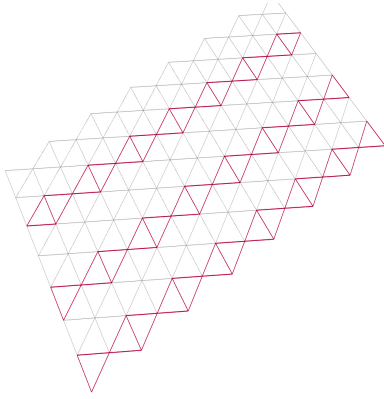




Rhino3D Grasshopper: Retrieve Data Tree Branch

Description

In Grasshopper you can retrieve branches from data trees with Tree Branch. This works with a single branch and also with a set of branches.

For a good introduction on Grasshopper's Data Trees read [this page from TU Delft](#).

New to Grasshopper? [I suggest you read this article in the first place](#).

Need more learning resources? [Check this out](#).

Disclaimer

As you will see in my screenshots most components carry a title above them displaying their name. This is because I use a plugin called [Bifocals](#).

Also you'll see my Grasshopper tab titles abbreviated because there's not enough horizontal space. I will mention the titles in full in my script though.

Branch and *Path* mean the same thing. That's Grasshopper data tree jargon. Put in other words, *branch* equals *path*.

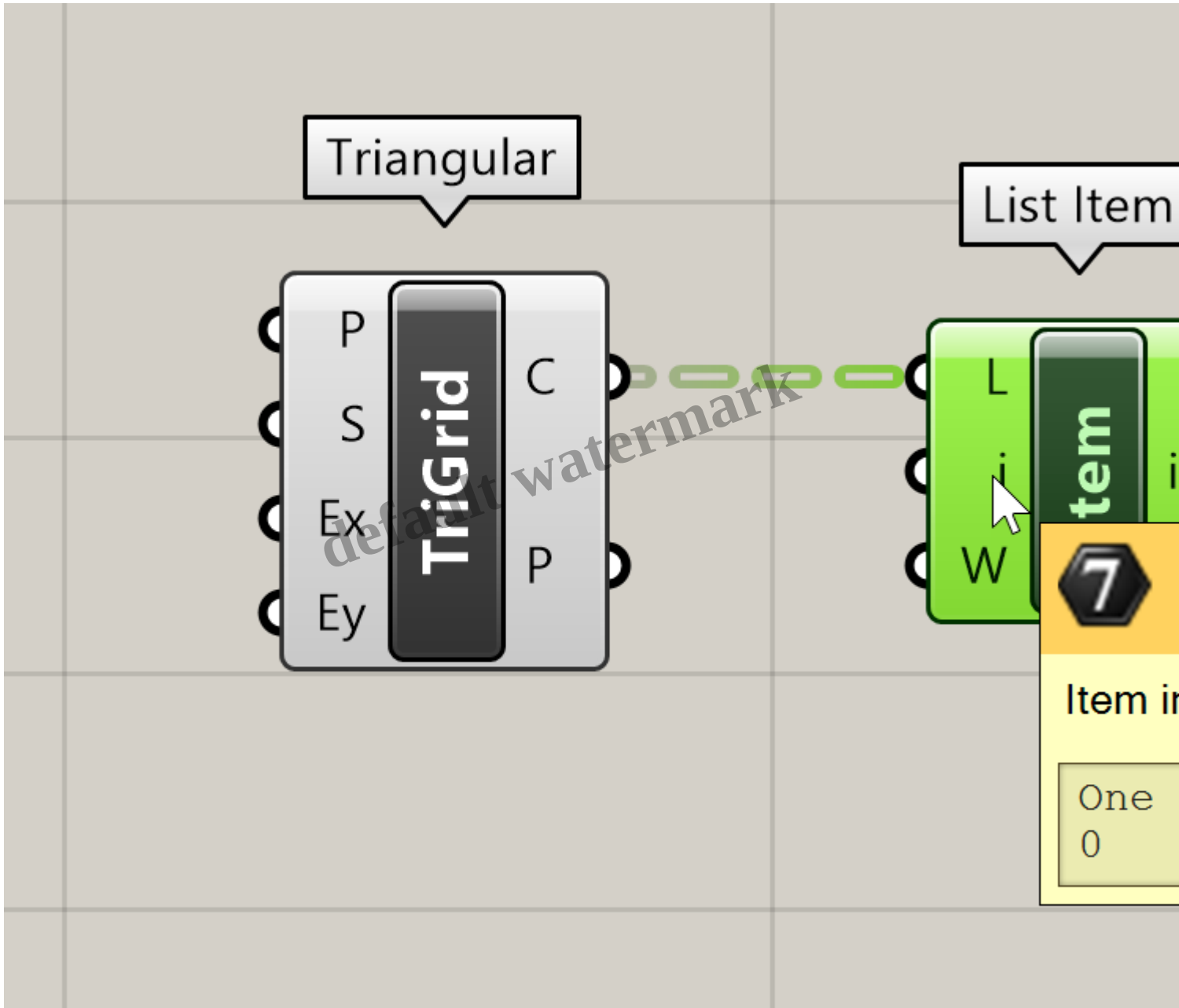
Create a Triangular Grid

Let's take a *Triangular* grid pattern as an example:

default watermark

List Item

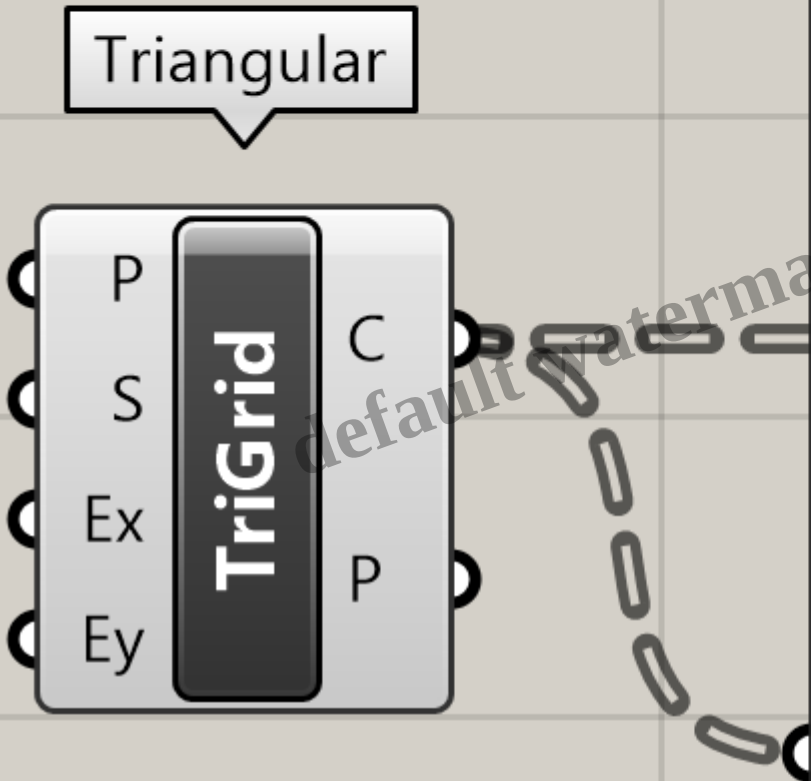
Let's assume you want to retrieve one of the triangles. When you connect a *List Item* to *TriGrid*'s output you'll see that it provides a whole set of triangles instead:



default watermark

A *Panel* reveals that indeed *List Item* extracts not *1* element (= *1* triangle) but *1* out of each branch of our *TriGrid* data tree:

default watermark



0	Polyline	Cur
1	Polyline	Cur
2	Polyline	Cur
3	Polyline	Cur
4	Polyline	Cur
5	Polyline	Cur
6	Polyline	Cur
7	Polyline	Cur
0	Polyline	Cur
1	Polyline	Cur
2	Polyline	Cur
3	Polyline	Cur
4	Polyline	Cur
5	Polyline	Cur
6	Polyline	Cur
7	Polyline	Cur
0	Polyline	Cur

(The number of items in each branch differs according to *TriGrid*'s input.)

