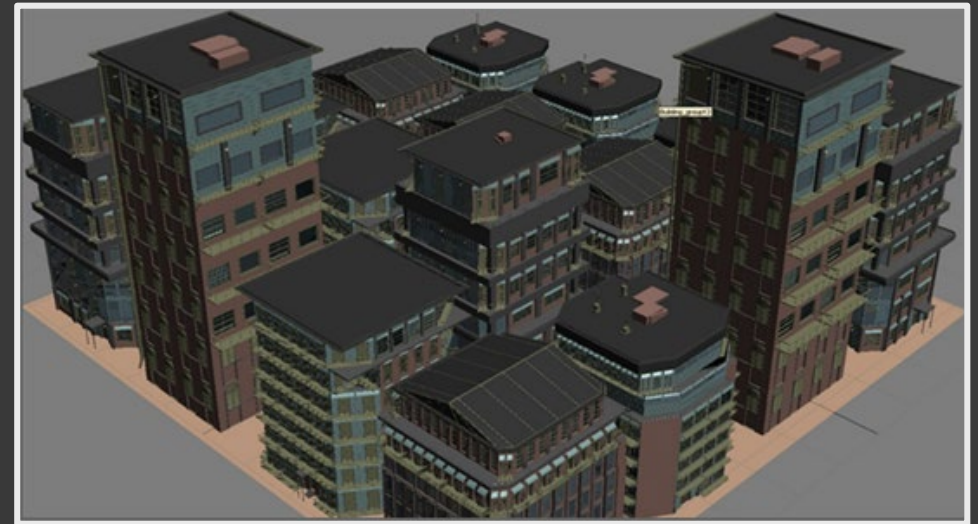# Procedural Building Generator

Sandy Demian – Personal Programming Project Proposal

Overview

- Procedural Building Generator
  - Residential houses
  - City buildings
- Buildings can be generated automatically or by using controls
- Modular pieces can be replaced for more variations
- Engine: Unreal
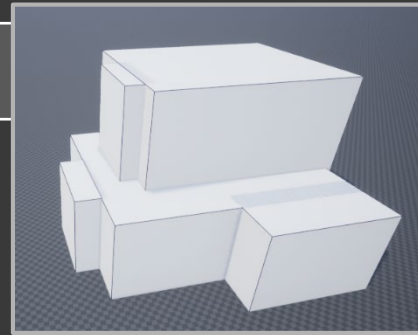
Schedule [Weeks 1-3]

Week 1

- Collect modular meshes
- Set up development diary webpages
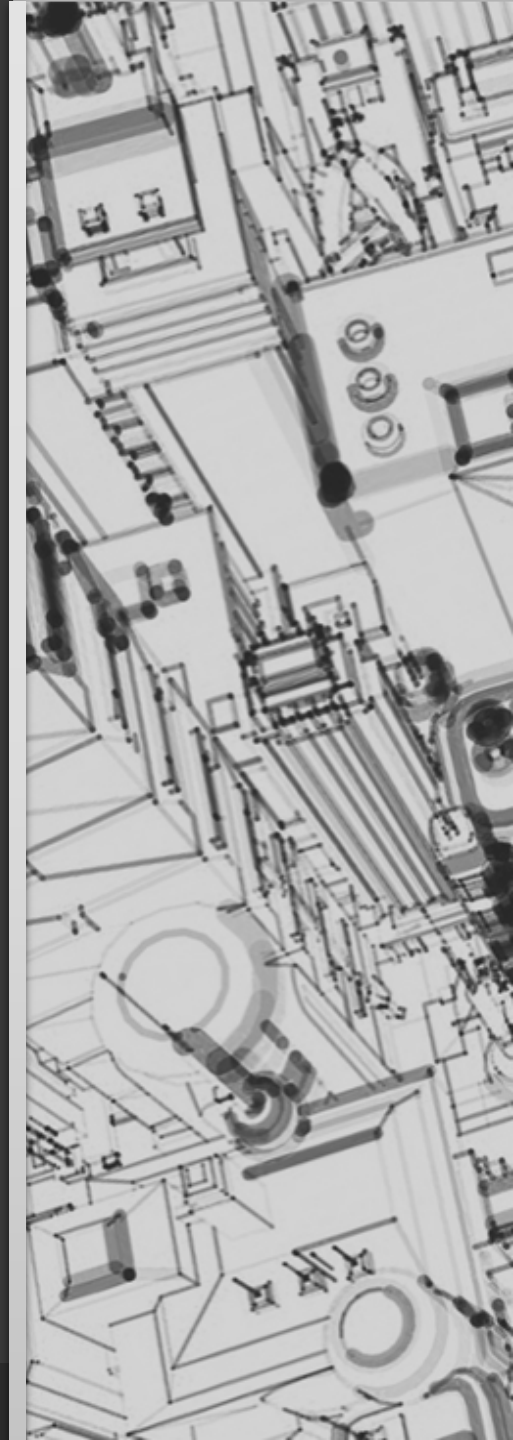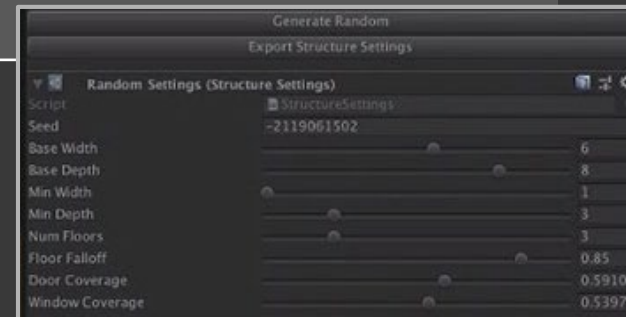- Start on generating variable building footprints

