

CS460 Fall 2021

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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://github.com/Keqiang-Li/cs460student/blob/main/07/index.html>

**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.