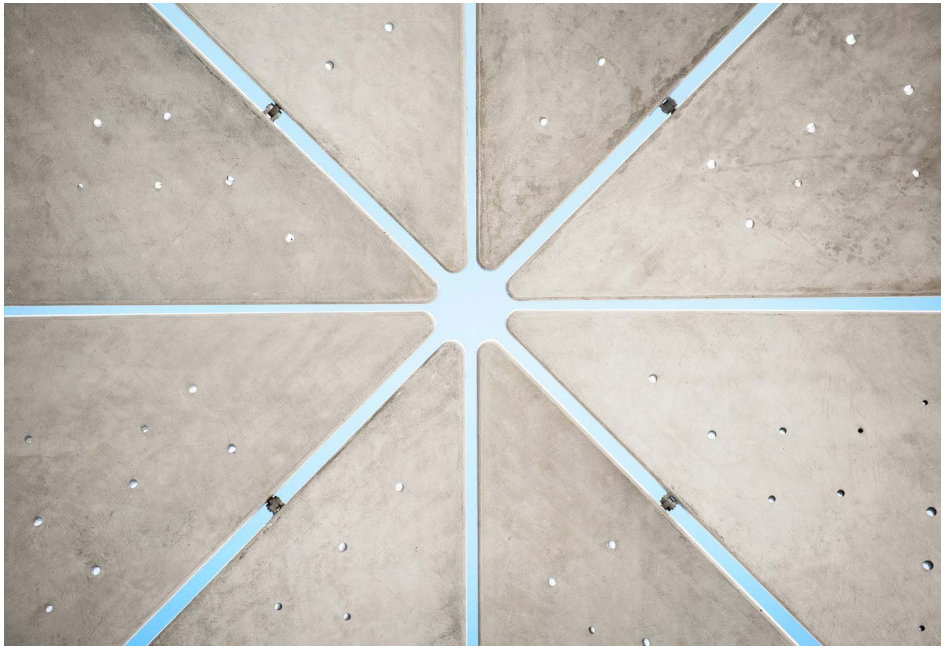


ANIMATION

Confluence Park Pavilion By
Flato Architects

Institute for advanced architecture of Catalonia

STUDENT[Siddharth Aryamane]

ABOUT THE PROJECT

Located along the Mission Reach section of the San Antonio River, Confluence Park is an educational park focusing on the critical role of water in the regional ecosystems. The central pavilion is composed of 22 concrete “petals” that form a network of vaults that provide shade and direct the flow of rainwater into an underground cistern used for the park’s irrigation. The design of the pavilion was inspired by the way many plants in the region direct rainwater to their root system through harnessing the structural efficiency of curved surfaces.



