



HACETTEPE BBM414 **EXP-2**

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ALGORITHM

I removed the unnecessary vertex shader from exp1 and added scaling and rotation settings as showed in slides. I added uniform variable to fragment shader which used for editing brightness of color. I only used one buffer and one VAO this time. I created pointers and check values for activating the states of the program. Idle function used for setting Z axis rotation up and color change.

FUNCTIONS

`void reshape(int w, int h)` for basic re-sizing window.

`void display(void)` for binding VAO, setting up uniform variables and by using correct program displaying content.

`void init()` for setting up vertices and managing buffer objects and setting vertex and fragment shaders and setting scale, theta, fcolor uniform variables' location

`int main(int argc, char **argv)` for glut and other initializings and using other functions. Added newly used callbacks.

`void keyboard(unsigned char key, int x, int y)` for keyboard call-backs.

`void idle(void)` for calling continuously through execution.

ENVIRONMENT SET-UP

```
sudo apt-get install libglu1-mesa-dev freeglut3-dev  
mesa-common-dev
```

```
sudo apt-get install libglew-dev
```

```
sudo apt-get install libglm-dev
```

```
sudo apt-get install libglfw3-dev
```

```
g++ -o Second second_assignment_openGL.cpp  
-IGL -IGLU -lglut -lglfw -IGLEW
```

REFERENCES

- INTERACTIVE COMPUTER GRAPHICS
A TOP-DOWN APPROACH WITH SHADER-BASED OPENGL®
6th Edition
- stackoverflow.com