Week 2

- Finish building footprints
- Generate Walls
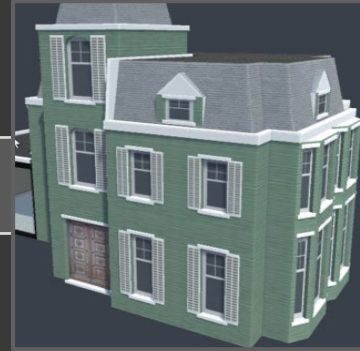- Extend to multiple stories

Week 3

- Add controls for base size, stories
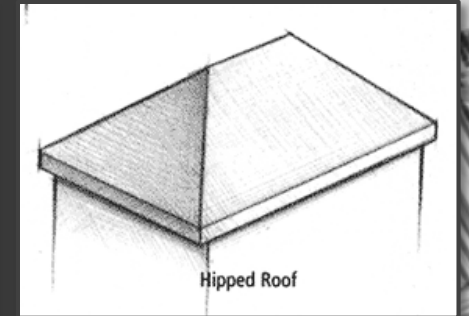- Start on placing widows and doors
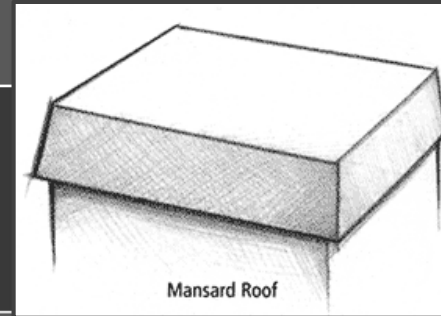
Schedule [Weeks 4-6]