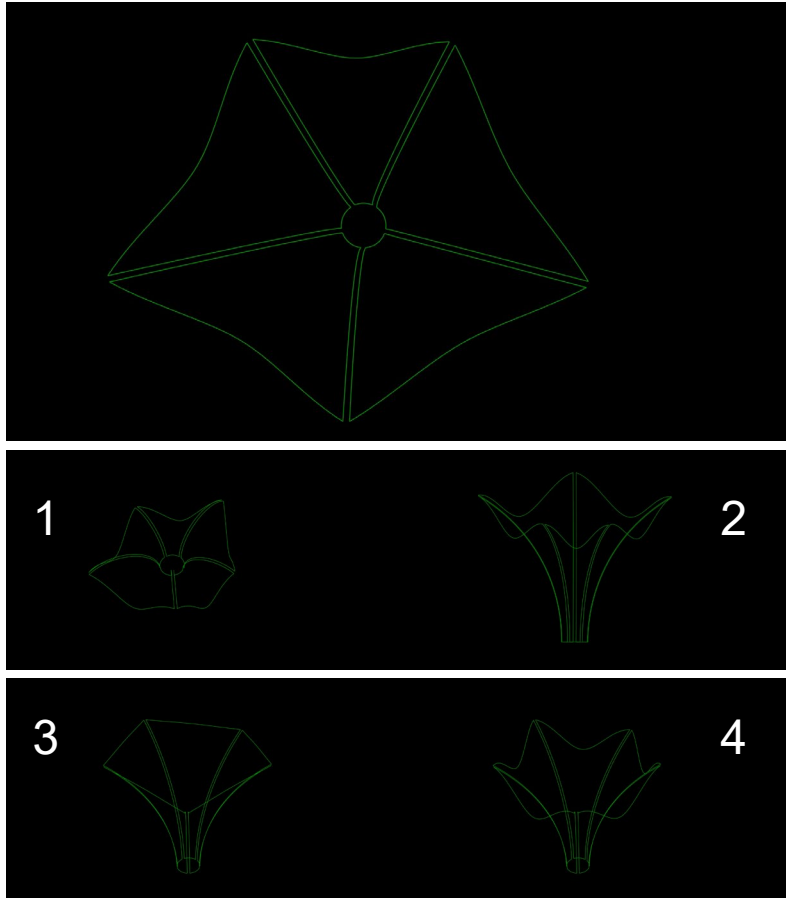




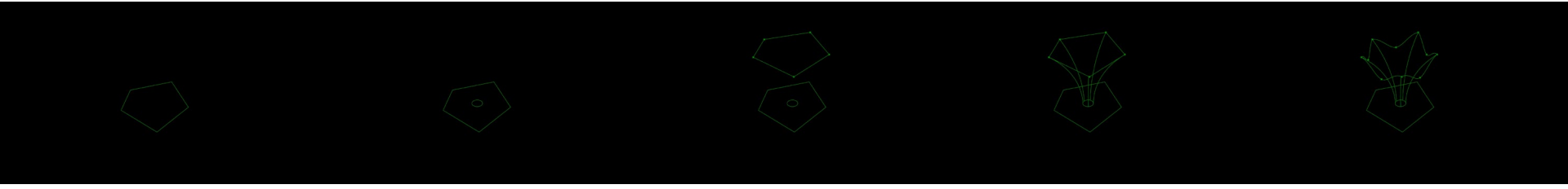
PAVILION CONCEPT

Main parameters

- The pavilion geometry is goverened by 3 parameters -
- The height of the arches connecting the bottom circle and upper polygon.
- The deformation of the upper polygon changes the top profile of the surface from a flat top surface to a curved top surface.
- The offset of the surface which controls the thin groves generated along the surface – from top to bottom.



