CS460 Fall 2019
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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.

This starter code creates one cube with XTK. For this assignment, you will need to modify the code to create many cubes: one cube for each pixel. Remember, you can set, for example, the color green for a cube `c` using `c.color=[0,1,0]`. Please replace the screenshot below with your version. Also, please commit this PDF and your final code to your Github fork and submit a pull request.
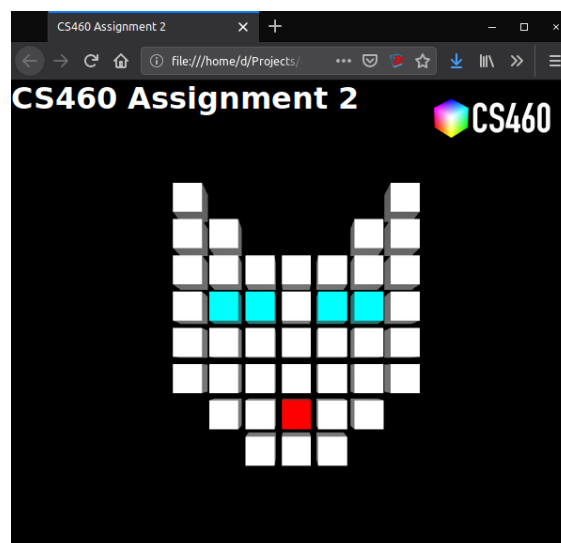
Bonus (33 points):

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?
The width of square is 20 and gap is 5, so we calculated the total width as 25. If we would not care about the gap, we can remove 5. So, the numbers will be c1.center = [0, 0, 0]; c2.center = [20, 0, 0];.

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

```
setInterval(function() {
  { c77.color = c77.color == [1, 0, 0] ? [0, 1, 0] : [1, 0, 0];
}, 500);
```

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.