Week 4

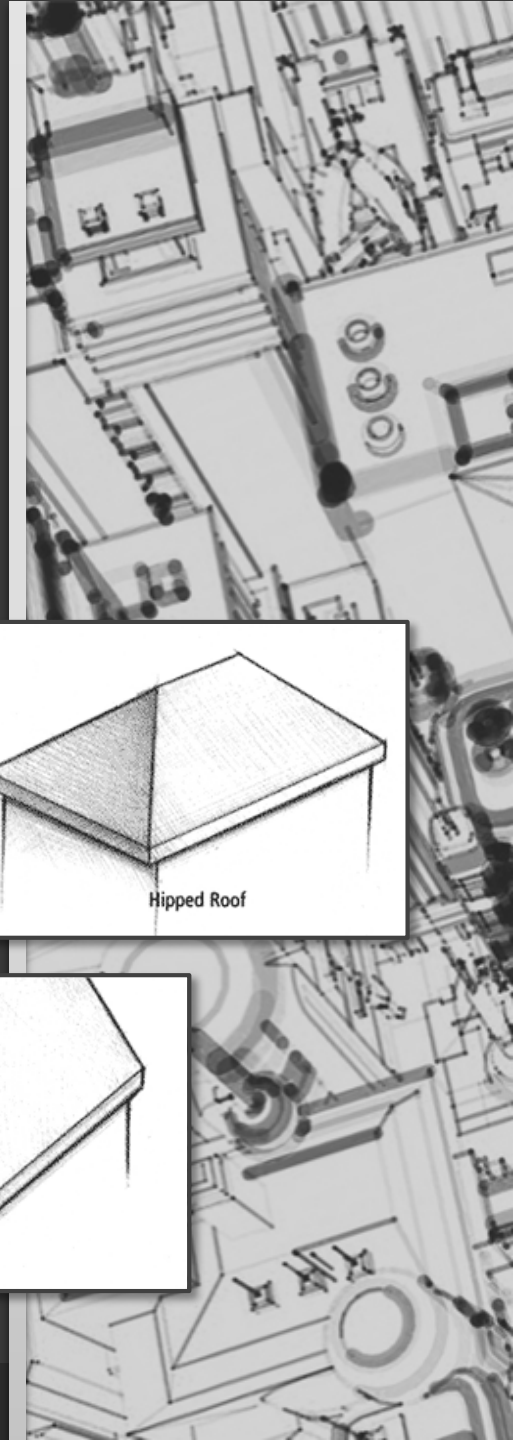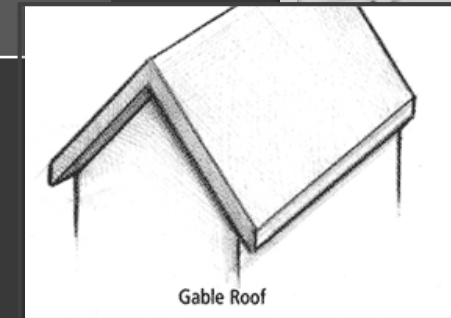- Generate windows and doors
- Add windows/doors controls

Week 5

- Generate roof [Mansard, Hipped, Gable]
- Add roof controls
- Prepare for update presentation

Mansard Roof

Hipped Roof

Week 6

- Generate variable balconies
- Generate decorations [curtains, light fixtures, fireplace chimney]
- Add balconies and decorations controls

Gable Roof

Schedule [Weeks 7-8]

Week 7

- Polish residential house generator
- Start on city building generator
    - Generate building footprint using previous method
    - Copy first floor to generate multiple stories
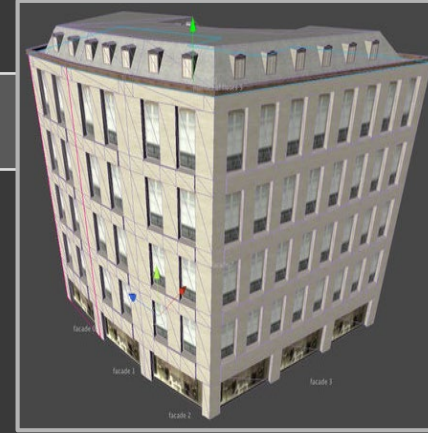
Week 8

