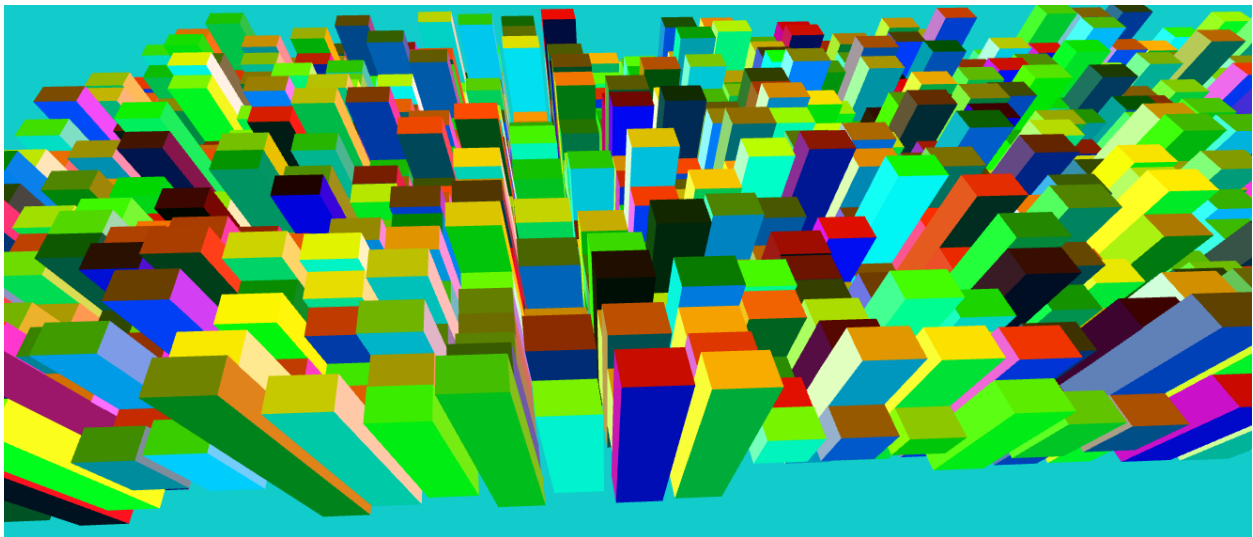


## CSE4204 | Computer Graphics Lab | Assignment – 4

### **[10 marks] :**

Create multiple towers from the geometry of a single tower. You need to create at least 50 towers in all directions with arbitrary size and colors. You must apply perspective projection and camera transformation to it.

Your program can only have the coordinate and color information of a single tower. You need to apply appropriate transformations on that particular tower to generate other towers with arbitrary colors. With each mouse click, the color and size of the towers will be changed. Also, you should be able to change the camera position by key pressing. For the Up and Down arrow key pressing, the camera will move towards the viewing direction and away from the viewing direction respectively. Initially your camera should be in a position so that it can capture the towers from a particular angle (See the video demo).



Video Demo Available Here: <https://rb.gy/9xznia>

### **Hints:**

- For generating multiple towers, you can write a recursive function to generate new towers around each tower.
- For arbitrary color and size, you can use Math.random() function in Javascript
- For changing the camera position, you need to change the factors of the Eye Matrix

**Evaluation:** Coding + Viva