

Assignment 2 - Fall 2019

Writeup

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INFO 5340 / CS 5650: Virtual and Augmented Reality
Cornell Tech - Fall 2019

Links

Make sure your URLs below are clickable hyperlinks in your submitted PDF.

Assignment repo

Replace “<insert link>” with an active hyperlink to your GitHub repo

GitHub: <https://github.com/virtual-and-augmented-reality/assignment-2-2019-ks20>

Assignment videos

Replace “<insert link>” with active hyperlinks to your solution recordings. They should be hosted on your Cornell Google Drive account. Make sure to set the video privacy settings as viewable/downloadable by other Cornell Google accounts.

Part 1: <https://drive.google.com/open?id=14GNu2zl1byJGcmled4wuTcsq43gmDuBy>

Part 2: <https://drive.google.com/open?id=14LtYIHBfLwMsM17q7HI-i7N26e1fevXO>

Part 3: https://drive.google.com/open?id=14CNpUsqiVhu-7de_uGSFCWQ9VF9g6iwk

Video Recordings: <https://drive.google.com/open?id=1Jxt2uarUDxsgHcahnVonqj03SziVIYXu>

Part 4: Final Five: <insert link>

Note: The order and total number of parts are different between A2 and A3, modify if needed.

Work Summary

Overall, the biggest challenge(s) I faced pertained to getting my environment set up and being able to test, build, and deploy the application. Specifically, because I had an iPhone 6, my phone was not compatible with AR Kit, so I had to borrow an Android phone.

For Part 1, my main functionality was placed in the SceneController, which essentially instantiated a cube upon a feathered plane based on touch. The main challenge I faced was creating a new LineRenderer each time a new cube was placed, so instead I just used one main LineRenderer, and simply extended its vertices each time a new cube was placed.

For Part 2, the biggest challenge I faced was getting the Bezier Curve to move forward and backward in the z-axis in the center of the phone/camera, based on the slider values. To solve this issue, I used the `gameObject.LookAt()` function, which allowed me to point the `gameObject` toward the camera and thus move in the appropriate z-direction.

For Part 3, the main challenge I faced was placing the sphere appropriately above the invisible Book Occlusion Cube and determining the dimensions of the Book Occlusion Cube to match the dimensions of the actual W.B. Mason ream of paper that I used as my occlusion object. I was able to figure this out with a bunch of trial-and-error on the x, y, z position values.

Final Five

<If you implemented the Final Five part, tell us about your solution, what you did and why.>

Additional Sections

<If you are required to add additional sections to your writeup in the assignment instructions, please add them here, such as 'Improvements' in A2.>