

To submit this assignment use your Github repository and follow the following instructions:

1. Create a new directory in the root folder and call it Assignments - if you don't already have it-
2. Inside Assignments create a new directory call it Assignment03
3. You will need 3 files inside Assignment03 since this assignment has only 3 questions, you should call each file by its questions number for example question 2 will be called question2.html, and for questions that are not a coding question you are allowed to use text file format only .txt
4. When you finish answering all your question you can push to Github
5. On CANVAS you need to submit the link to your repository before the due date
6. Make sure to check your work on GitHub before submitting to CANVAS
7. Don't commit anything to GitHub after the assignment due date

Question 01 (Keypress Animation)

For this question, you need to create a triangle in the middle of the CANVAS and use arrow keys to rotate this triangle with respect to the y-axis, if the user presses the left arrow the triangle will rotate left if the user presses the right arrow the triangle will rotate in the opposite direction, the animation should not break your rendering under any condition.

Triangle and implementation properties:

- You need to use the color buffer as explained in class
- For rotation, you need to use the Matrix4() class as explained in class
- Every vertex of the three of the triangle should have a different color
- The vertex array should be a collection of [x, y, R, B, G] for every vertex

Question 02 (Random Color Points Animation)

In the previous assignment, you added one point to the canvas and moved it randomly between the walls of the canvas, in this question you will need to randomly move two-points in the canvas with the following requirements:

- **None of the two points will translate outside of the canvas (exactly like before)**
- **Ignore the z transposition**
- **The two points will change their color randomly every 5 seconds**

Question 03 (3-D cube)

In this question, you will create a 3-D cube as shown below, all sides of this cube should be colored differently (anything of your choice) color should be interpolated from the vertices, in order to show the colors of all sides of the cube you should constantly rotate it around the x and y-axis

