CSE 483/CSE 583
Computer Graphics

Assignment 1

Due to:
Part1: 21.03.2021
Part2: 28.03.2021
Part3: 04.04.2021

In this homework you will create your first game using the primitives of OpenGL. This homework has three parts.

In **Part 1**, draw a robot and a ball. The robot must have a body, a head, a wheel and an arm. Also at the background draw a figure that consists of some lines and points which are replicated in a loop. Use at least three different colors. Be creative!
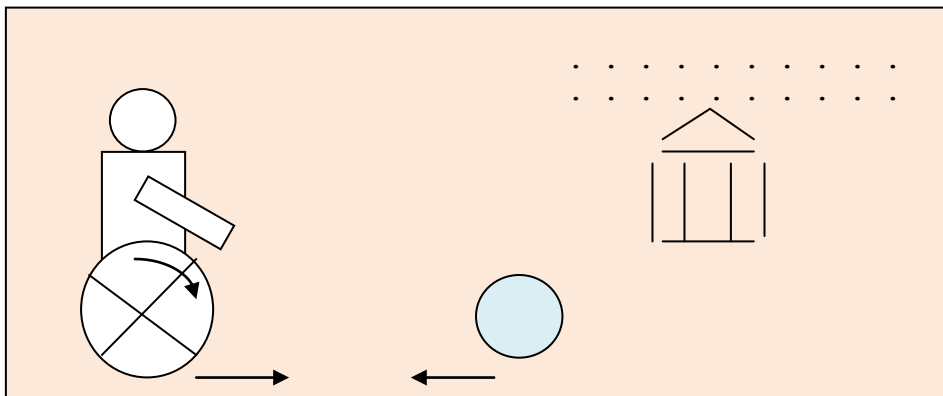
In **Part 2**, you will move the robot and the ball. Move the ball towards the robot. Also the robot must move towards the ball. While the robot is moving, its wheel must also rotate.

In **Part 3**, you will write your game. In this game, the player can control the robot using the keyboard.

"←"   moves robot left
"→"   moves robot right
Space bar   robot jumps (using the space bar, the robot can jump over the ball)

Goal of the game is to move the robot towards a moving ball and jump over the ball without collision. If the robot successfully jumps over the ball, the player wins. If there is a collision, color of the ball changes to red.

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.