

CS460 Fall 2020

Github Username: EncryptedCurse

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## Assignment 7: Skinned and Animated Robots!

We will add a mesh to our robot bones and then create an animated crowd.



**Starter code for assignment 7.** After pulling from upstream, there is the folder 07 in your fork. Please copy `index.html` and `robot.js` from assignment 6 over or use Daniel's solution from <https://cs460.org/shortcuts/28>. Also, please don't forget to copy the images.

**Part 1 (50 points):** Please skin the robot using the `HELPER.cylinderSkeletonMesh` function. You will need to call that function 5 times. Note: We started this process in class and there is a work-in-progress `robot.js` that can be helpful at <https://cs460.org/shortcuts/29/>. Also, the slides around [http://slides.com/haehn/cs460\\_lecture26#/26](http://slides.com/haehn/cs460_lecture26#/26) explain the `HELPER` function.

**Part 2 (30 points):** Allow the placement of multiple robots. Daniel's code includes the `THREE.Raycaster` to change the position of a robot when shift+clicked on the floor (see <https://cs460.org/shortcuts/28>). Now, rather than changing the position of the robot, we want to create a new one. Please change the code in `index.html` to work with `robot.js` from part 1.

**Part 3 (19 points):** Add functionality that allows to animate all placed robots. **For example, if the user clicks dance, all robots on the floor start dancing.** This can be done using an array as shown in the <https://cs460.org/showcase/06> demo from class.

**Part 4 (1 points):** Please update the screenshot above with your own and then post the github pages url here:

<https://encryptedcurse.github.io/cs460student/07/>

**Bonus (33 points):**

**Part 1 (18 points):** Please add a head (box or sphere or whatever) to the robot object and use a texture to skin it.

**Part 2 (15 points):** Please add at least one video texture to the scene. And, of course, add some music for the dancing.

The window must be clicked for the video to start playing due to the browser's auto-play policy.