CMPM 163 Notes

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Homework Tips

- Even if a build is provided it is useful to provide a download to the raw project - sometimes the builds don't work on specific platforms!
- Try to do a WebGL build *wherever possible* - it's quicker and easier for the TAs

Visual Effect Case Studies

- **River VFX:**
  - Potentially adjusting the UV of the texture based on angle of surface normals, in order to provide the illusion of the water accelerating over the fall
  - Water surface has two textures with different offset-over-time speeds
- **Toon Shaded Pond:**
  - Standard toon shader
  - Lighting appears to be baked into the texture
  - Some easing function on the "bob" effect - could be implemented as vertex displacement shader but more likely implemented CPU-side
  - Foam around the edges potentially the result of some difference between noise textures
- **Unlit Waterfall:**
  - Noise around edges of water
  - Particles at impact point of water column
  - Some kind of toon effect on solid objects
  - Possibly stretched Perlin noise difference function on water column
- Check out: Harry Halisavakis - Technically Art

Unity Shader Graph

- It's a new method for creating shaders that doesn't require writing code
- Nodes-and-strings graph-based interface for controlling and creating new shaders
- Connect the inputs and outputs of a library of functional nodes to produce interesting results
- It may still be useful to understand shader programming internals, to understand how individual nodes will function