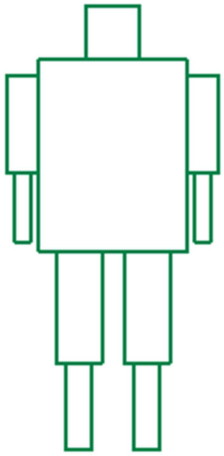
ANKARA UNIVERSITY
Computer Engineering
2018-2019 Fall Semester
COM337 Computer Graphics
Coursework 2

In this coursework, you will be drawing a humanoid character on screen, implementing interactive transformations and different projection options using WebGL. Your model will be similar to the figure below but it will be three-dimensional (3D). Therefore, you need to use 3D shapes such as cylinders and boxes instead of 2D ones like rectangles. Of course, because we only have triangles in WebGL, everything will be build up from triangles. You should use different colors for different parts of the body.



The character should rotate after a key from keyboard is pressed. It should rotate to right (d key), left (a key), up (w key) and down (s key) when the corresponding key is pressed.

The user can change between orthogonal and perspective projection by pressing p key.

Your program should also handle window reshape properly so that the shape is not distorted when aspect ratio changes.

Bonuses

The following tasks are not required but implementing them will give you bonus points.

- Rotation with mouse instead of keyboard.
- Using a hierarchical model instead of separate and independent shapes to build the character.
- A simple animation of the character such as walking, running, etc.
- Handling interaction so that the user can give a specific pose to the character through inputs.
- Being able to select part of a body with mouse click.

Warning

Your solutions will be analyzed using code similarity software. Of course you are free to discuss with your friends but your code should be your own work. If there is unacceptable level of similarity with others' solutions, it will be treated as plagiarism. In such a case, Higher Education Council (YÖK) regulations will be strictly applied.

Deadline and Submission

You should complete your work and send your source code to comblm337@gmail.com until **23:59 on December 23, Sunday**. An announcement for demo hours will be made on the course web page.