

***Project Report***

***ON***

Opengl Kitchen Design

Course Code: CSE-422

Course Title : Computer Graphics

**Submitted To**

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***Submitted By***

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**Project Overview:-**

In the project we will see generally a home Kitchen with everything inside. But the amazing part of it is that everything is done by code. That means that the project doesn't load any 3D object. It just creates them at runtime. There is no 3D engine used so we get to see how looks most of the code used to make cameras, object interaction, collisions, among others.

## Interesting Objects:-

**OpenGL Teapot:**

Entering the **kitchen** we will see the classic **OpenGL** Teapot. This is object was hardcoded into the GLUT library and is like the symbol of **OpenGL**.

**Opening Doors:**

We need to interact with doors. The door will open and close. The good part is that there is no 3D engine behind it so you get to see how is actually done.

**Skybox:**

When we walk around the kitchen we will see the sky and the ground. Which is a textured cube (skybox) and a plane for the ground.

## OpenGL topics covered by this project:-

This is a list of all the basics that this project involves.

* FPS Camera.
* CSG (Constructive Solid Geometry)
* Transparency
* Collisions
* Skybox Technique
* Vector Handling
* Texture Loading and mapping
* **OpenGL** primitives
* Object interaction

**Controls:-**

The project uses a FPS camera. We will change the camera direction with the mouse and move forward and backwards with left click/right click. To interact or open the objects like the kitchen door press space.

**Team Members Contribution with Opengl Document:-**

We divided our project work between us so that we can create a success project. When we got stuck then we took help from one another and stack overflow. At last we came successfully with the project. Here are some major activities of ours with the object and other modification.

1. **Md. Manjur Ahamed (142-15-3619):**

* Teapot
* Refrigerator
* Control
* Texture
* FPS Camera & others

**Github link: https://github.com/Ahamed3619**

1. **Md. Habibur Rahman(142-15-3480):**

* Skybox
* Window
* Sink
* Walls & others

1. **Falguni Saha(142-15-):**

* Ground
* Kitchen Boxes
* Door & others

# **Experience:-**

At last we can say that, the working experience was great. We learned many things to develop a good computer graphics projects like it. After all thanks to our honorable teacher who suggested us a great project in computer graphics. Thank you Sir. Allah Hafez.

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