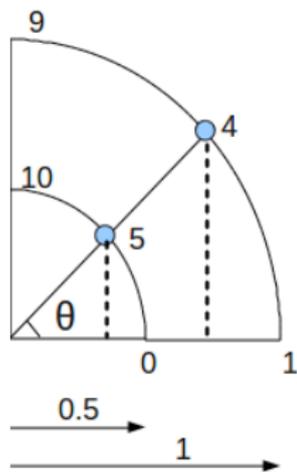
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Curved geometry



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Curved geometry

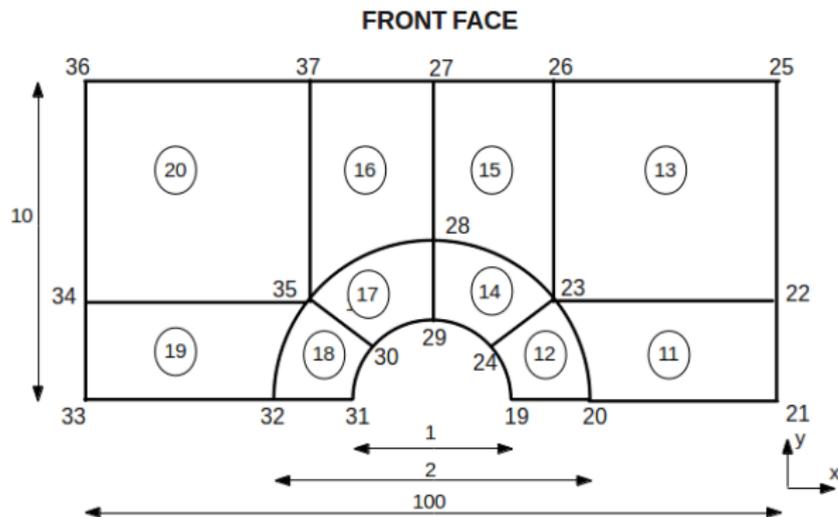


- $\sin(\theta) = \text{opposite/hypotenuse}$
- $\cos(\theta) = \text{adjacent/hypotenuse}$



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Curved geometry



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Summary

- How to create a curved geometry



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Summary

- How to create a curved geometry
- How to enter points for edges in OpenFOAM



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Assignment

- Create a geometry with inner semi-circle of radius 2 and outer semi-circle of radius 4 meters



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Assignment

- Create a geometry with inner semi-circle of radius 2 and outer semi-circle of radius 4 meters



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Assignment

- Create a geometry with inner semi-circle of radius 2 and outer semi-circle of radius 4 meters
- 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



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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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>

