University of Massachusetts Boston



CS460 Fall 2022 Name: Anirudh T Student ID: 01998961 Due Date: 09/19/2022

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.



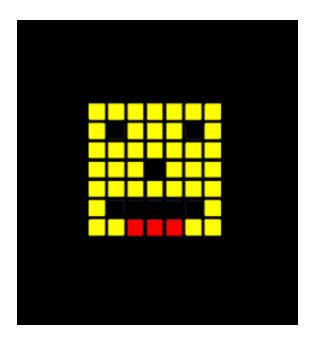
Here is a fox.

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. My pixel art represents funny smiley face



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?

Answer: by creating the next cube taking central point as 20 than 25 with no gap in the direction of the axis

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.