Branches

Version 1.0.0, by Giorgio Bianchini

Description: Plots tree branches as lines.

Module type: Plotting

Module ID: `7c767b07-71be-48b2-8753-b27f3e973570`

This module is used to draw the branches of the tree. It can draw branches for the different Coordinates modules, based on the value of the Shape parameter.

Parameters

Root branch

Control type: Check box

Default value: Checked

If this check box is checked, a branch is drawn starting from the root node of the tree. Otherwise, the root node has no branch going into it. This can be useful to highlight whether a tree is rooted or unrooted.

Shape

Control type: Slider

Default value: 0.00

Range: [0.00, 2.00]

This parameter determines the shape of the branches. A value of `0` corresponds to branches computed assuming *Rectangular* coordinates; a value of `1` to *Radial* coordinates and a value of `2` to *Circular* coordinates. Intermediate values interpolate between these styles. Use the Fixed shapes buttons to quickly switch between the three styles.

Fixed shapes

Control type: Buttons

Buttons:

- Rectangular
- Radial
- Circular

These buttons set the value of the Shape parameter to the predefined values corresponding to the three branch styles.

Auto elbow

Control type: Check box

Default value: Checked

If the Shape is between `0` and `1`, the elbow corresponds to the point where the branch coming from the parent node turns to head towards the child node. If this check box is checked, the position of the elbow is computed automatically for each branch, based on the position of the parent node and the child node. Otherwise, it is determined by the Elbow position parameter.

Elbow position

Control type: Slider

Default value: 0.50

Range: [0.00, 1.00]

This parameter determines the position of the elbow if the Auto elbow option is disabled. A value of `0` places the elbows closer to the parent nodes; a value of `1` places the elbows closer to the child nodes.

Rounding

Control type: Slider

Default value: 0.00

Range: [0.00, 1.00]

This parameter determines the amount of rounding to apply to the angles of the branches. A value of `0` produces sharp angles, while a value of `1` produces completely rounded angles.

Auto colour by node

Control type: Check box

Default value: Unchecked

If this check box is checked, the colour of each branch is determined algorithmically in a pseudo-random way designed to achieve an aestethically pleasing distribution of colours, while being reproducible if the same tree is rendered multiple times.

Opacity

Control type: Slider

Default value: 100 %

Range: [0 %, 100 %]

This parameter determines the opacity of the colour used if the Auto colour by node option is enabled.

Colour

Control type: Colour (by node)

Default value: ■ #000000 (opacity: 100%)

Default attribute: `Color`

This parameter determines the colour used to draw each branch (if the Auto colour by node option is disabled). The colour can be determined based on the value of an attribute of the nodes in the tree. For nodes that do not possess the specified attribute (or that have the attribute with an invalid value), a default value is used. The default attribute used to determine the colour is `Color`.

Line weight

Control type: Number spin box (by node)

Default value: 1

Range: [0, +∞)

Default attribute: `Thickness`

This parameter determines the thickness of the lines used to draw the branches. This can be based on the value of an attribute of the nodes in the tree. For nodes that do not possess the specified attribute (or that have the attribute with an invalid value), a default value is used. The default attribute used to determine the line weight is `Thickness`.

Line cap

Control type: Drop-down list

Default value: Round

Possible values:

- Butt
- Round
- Square

The line cap to use when drawing the branches.

Further information

For optimal results, the value of the Shape parameter should correspond to the Coordinates module used. However, if *Rectangular* coordinates are being used, a Shape value between `0` and `1` can be used, toghether with the Rounding parameter, to produce interesting results.