- Generate windows/doors/balconies on the first and second stories
- Duplicates second story windows/doors/balconies
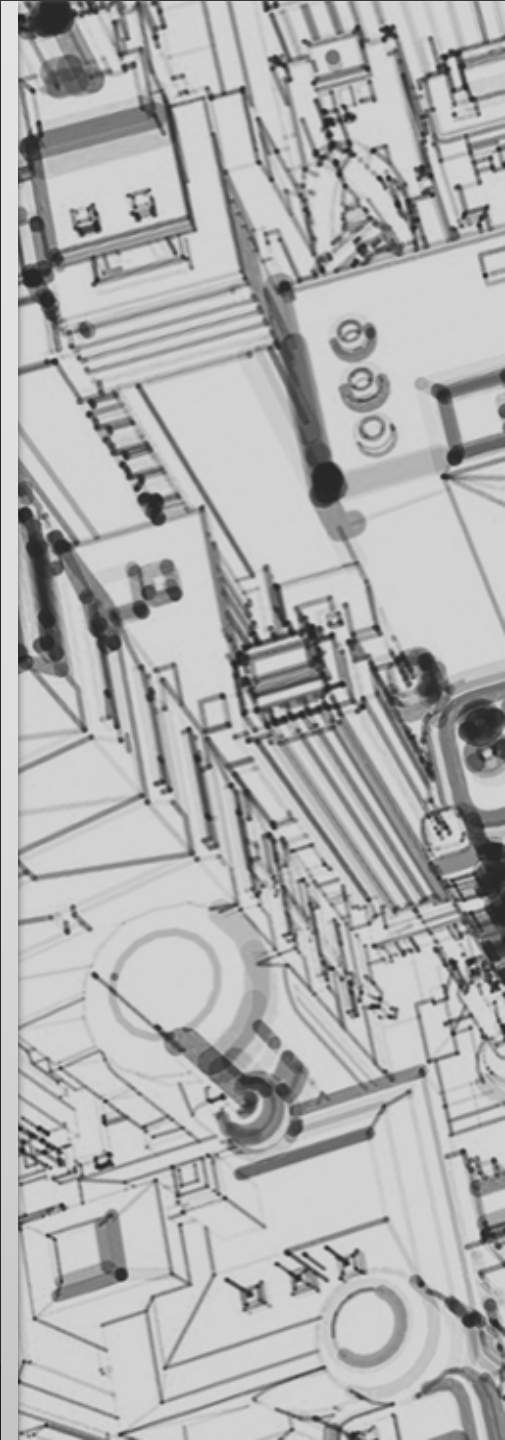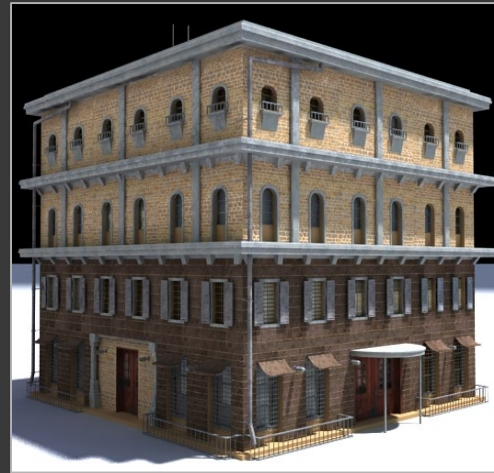- Generate