PSEUDO CODE



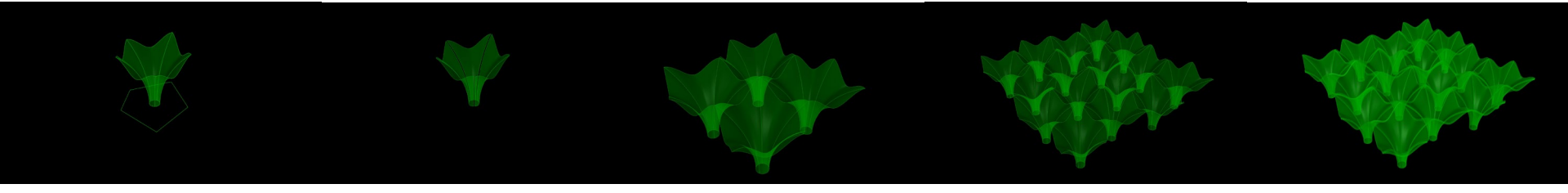
1 Create base polygon

2 Create base circle

3 Move polygon along Z & find end points

4 Generate arches by connecting points on circle & polygon

5 Generate curved upper profile using midpoints of upper polygon



6 Sweep curves to generate surface

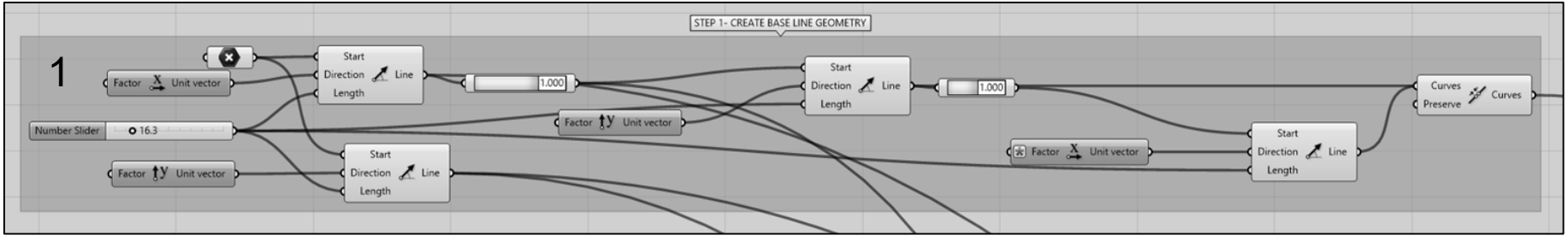
7 Fragment surface to attain surface profile

