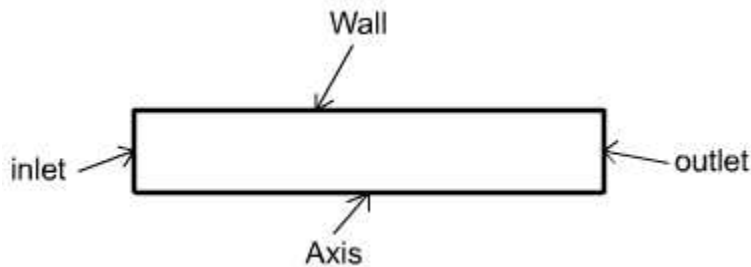


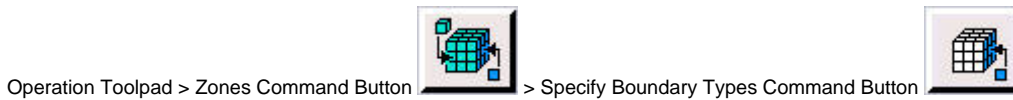
FLUENT - Laminar Pipe Flow 3 Specify Boundary Types in GAMBIT Content

Step 3: Specify Boundary Types in GAMBIT

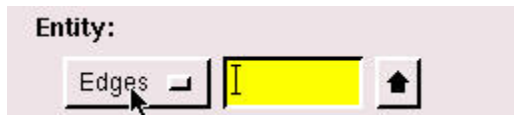


Create Boundary Types

We'll next set the boundary types in GAMBIT. The left edge is the inlet of the pipe, the right edge the outlet, the top edge the wall, and the bottom edge the axis.



This will bring up the *Specify Boundary Types* window on the *Operation Panel*. We will first specify that the left edge is the inlet. Under **Entity**, pick Edges so that *GAMBIT* knows we want to pick an edge (face is default).



Now select the left edge by Shift-clicking on it. The selected edge should appear in the yellow box next to the Edges box you just worked with as well as the Label/Type list right under the Edges box.

Next to Name:, enter inlet.

For Type:, select VELOCITY_INLET. (Note: Sometimes all the items in a dropdown menu will not be visible. If you cannot find the VELOCITY_INLET option in the Type menu, try maximizing the window. If it is still not visible, try auto-hiding your taskbar. Right-click on the taskbar and go to properties.)

Click Apply. You should see the new entry appear under Name/Type box near the top of the window.

Specify Boundary Types

FLUENT 5/6

Action:

◆ Add
▼ Modify

▼ Delete
▼ Delete all

Name	Type
inlet	VELOCITY_INLET

☐ Show labels

Name:

Type: VELOCITY_INLET

Entity:

Edges
Edge.4
↑

Label	Type
edge.4	Edge

Remove
Edit

Apply
Reset
Close

Repeat this process for the other three edges according to the following table:

Edge Position	Name	Type
Left	inlet	VELOCITY_INLET
Right	outlet	PRESSURE_OUTLET
Top	wall	WALL
Bottom	centerline	AXIS

You should have the following edges in the Name/Type list when finished:

Name	Type
inlet	VELOCITY_INLET
outlet	PRESSURE_OUTLET
wall	WALL
centerline	AXIS

Save and Export

Main Menu > File > Save

Main Menu > File > Export > Mesh...

Type in pipe.msh for the File Name:.. Select Export 2d Mesh since this is a 2 dimensional mesh. Click Accept.

Check pipe.msh has been created in your working directory (the box will be filled in red).