

## CSE4204 | Section B | Computer Graphics Lab | Assignment – 2

### [10 marks]:

Create 3D cube using index buffer. Provide different colors for different faces. You have to introduce border for the object as shown in the diagrams below.

For each left click, the cube will be scaled up and for right click, it will be scaled down. For pressing right and down arrow keys, the cube will rotate (+ve) along Y and X axis respectively.

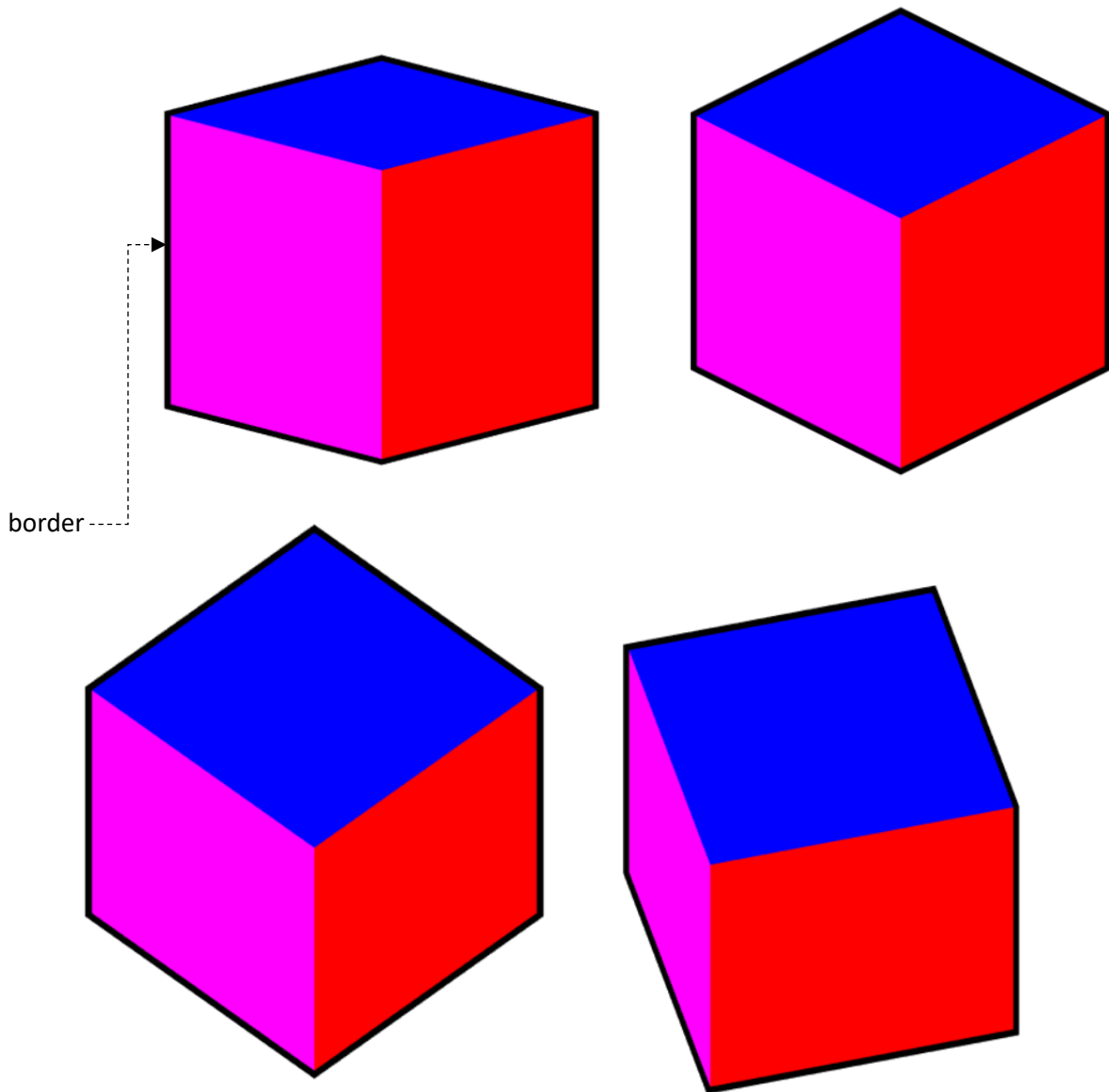


Figure: different example states of the 3D cube.

**Hints:**

- To draw the border, you can call the draw functions two times. One will draw the cube with black color, but being slightly scaled up. For the next call, the cube will be drawn with faces' colors, but not being scaled. This difference between scaling factors will be appeared as a border in the canvas.
- To handle the colors for two different draw calls, you can use control statements inside shaders that will switch between different `gl_FragColor`.
- Be careful while using `gl.COLOR_BUFFER_BIT` for second draw call.

**Deadline:** The day before the next lab session. Google Forms will be provided for submission.

**Evaluation:** Coding + Viva