

CS460 Fall 2019**Name:** Kshitij Ozarkar**Student ID:** 01798743**Due Date:** 09/16/2019

Assignment 2: XTK Cube / Pixel Art

We will create pixel art - and then use XTK to render it in 3D, fully interactive and web-based.



Here is an empty grid of 9x9 pixels:

If we set pixels to different colors, we can create pixel art.



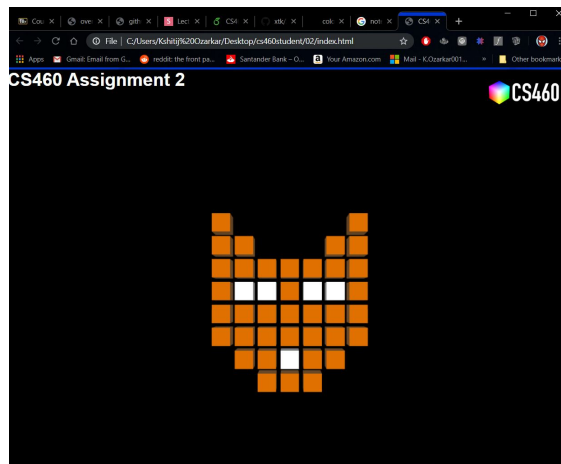
Here is a fox.



And here is a pine tree.

To create 3D pixel art, we can use colored `x.cube` objects instead of pixels.

Please choose one, either the fox or the pine tree, and then create a 3D version using XTK (<http://goXTK.com>). Start with the **index.html** from <https://cs460.org/shortcuts/04/> and save it in directory **02/** in your github fork.



Bonus (33 points):

Question 1 (10 points): If we would not care about the gap between cubes/pixels, how could we reduce the number of X.cube objects in the scene?

We could change the dimensions of the cube and instead of using multiple cubes in the same line, we can use one single rectangular shaped, stretched out cube. And for lines containing the eyes and mouth that have a different color, we can use a different cube. It would still have way less cubes.

Question 2 (23 points): Animate the pixel art! We can use the following JavaScript snippet to execute code every second:

```
setInterval(function() {  
    // your code  
}, 1000);
```

Please write code to animate closing/opening of the fox's eyes or, if you chose the pine tree, make some pixels/cubes light up like a Christmas tree. In both cases, you will need to keep track of certain cubes and then change their color using the snippet above. You can submit this as part of your 02/index.html file.