YEDITEPE UNIVERSITY
Department of Computer Engineering

CSE 483/CSE 583
Computer Graphics

Assignment 2

Due to:
Part1: 18.04.2021
Part2: 25.04.2021
Part3: 02.05.2021

In this homework you will change your 2D game to a 3D game using OpenGL. This homework has three parts.

In **Part 1**, draw the robot and the ball. Use a sphere for the head, cubes for the body and the arm, a cylinder for the wheel, and use a sphere to draw the ball. Also draw a ground, and draw an object using one or more of the following and replicate it 10 times.

Cone	Teapot	Torus
Tetrahedron	Octahedron	Dodecahedron Icosahedron

Use at least three different colours. Draw the objects as both solid and wireframe.
Be creative!
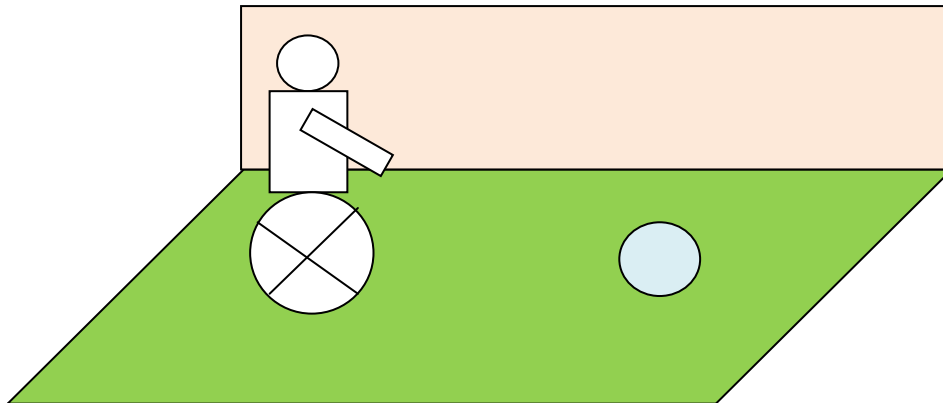
In **Part 2**, you will move the camera as follows:
        f - move camera forward
        b - move camera backward
        r - turn camera right
        l - turn camera left
        u - turn camera up
        d - turn camera down

In **Part 3**, you will add light effects and texture. Place a white light source to your environment. It must be controlled by keys 0 and 1.
        0-switch light off
        1-switch light on
The robot must be gray and shiny. The ball must be dull. Also map a 10x10 chessboard texture to the ground.

Important! Assignments must be done individually. You can discuss ideas with other students in general terms, but the code you submit should be your own work. You are not allowed to reuse codes that you find searching the web, magazines or books. If you use portions of a code that is on a website, you must reference the source of the code by giving the link to its web page. You can only use a SMALL percentage of the code and write the substantial portion of the program on your own. Otherwise you will not be given full credit for the assignment.

Submission: All assignments will be submitted through **coadsysexam**. Submit only the **source code** with the name "YourName_hw1p1.cpp" for part1, "YourName_hw1p2.cpp" for part2, "YourName_hw1p3.cpp" for part 3.
Do not submit a zip file.