University of Massachusetts Boston

CS460

CS460 Fall 2021
**Name:** YOURNAME
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Due Date: 09/20/2021

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.

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

Since we can choose to create what ever shape that we want, for this project I create a pixel art sword, with the help of XTK libary using functions such as X.transform.rotateX, X.length and X.camera.rotate;
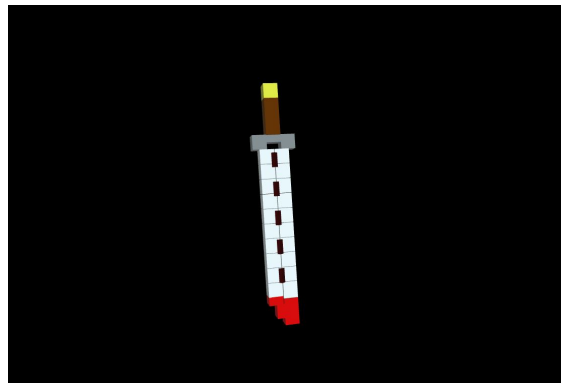
Bonus (33 points):

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? - Assuming this picture is the scene refer to
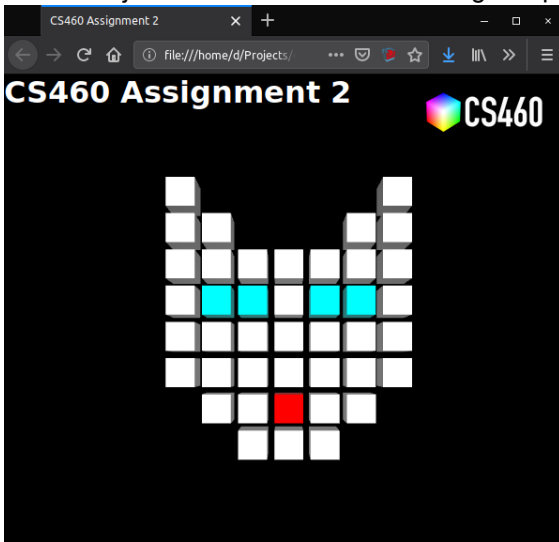
 If we don't care about the gap between cubes/pixels, we can optimize the amount of cubes by creating 7 cubes by the X direction of the camera, then after that we can change the length of each cubes by using function X.lengthX, then adjusting the Y-cordinate of each rows by using X.center.

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.