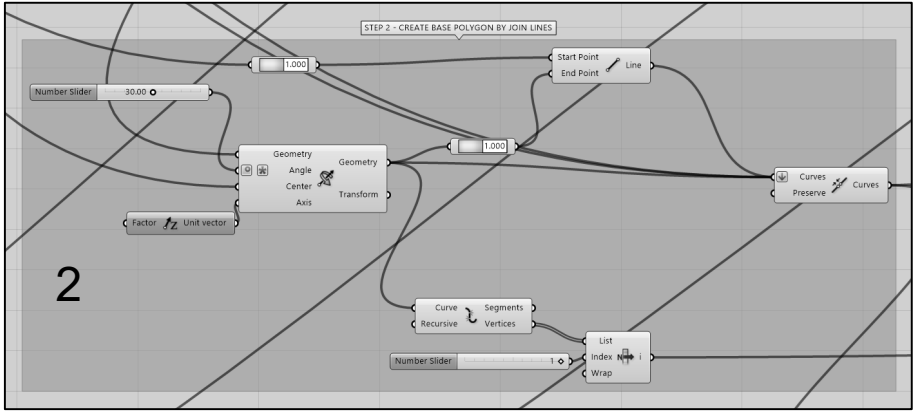
8 Polar array once

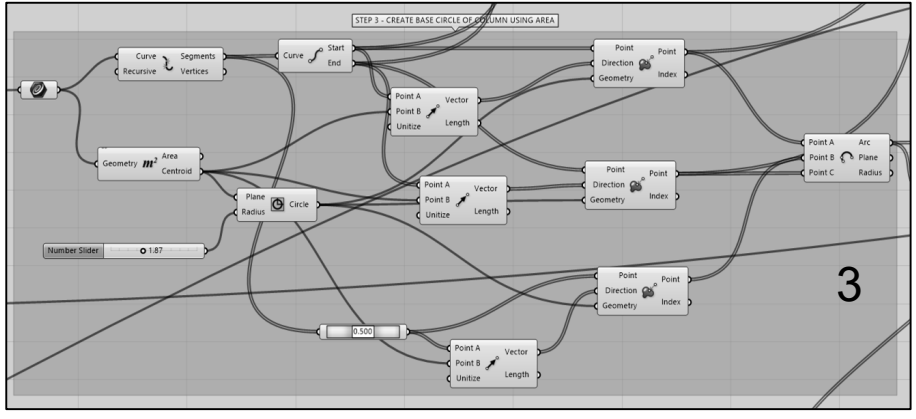
9 Polar array again

10 Extrude geometry for thickness

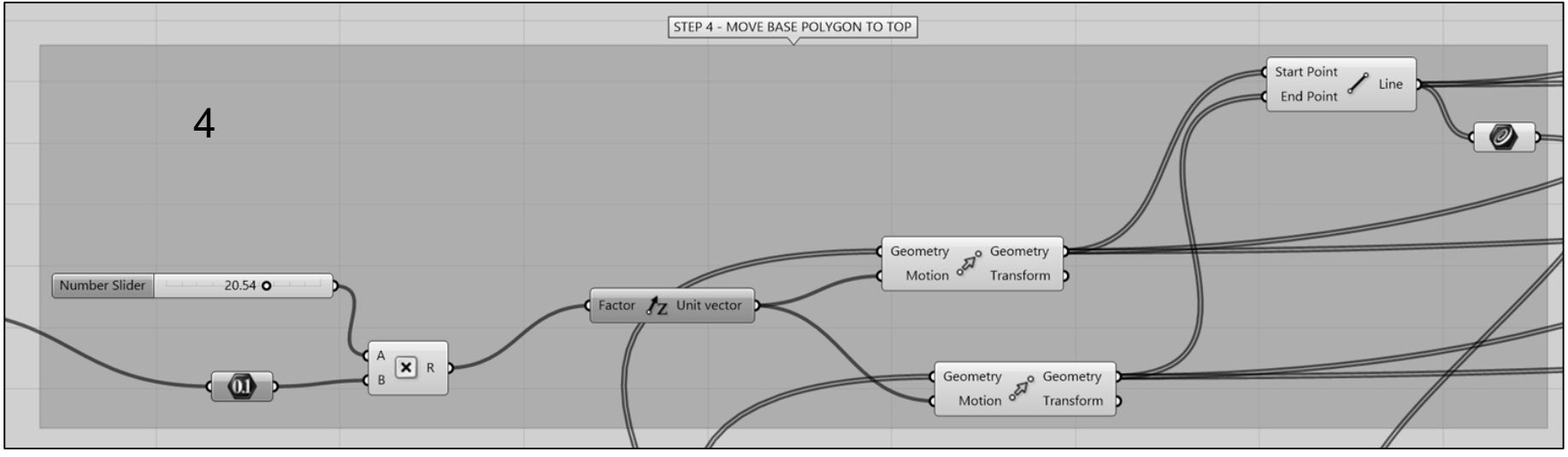
CODE DEVELOPMENT







CODE DEVELOPMENT



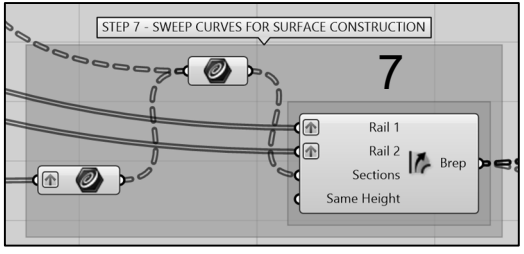
TUTORS: RODRIGO AGUIRRE, MOHAMAD ELATAB

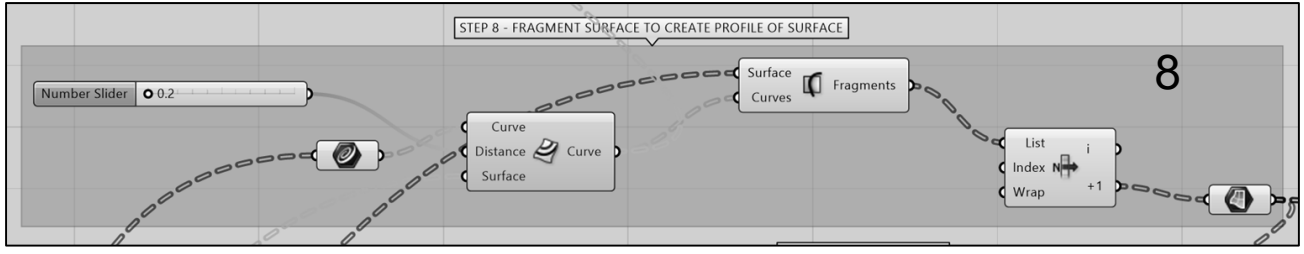
ASSISTANT: IVAN MARCHUK, OANA TAUT

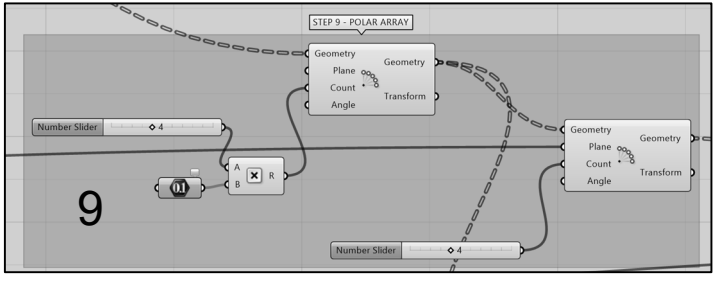
[Confluence Park]