As you see, *List Item* by itself doesn't work here.

Tree Branch

We want to single out *1 branch* of our tree. To do this, we choose *Tree Branch*:

default watermark

Dis ARCHICAD M+ Pufferfish PanelingTools Kangaroo2

Sets Text Tree

Set

List Item

Item

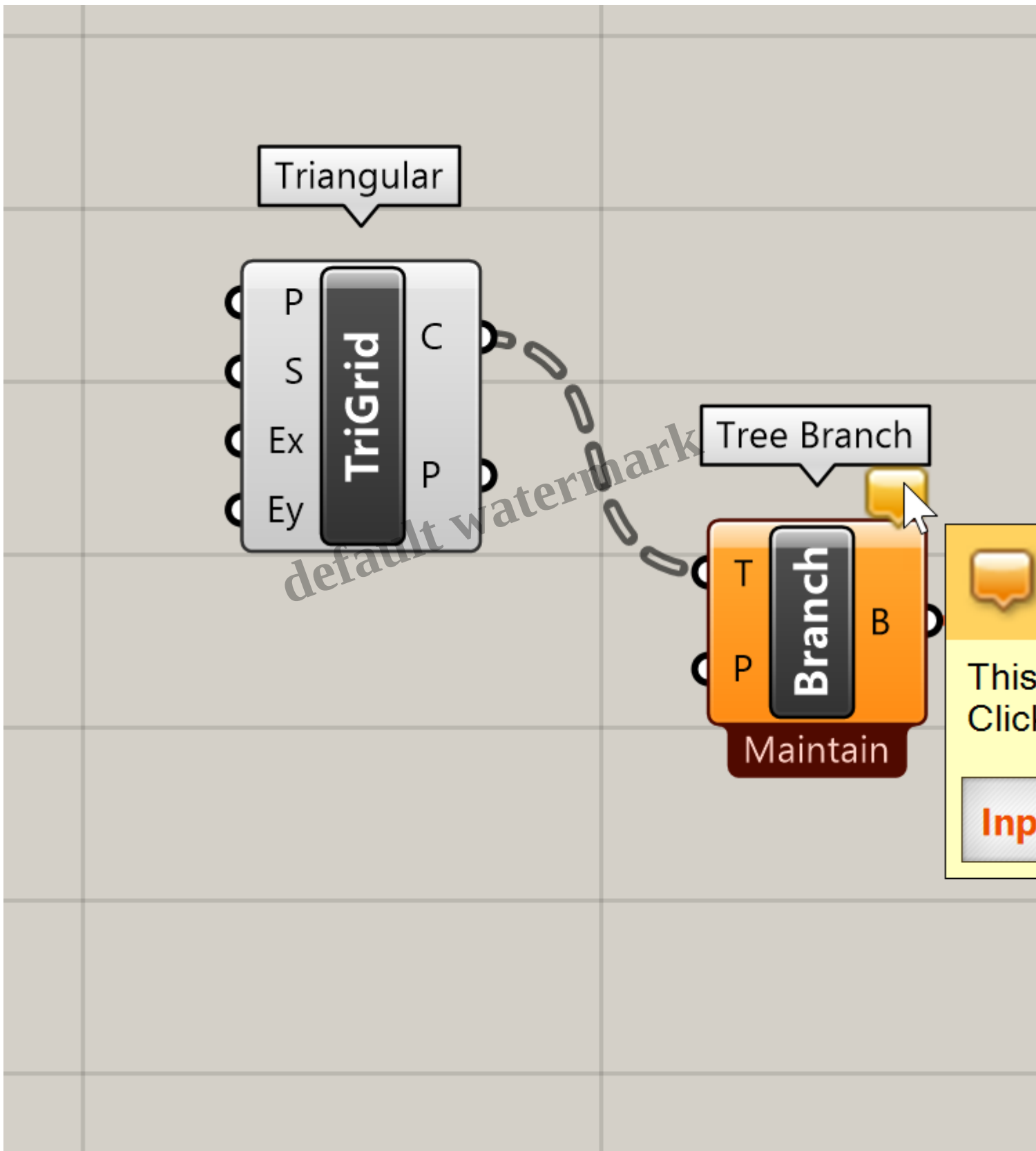
Tree Branch

Retrieve a specific branch

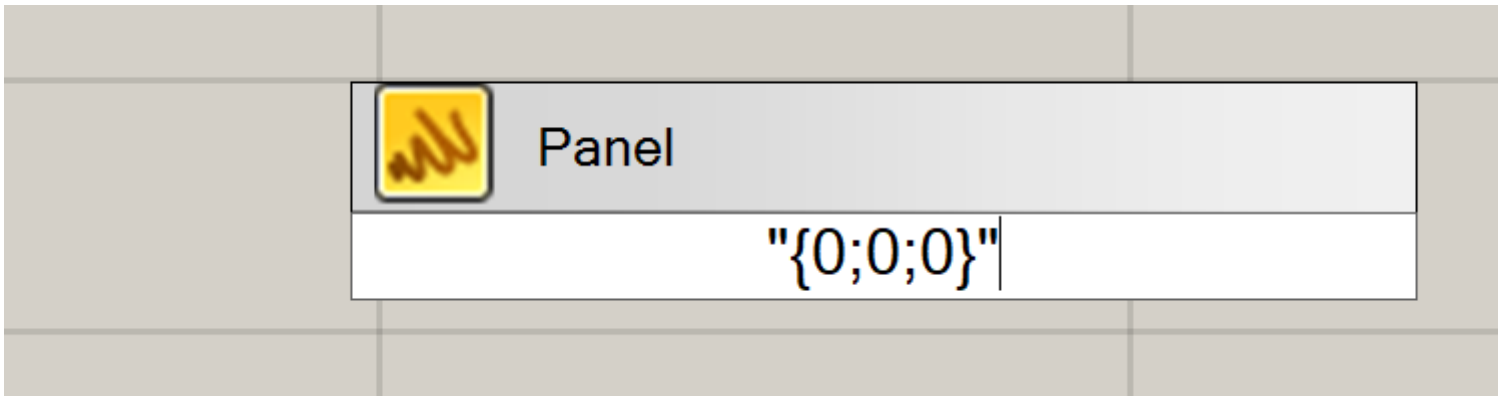
Footer Tagline

The screenshot shows a software interface with a top toolbar containing tabs for 'Dis', 'ARCHICAD', 'M+', 'Pufferfish', 'PanelingTools', and 'Kangaroo2'. Below these are three main tool categories: 'Sets', 'Text', and 'Tree'. The 'Tree' category is expanded, showing a list of tools: 'Clean Tree', 'Graft Tree', 'Simplify Tree', 'Trim Tree', 'Entwine', 'Flip Matrix', 'Match Tree', 'Shift Paths', 'Stream Filter', 'Relative Item', and 'Tree Branch'. A red arrow points to the 'Tree' menu header, and another red arrow points to the 'Tree Branch' option. A large red arrow points to the 'Set' button in the 'Sets' category. A 'List Item' callout points to a button labeled 'Item' in the bottom left corner.

Connected to *TriGrid*'s output is demands for a *P (ath)* input:

