BBM414 - Experiment 5

Yunus Emre Akgün, 21726875

akgunyunus482@gmail.com

Hacettepe University Department of Computer Engineering

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Introduction

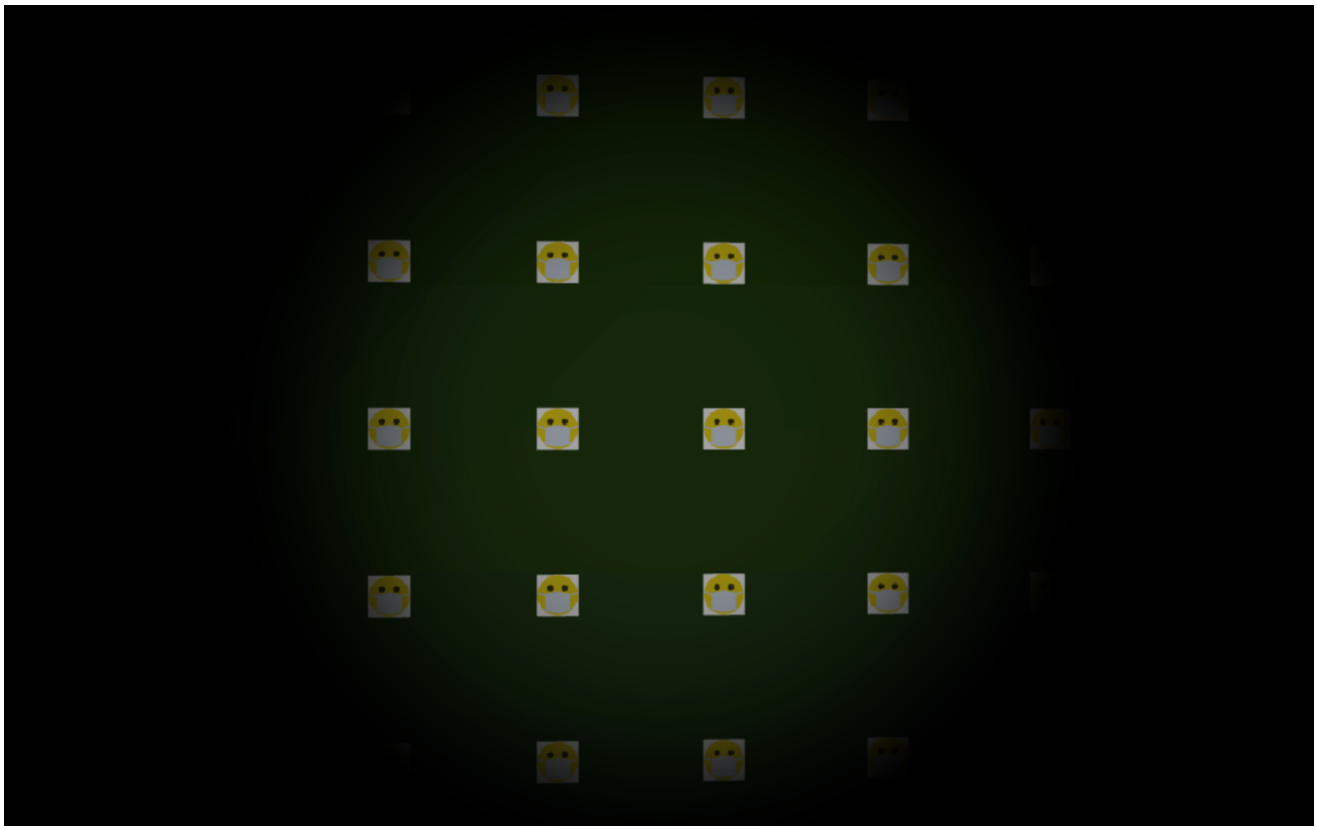
In this experiment, we were expected to use lighting on the 3D objects and combining all the previously learnt knowledge about this course and usage of texture and all other things will combined.

Part1

In this part, we were expected to add a texture to an existing cube and increase and decrease the light intensity on the surfaces according to user input we will change value of tetha and other required values.

Part2

Firstly ı set the plane positions and normals into array then create surface with given image to set all cubes onto it.This plane has 6 verticies its size 100x100x100 each cube placed onto plane and there are some space between all cubes according to thier i and j values.To give spotlight to all cubes ı set positions of light in same direction with cubes normals.So you can see easily all cubes using Mouse and keyboard



Conclusion

In this experiment, I get learn how to use pointer lock api and how to load an object from and convert rectangle to textured shape using required moethods and fileds

Function Name	İnput(s)	Info
checkWebGL	`canvas`	**Create webgl canvas**
createShader	`gl, shaderType, shaderSource`	Create shader for program
drawScene	`gl, canvas`	Draw all cubes on screen
calcNormal	`cubeSide`	Calculate cube normals and positions
getCubeVertex	`İndex,i,j`	Return the vec3 to one verticies of cube
createCube	`i, j`	Create cube and return it with cube normals
clickEvent	`clickID,canvas`	Take input of keyboead
updatePosition	`event`	Update Mouse position info
configureTexture	`Program ,image`	Bind texture to program
resizeCanvasToDisplaySize	`canvas`	Resize canvas