

# Assignment 4

063-0610-00L The Digital in Architecture

Spring Semester 2020

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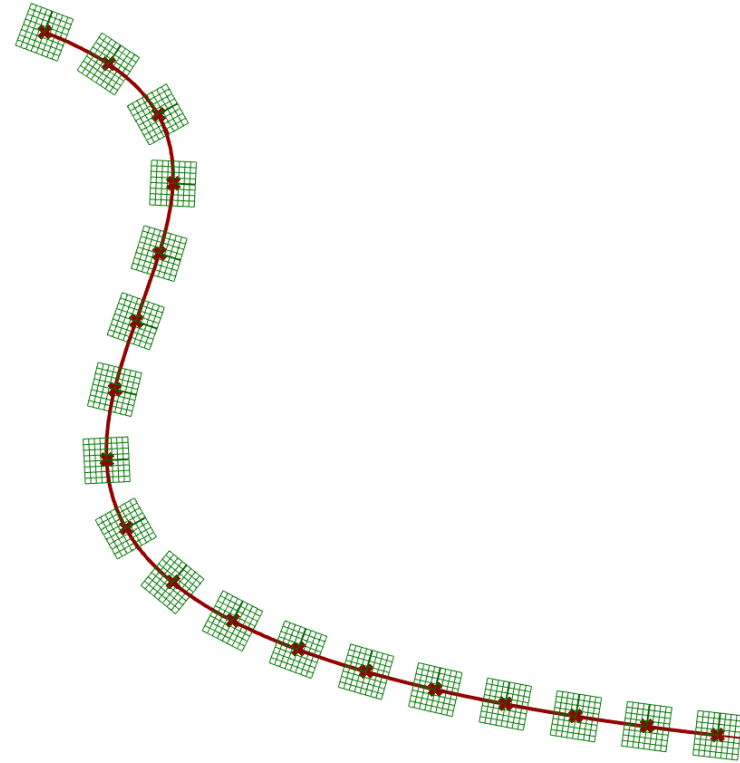
**Due: Mo, 16.03.2020 23:59**

## Task 1

Draw a curve (or use one that you created mathematically in the last exercise), and create a series of planes that follow this curve.

Hint: You might start by dividing the curve using the **Divide Curve** component from the **Curve>Division** tab.

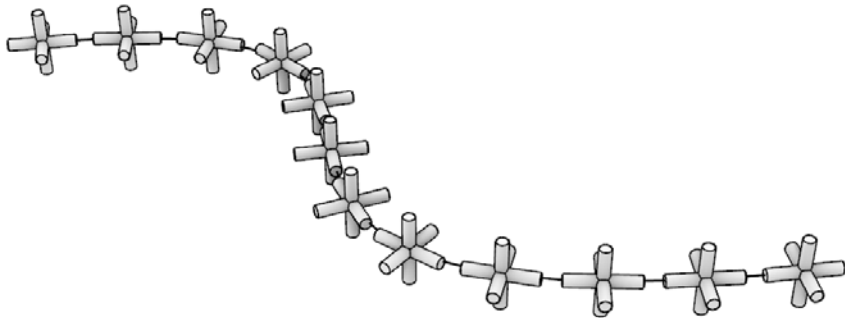
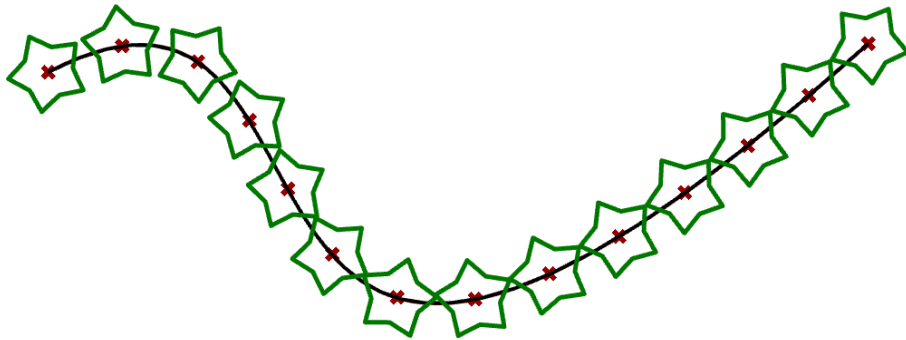
Hint: one way to create planes along the curve is to use the **Horizontal Frame** component from the **Curve>Analysis** tab, with the  $t$  values from the division as input.



