# USC / A605a // EX: 01 / Precedent Studies / Analysis & Critique // Group: Geometry Form

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# Project 1> Stacked Houses by Herzog & de Meuron / Weil am Rhein, Germany

The Stacked Houses designed by Swiss architects Herzog and de Meuron have given visitors an illusion of stacked homes that almost appear like each is balancing on top of one another. The technique of using the addition of houses vertically with multiple orientations adds a new dimension of geometry that creates unique spaces in and outside the structure. Many of these houses overhang as much as 16 feet off of the center of the structure. This structure is a great example of how using repetition of geometry can creates a new complex shape.

### Geometry Addition

The primary shape of a pitched roof house is multiplied by five and stacked vertically.

### Stacking

The multiple geometries are rotated around a center point where they are then set up upon one another.

### Final Geometry

The new multi-shaped geometry provides a sense of chaos, yet is organized around a center node where a spiral staircase is placed for circulation to all levels.









# Project 2> 4X4 House by Tadao Ando / Kobe, Japan

The 4X4 House by Tadao Ando uses two shapes of a rectangular box and a cube. The House is known as the 4X4 House due to the fact that its dimensions are four meters by four meters due to regulations within that housing district. The additional cube on top of the rectangular box was added to provide more livable space for the home owners. The slight offset of the concrete and glass cube on top of the structure helps creates a new dramatic geometry.

Geometry Addition

The primary shapes are a rectangle and cube. These two shapes are added together with a slight offset on top of the structure.

### Embedding

The cube geometry is embedded within the larger rectangle figure.

### Final Geometry

The result of the two figures combined creates a sense of complexity as one shape overhangs the surface of the shape underneath.









Project 3> Zhang Zhidong and Modern Industrial Museum by Studio Libeskind / Wuhan, China	Geometry Addition	Merging	Final Geometry
The Zhang Zhidong and Modern Industrial Museum is dedicated to three separate inspired ideas. To separately display each portion of the Museum, Libeskind designed three separate pieces of geometry to stand alone, yet also be able to combine together. The use of contrasting geometries of rectangles and one organic uncontrolled figured form, creates a dramatic aesthetic to viewers from the exterior of the building. The scale difference of these geometries illustrates an illusion of floating of the swoosh figure.	The two simply shaped rectangles are added to the contrasting transformed shape that resembles a swoosh-like shape.	The swoosh-like shape is set within the two rectangle figures for support.	The three geometries together creates a figure that provokes the fight against gravity, as the swoop figure gives a sense of floating in air.

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