Altair HyperGraph 2D Tutorials

HG-3000: Working with Bar Charts

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In this tutorial, you will learn how to create bar charts by entering values, importing a data file, or specifying a mathematical expression.
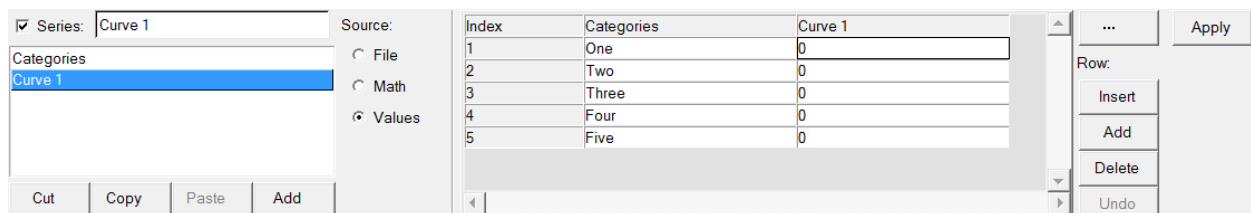
Tools

When the plot type is set to **Bar Charts** (📊), the **Define Curves** panel allows you to add and edit bar charts in the active plot window.   It can be accessed one of the following ways.

- Click on the **Define Curves** panel icon, ✎, on the toolbar

  Or
- From the menu bar select **Curves > Define Curves**

Bar charts are comprised of data and categories. Data can be entered as values, read from an external file, or defined as a mathematical expression.

Exercise: Create Bar Charts

Step 1:   Create a bar chart by entering values in the Define Curves panel.

Enter the values `563.35`, `567.22`, and `423.51`.

1. From the menu bar select **File > New > Session** to clear the contents of the current session.

2. From the plot type menu, select **Bar Chart,** 📊.

3. Enter the **Define Curves** panel, ✎.

4. Click **Add** to create a new bar chart named **Curve 1**.

   Curve 1 is highlighted in the series list to indicate it is the active series.

5. In the **Series** field above the bar chart list, rename **Curve 1** to `Nodal Point 1` and press ENTER.

6. Under **Source**, select **Values**.

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7. In the panel's center, under the column **Nodal Point 1**, type these three values:

|	
Index 1:	563.35
Index 2:	567.22
Index 3:	423.51

8. Click ***Apply*** to create the bar chart.

Step 2:   Create a bar chart by importing values from the data file `nodal_values.dat.`

1. ***Add*** a second bar chart to the current plot window.

2. Rename **Curve 2** to `Nodal Point 2`.

3. Under **Source**, select ***File***.

4. Click the file browser next to **File***:* and open the `nodal_values.dat` file, located in the `plotting` folder.

5. Leave **Type***:* set to **Unknown**.

6. Leave **Request***:* set to **Block1**.

7. Leave **Component***:* set to **Column1**.

8. Click ***Apply*** to create the bar chart.

Step 3:   Create a bar chart using a math expression.

1. From menu bar, select *File > Import > Session* and open the session file `bar_chart.mvw`, located in the `plotting` folder.

   A second page containing an XY Plot window with three XY data curves is added to the session and is currently displayed.

2. Go back to the session's page 1, which contains the bar chart.

3. *Add* a third bar chart to the current plot window.

4. Rename **Curve 3** to `Nodal Point 3`.

5. Under **Source**, select *Math*.

6. In the **Expression***:* field, type the following math expression:
   `{max(p2w1c1.y),max(p2w1c2.y),max(p2w1c3.y)}`

7. Click *Apply* to create the bar chart.
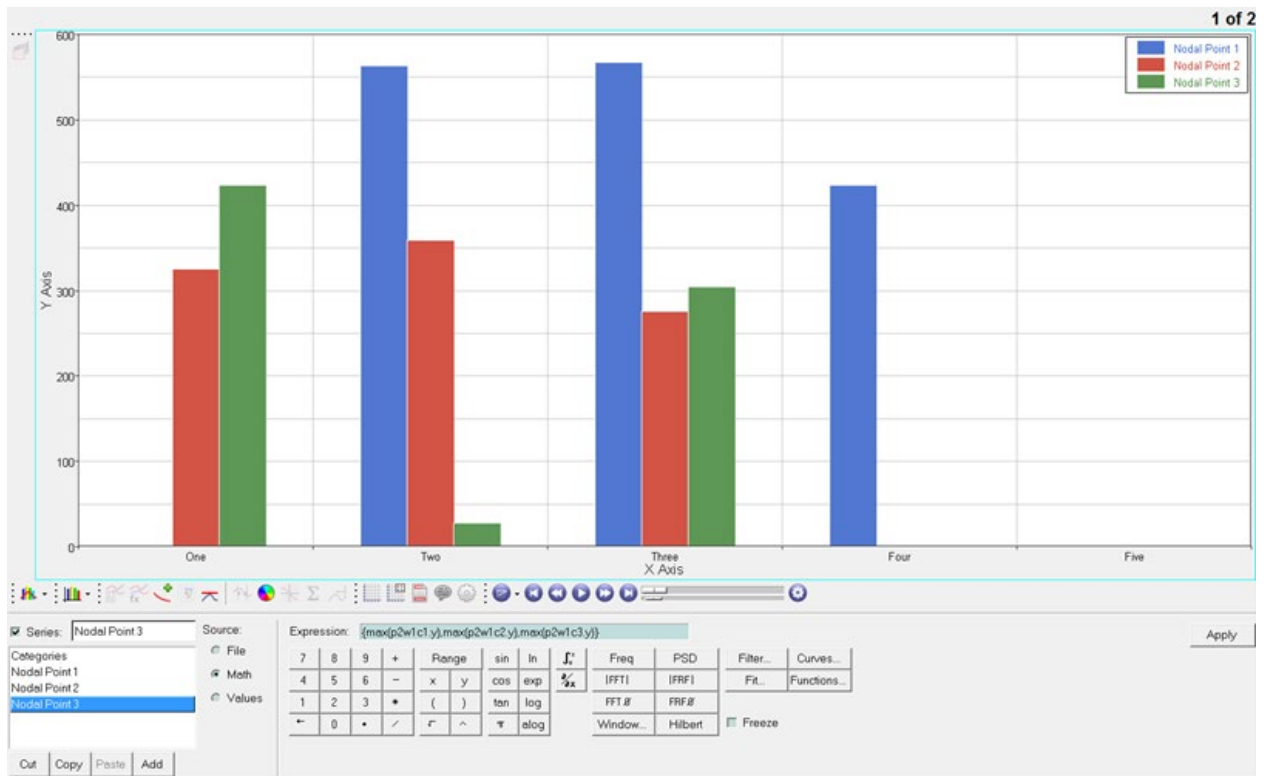
Step 4:   Modify category labels.

1. In the **Categories** column, click ***One***, rename it `x disp`, and click ***Apply*** to update the bar chart's label.

2. Rename category Two to `y disp`.

3. Rename category Three to `z disp`.

4. Click ***Apply*** to update the bar chart's labels.