## Task 2

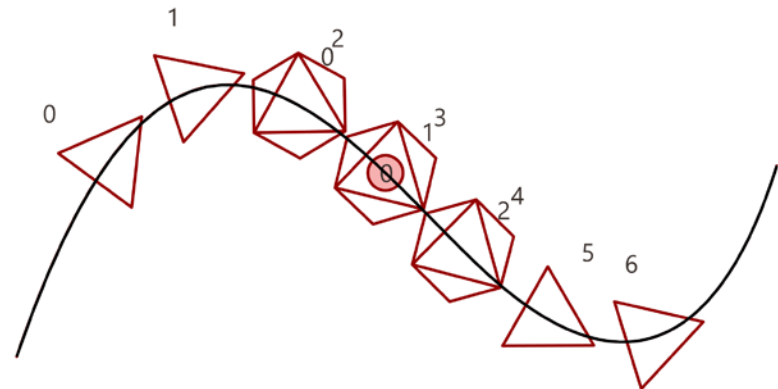
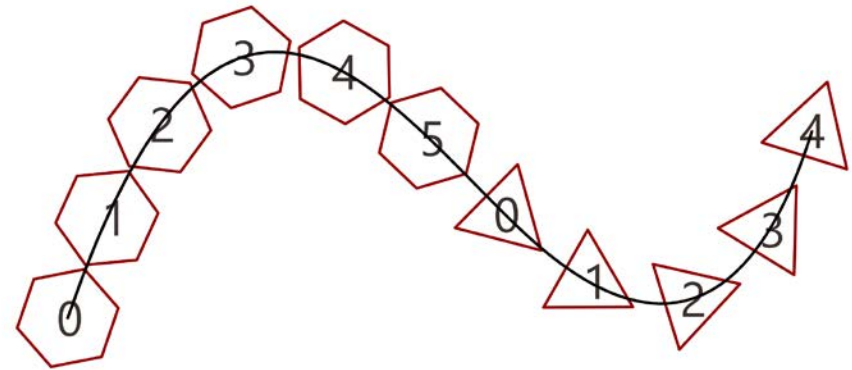
In the second step, create a series of objects along the curve. Do this both for **A**) a curve, and **B**) a 3D object (brick, etc.)

Hint: consider the **Orient** component, in the **Transform>Euclidean** tab.



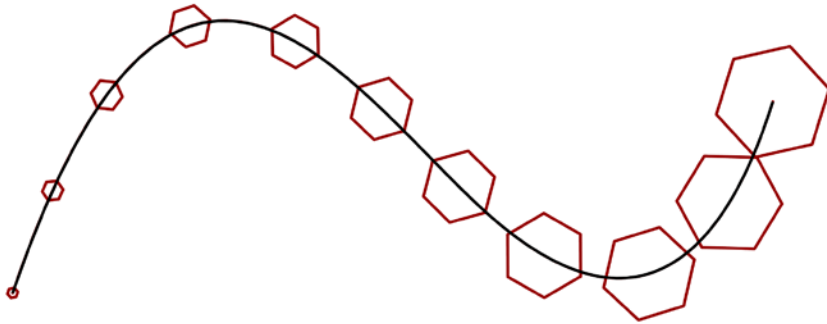
## Task 3

Create a pattern by removing or replacing a number of elements using list management. Label the index of each point with a text tag.



## Task 4 (bonus)

Scale or rotate the objects along the curve based on their index, or properties of the curve (direction, etc).



### To submit:

- A **.pdf** file with 4 pages. Each of the page will contain a different Task. Rename your pdf file to include your surname and name (**Assignment4\_Mustermann\_Chris.pdf**)

To create the screenshots of your design, follow this settings:

- In Grasshopper, preview only the **output geometry** and the interpolated **curve**.
  - In Rhino: change **background to white**.
  - Use **ViewCaptureToFile** command to make the screenshot, set width=3000 and height=1500, with WorldAxes, CPlaneAxes, and Grid adjusted to the scale of your design. Use white Background and Save as **\*.png**, filename same as your Grasshopper file.
- a Grasshopper file (\*.gh) with your modified code – **the code for each task must be grouped** and labeled. Rename your file to include your surname and name.

### IMPORTANT

Do not submit the Rhino (\*.3dm) file.

Do not submit multiple copies

Do not submit .zip files

Strickly stick to the file-naming convention!