INTRODUCTION TO GRASSHOPPER

Target Audience

This course is for the design professionals who want to efficiently get introduced to the concepts and features of Grasshopper at an accelerated pace on line.

Block 1-Day 1 [1:30 Hours]

• The interface of Grasshopper and its workflow
• Integer, Decimal, and the Numeric Slider Parameters
• Introduction to more Parameters like: The String, Point, Curve, and
  Geometry Parameters, etc
• Manipulate the data on some parameters
• More about Short, Long, and Cross referenced lists

[After each block, we will have a 15 minute break!]

Block 2-Day 1 [1:30 Hours]

• Introduction to "Sets" components [LISTS]
• Shift, Length and List Item components
• Split, Sub-List and Reverse components
• Series and Range components
• Boolean Toggle, Cull Pattern, and Duplicate data components
• Random, Random Reduce, and Jitter components, the fun starts here!
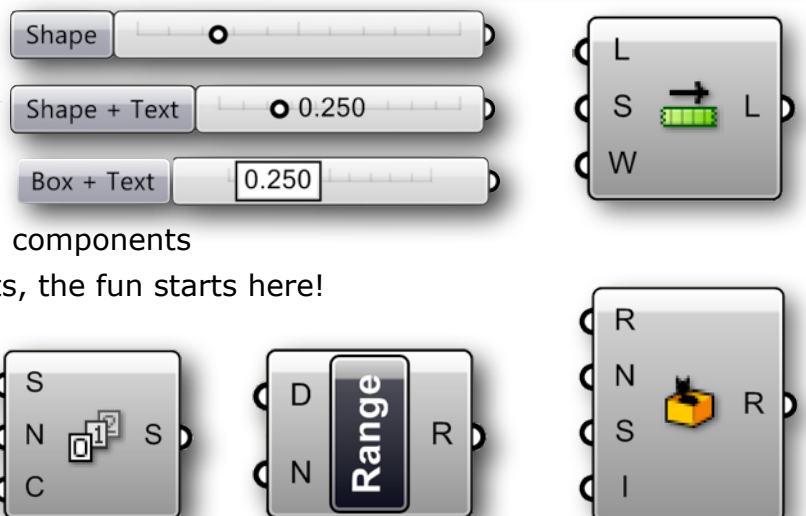
[Each day we will have a 30 minute Q&A]

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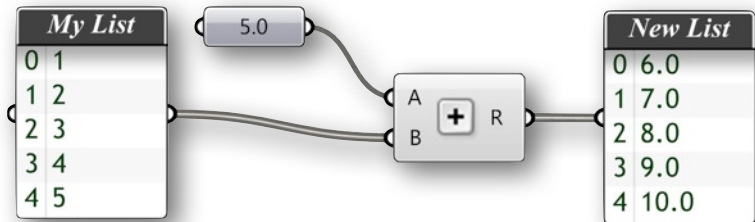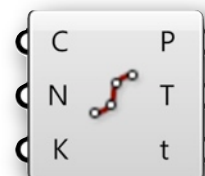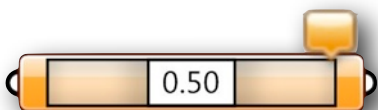
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Block 3-Day 2 [1:30 Hours]

• Introduction to some Math components
• Addition, Multiplication, Subtraction and Division components
• The Absolute and Negative Math components
• Math Functions and the Expression Editor.
• Make a Domain and also decompose a Domain, learn how to use them!
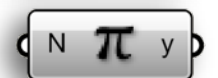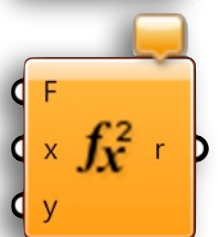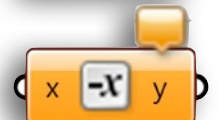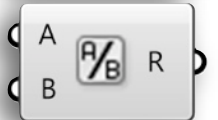
Block 4-Day 2 [1:30 Hours]