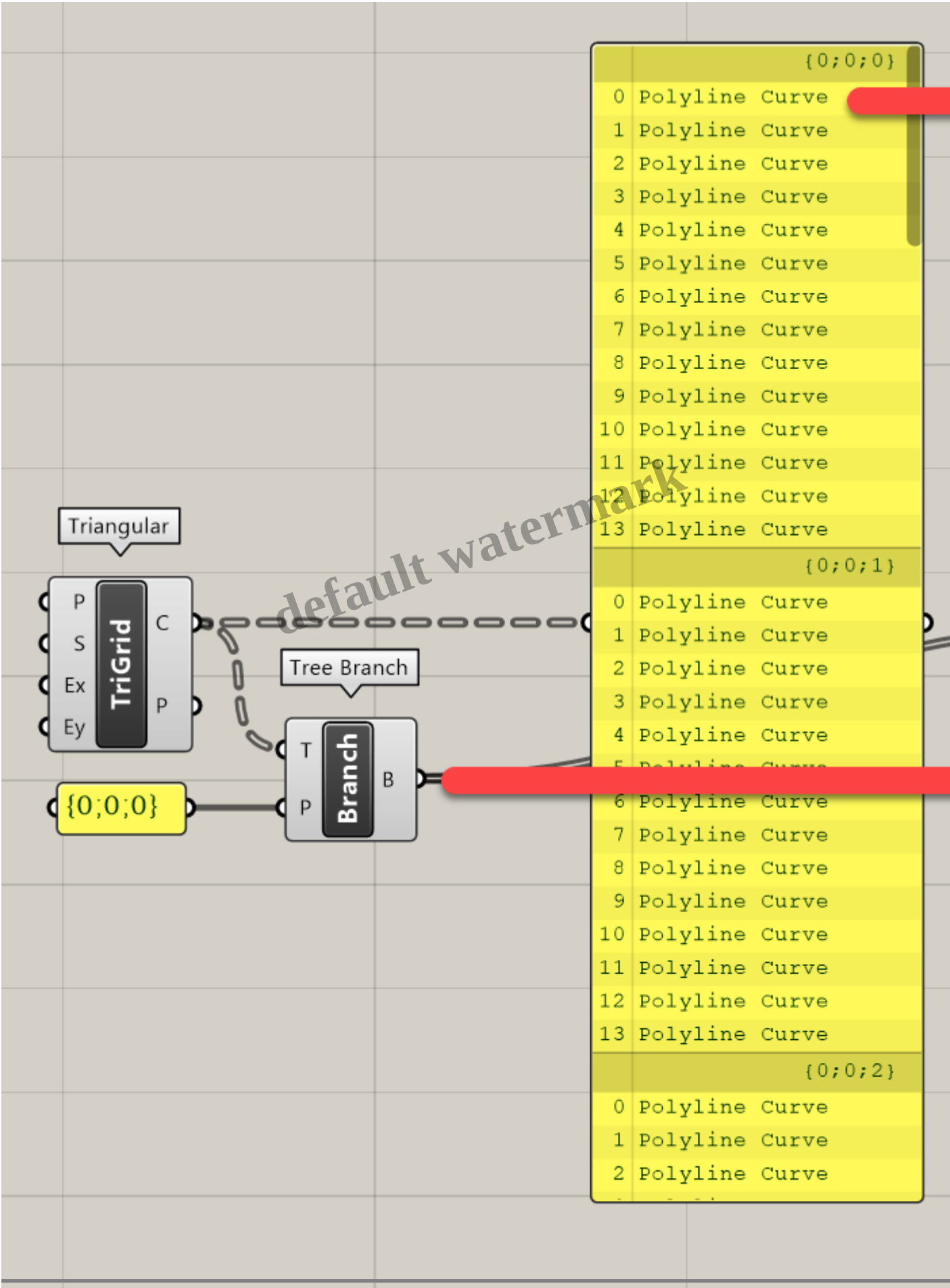


Double-click on the canvas, write “0;0;0” and hit *Return*:



Feed this panel into *Tree Branch*’s *P* input:

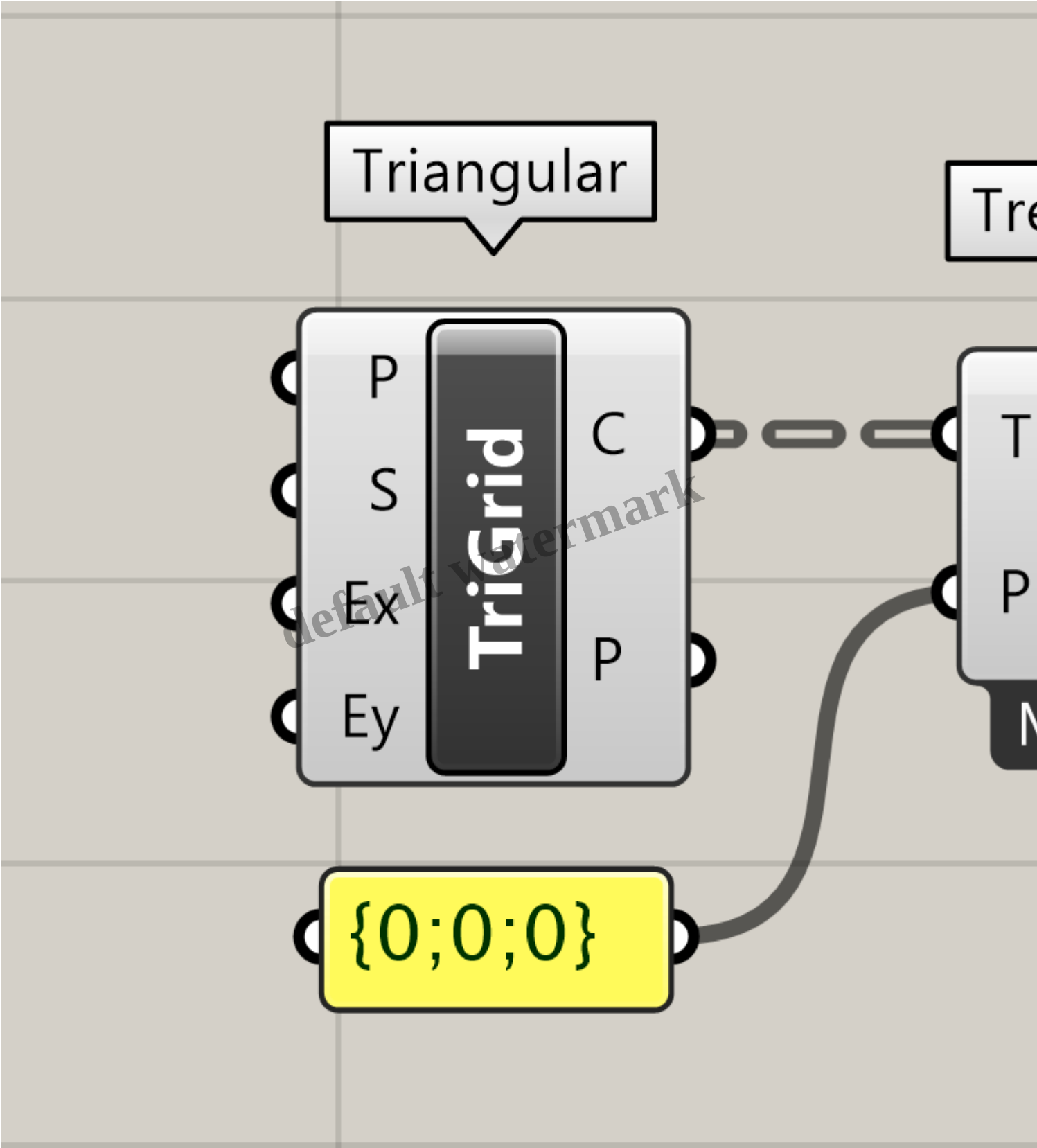
default watermark



As you see *Tree Branch* retrieves *1* branch (in my example the first of them).

When you connect your *List item* to *B* output you will have extracted exactly *1* triangle:

default watermark



O

default watermark

X

Z

Extract Set of Branches

To retrieve more than one branch, double-click your text panel feeding *Tree Branch's P* input and simply add more paths:

default watermark

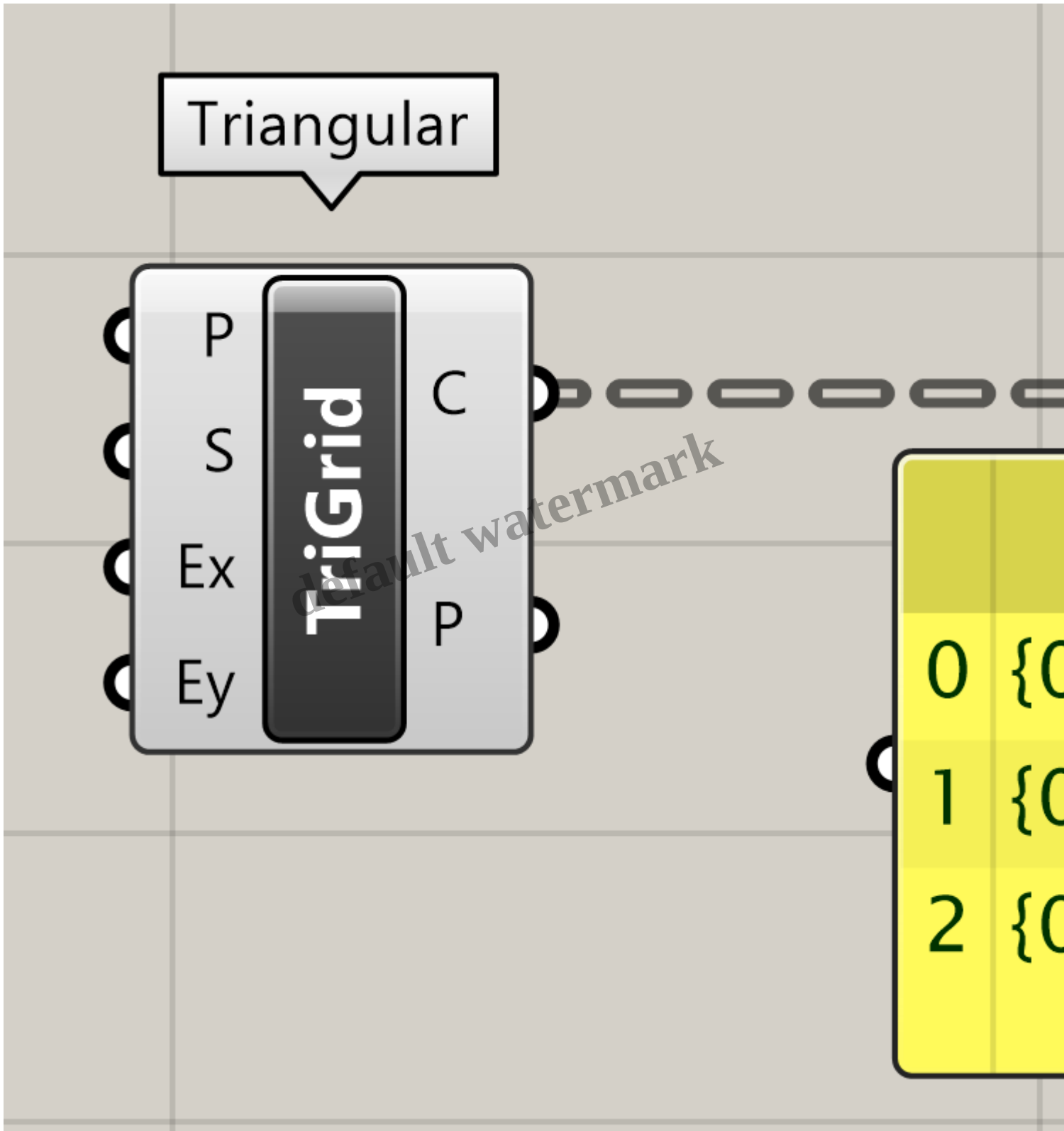
Triangular



RM

```
{0;0;  
{0;0;  
{0;0;
```


Don't forget to turn your panel in *Multiline Data* mode your panel should look like this:



default watermark

For a good introduction on Grasshopper's Data Trees read [this page from TU Delft](#).

New to Grasshopper? [I suggest you read this article in the first place](#).

Need more learning resources? [Check this out](#).

[© Horst Sondermann 2019 // All Rights reserved](#)

Category

1. Rhino/Grasshopper

Tags

1. Data Tree
2. Extract Branch

Date Created

November 2019

Author

hsondermanncom

default watermark