CG 200 Computer Graphics Assignment

Assignment Semester 2, 2016

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**Submission**

This submission includes the following:

* C Source Files – main.{c,h}, shape.{c,h}, render.{c,h}
* Makefile
* README.txt
* Report.pdf
* Assignment Cover Sheet

**System Overview**

This assignment uses C Programming Language. It does not very complicated object or finishing created using external tool. It started with camera placing at z = 20, which means I have placed the camera 20 units in front all the objects for better vision. For the animation part, I use similar algorithm for each of them for animation simplicity, however they all have different animations.

It has several functions which make this assignment up:

* Callback functions like main loop, key operation and display key.
* Functions for drawing like drawOval, drawCircle, drawPyramid and more.
* Other disabled default functions like:
  + GL\_LIGHTING – enables light throughout the entire program.
  + GL\_COLOR\_MATERIAL – enables object to have their colours when lights are enabled.
  + GL\_DEPTH\_TEST – enables depth buffering for draw objects

**Objects Creation and Animation**

In this assignment, I have created 6 objects – 4 simple objects and 3 composite objects.

Floor

* A simple sea floor using GL\_QUADS

Bubbles

* Water bubbles using solid sphere with animation of running up

Chest Box

* Box using solid cube

Pyramid

* Draw pyramid using 4 GL\_TRIANGLES ( four faces )

Sea Flower

* It is a composition of cylinder, sphere and oval shape with animation of rotating the paddle

Sea Turtle

* It is made using oval, sphere and lines with animation of running towards the screen

Diver

* Lines and rectangle are all I need to draw the diver with animation of swimming from right to left