infrequent floorplan change
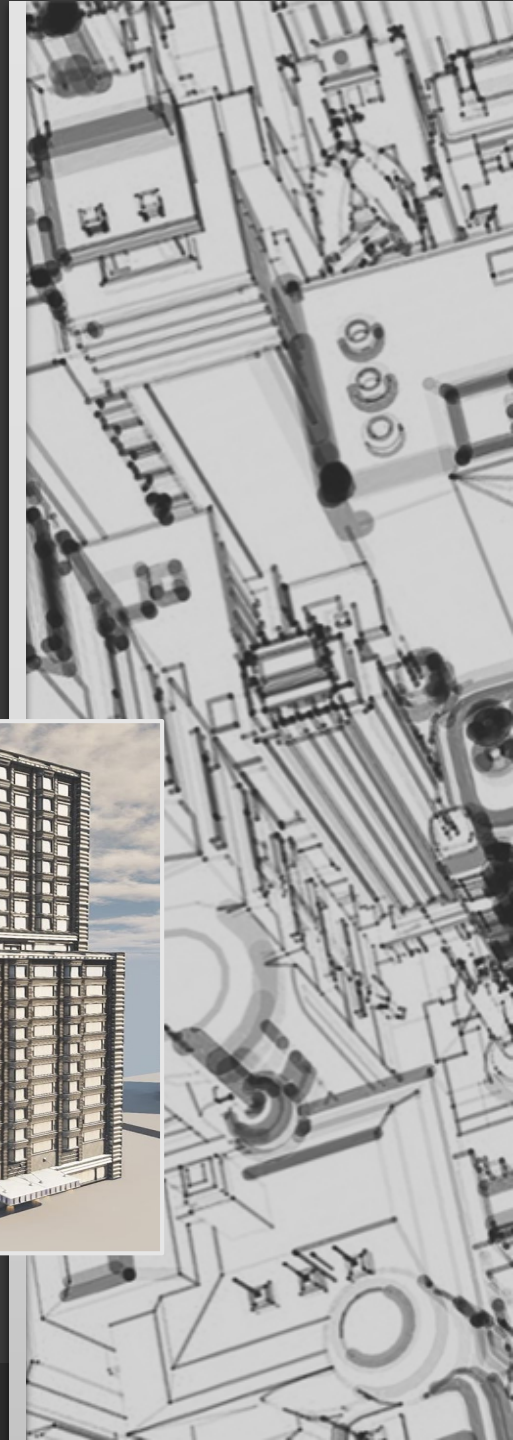
Schedule [Weeks 9-10]
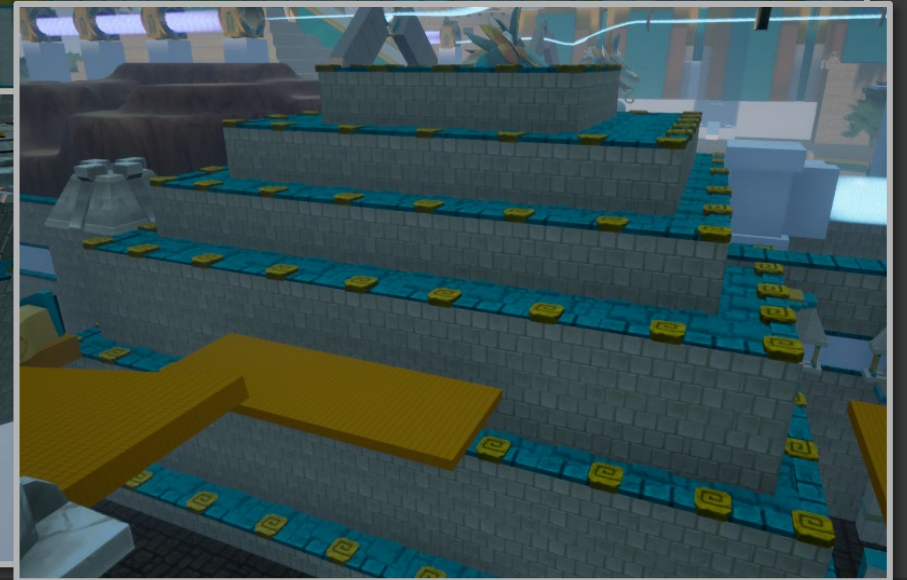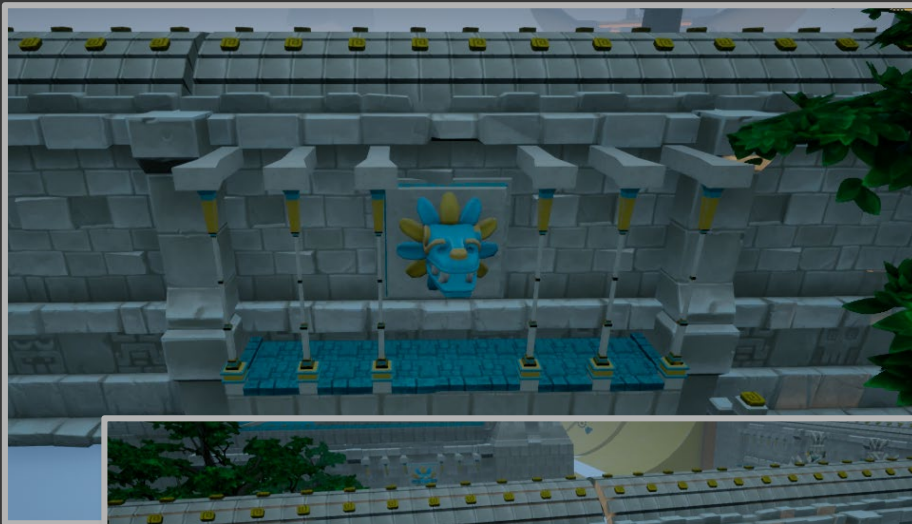
Week 9