• Introduction to "Curves" components
• Line, Circle, 3PArc, and the Rectangle curve components
• Divide Length, Perpendicular and Horizontal components
• Extend, Offset, Join, Fillet and Project to BRep utility curve components
• Length, End Points, Point on Curve, Evaluate, Perpendicular, and Horizontal Frame etc..
• Polyline, Interpolate, and Control Points curve components
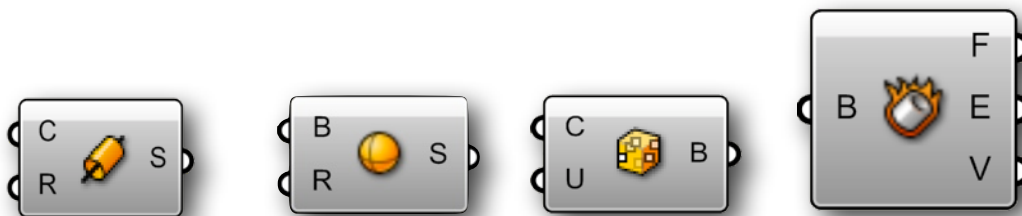
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Block 5-Day 3 [1:30 Hours]

- Quick introduction to Vector and Surface components
- Unit X, Y and Z Vectors, Amplitude, Reverse and Between Vectors
- Vector CPlane components like, XY, XZ and YZ
- Rotate and Offset CPlanes Vector components
- Work with Extrude, Loft, Planar, and 3 or 4 point Surface component
- Bounding Box, Cap, Divide, and Frame Surface components
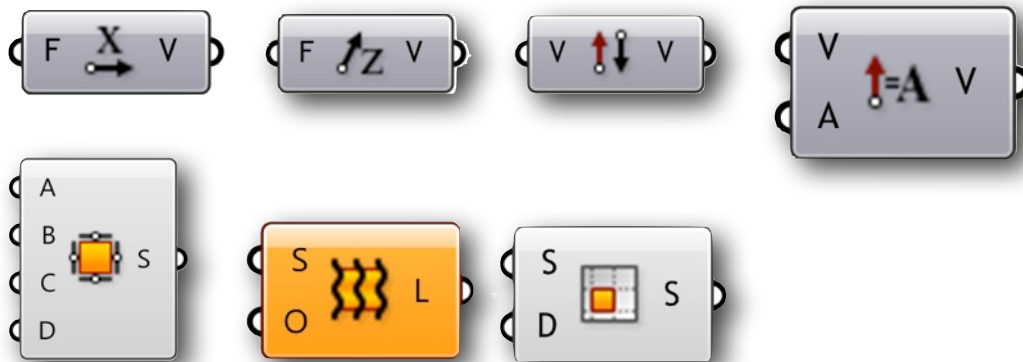
Block 6-Day 3 [1:30 Hours]

- Area, Explode, and Evaluate Analyze components
- Sphere, Pipe, Cone, and Center Box Surface components
- Work with Extrude, Loft, Planar, and 3 or 4 point Surface component
- Bounding Box, Cap, Divide, and Frame Surface components
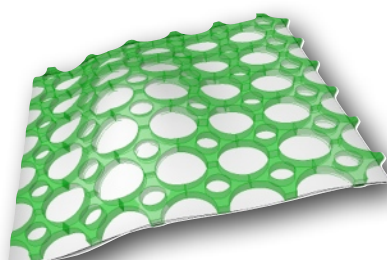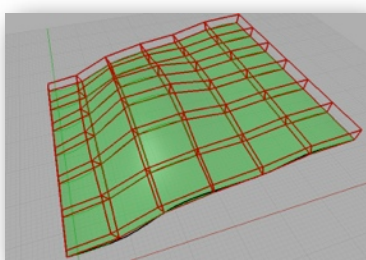- Area, Explode, and Evaluate Analyze components

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Block 7-Day 4 [1:30 Hours]

• Project CPlane, Srf-Box, and Box Morph Transform components

Block 8-Day 4 [1:30 Hours]

• It is time to work with the Intersection and Transform components
• Move, Scale, Mirror, Scale NU, Orient, and Rotate Around an Axis Transform components
• Introduction to some Intersection components like: BRep + Plane, BRep + BRep, BRep + Curve, and some Boolean components

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These are some of the exercises we will cover during the online class.

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