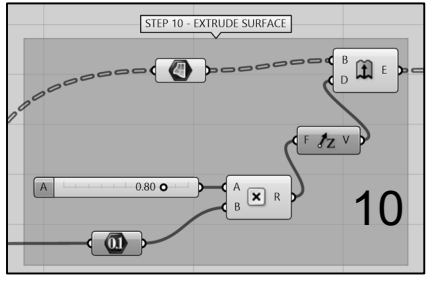
STUDENT:[Siddharth Aryamane]

CODE DEVELOPMENT

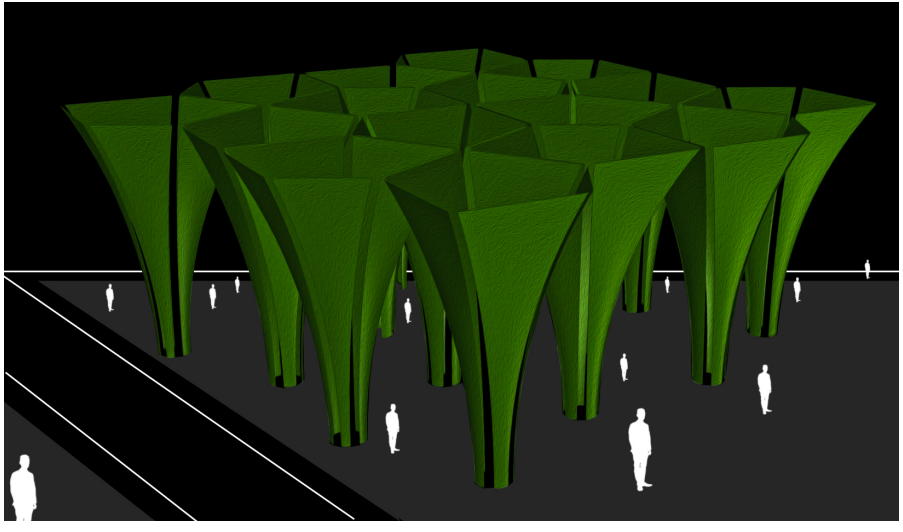








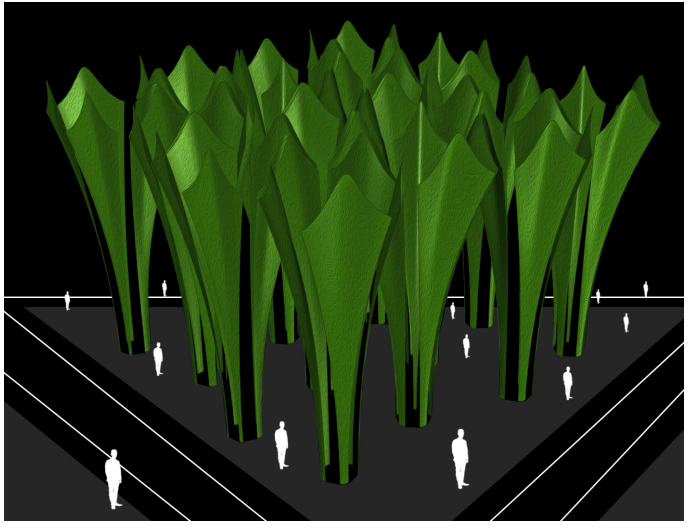
ITERATIONS



PARAMETERS CHANGED

OFFSET ON CURVE – 0.2

MOVE (Z AXIS) – 0.5



PARAMETERS CHANGED

OFFSET ON CURVE – 0.8

MOVE (Z AXIS) – 4.70

VISUALIZATION