- Generate building decorations

Week 10

- Polish city building generator
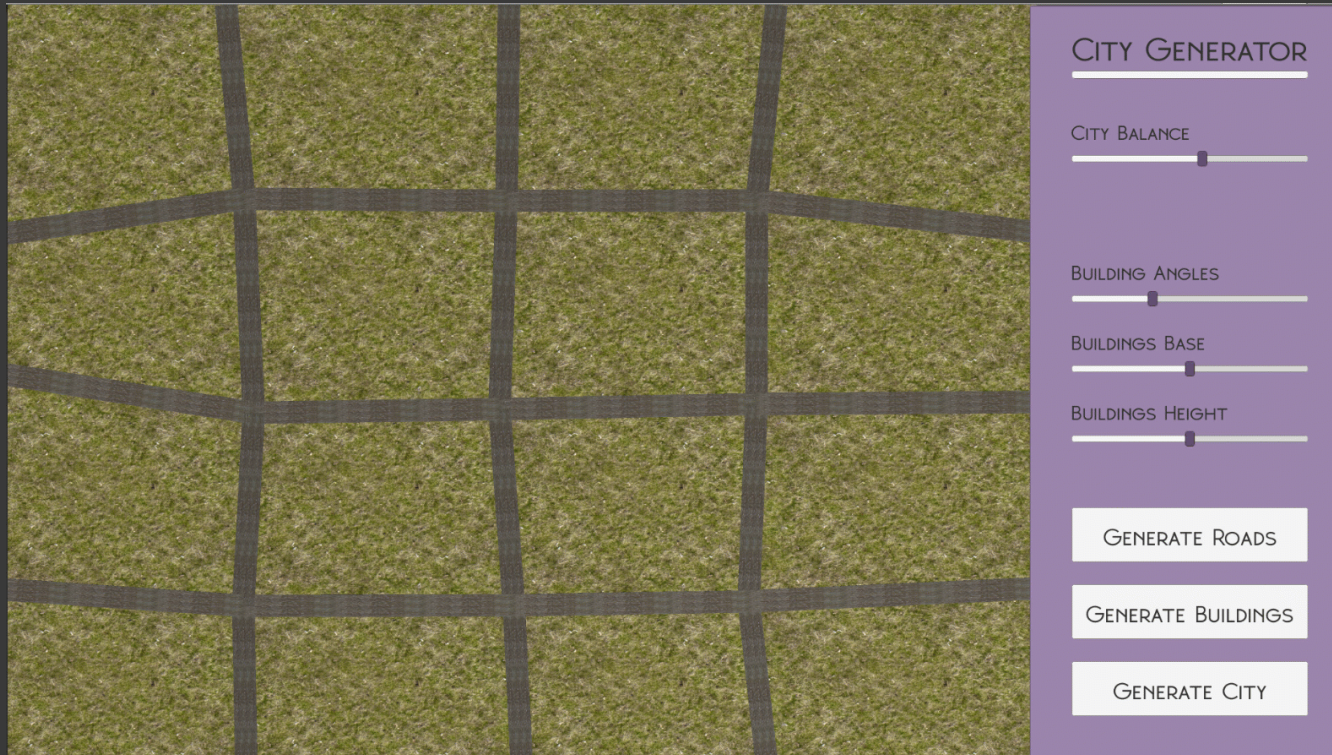- Prepare for final presentation
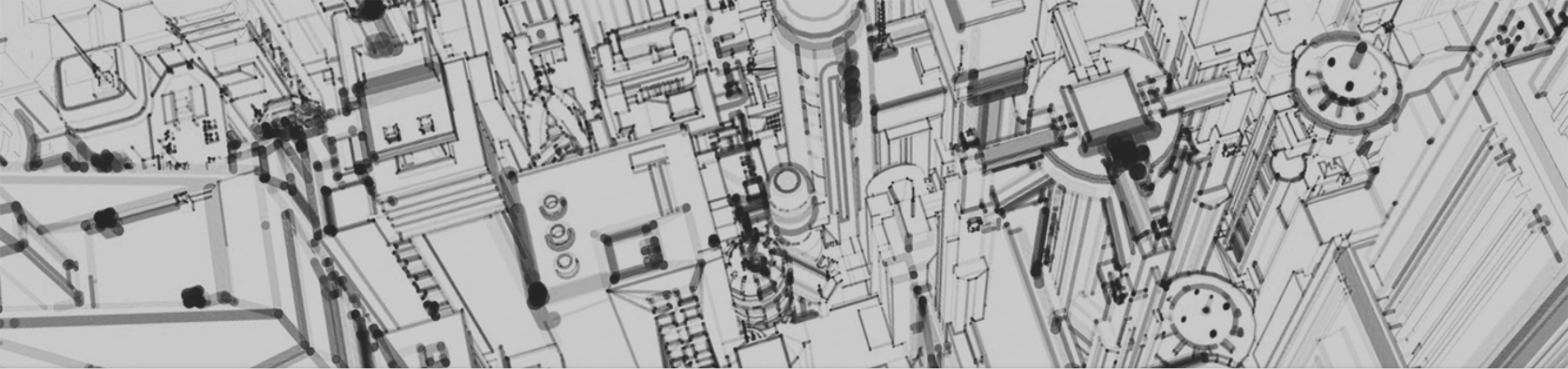
Additional Scope - Option 1

- Modify the Generator to be able to make decorated walls for capstone

Additional Scope – Option 2

- Port city street generator to Unreal

- Generate and place buildings in the city

Questions/feedback