

Universitatea Tehnică Cluj-Napoca
Facultatea de Automatică și Calculatoare
Automatică

OpenGL

Proiect

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2019-2020

Summary

Contents

3D animated Object.....

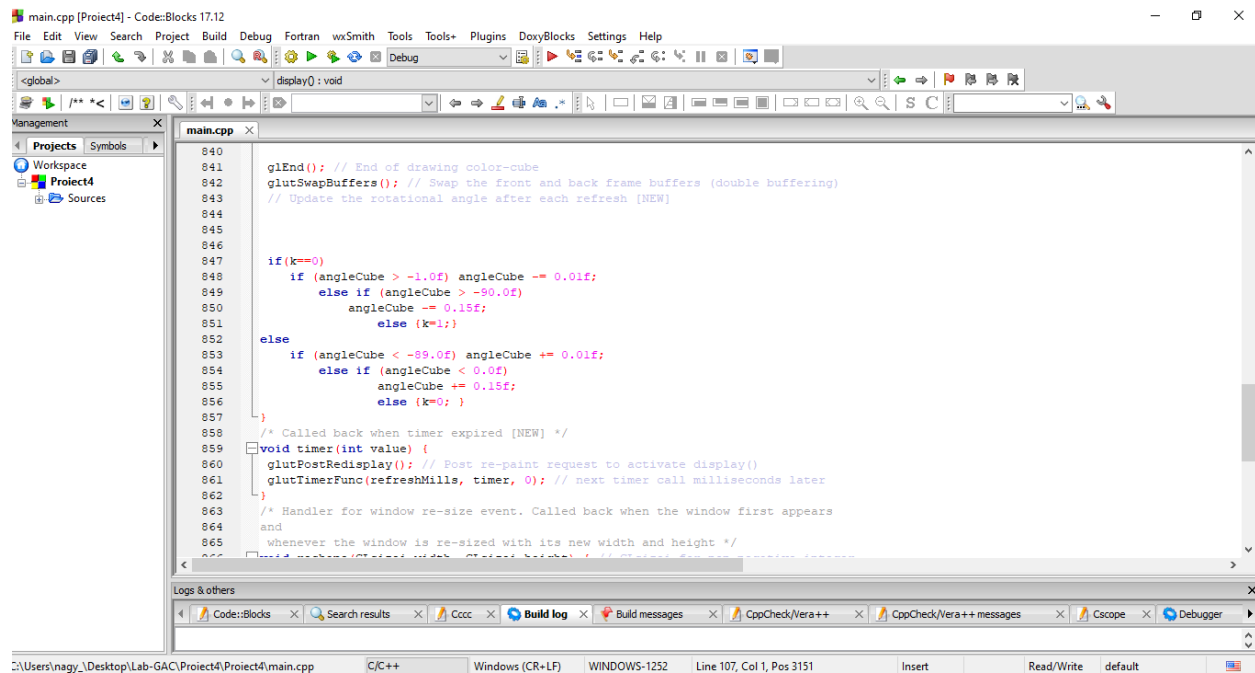
Function & Commands.....

3D animated Object



The object is rotated to -90.0f around Ox.

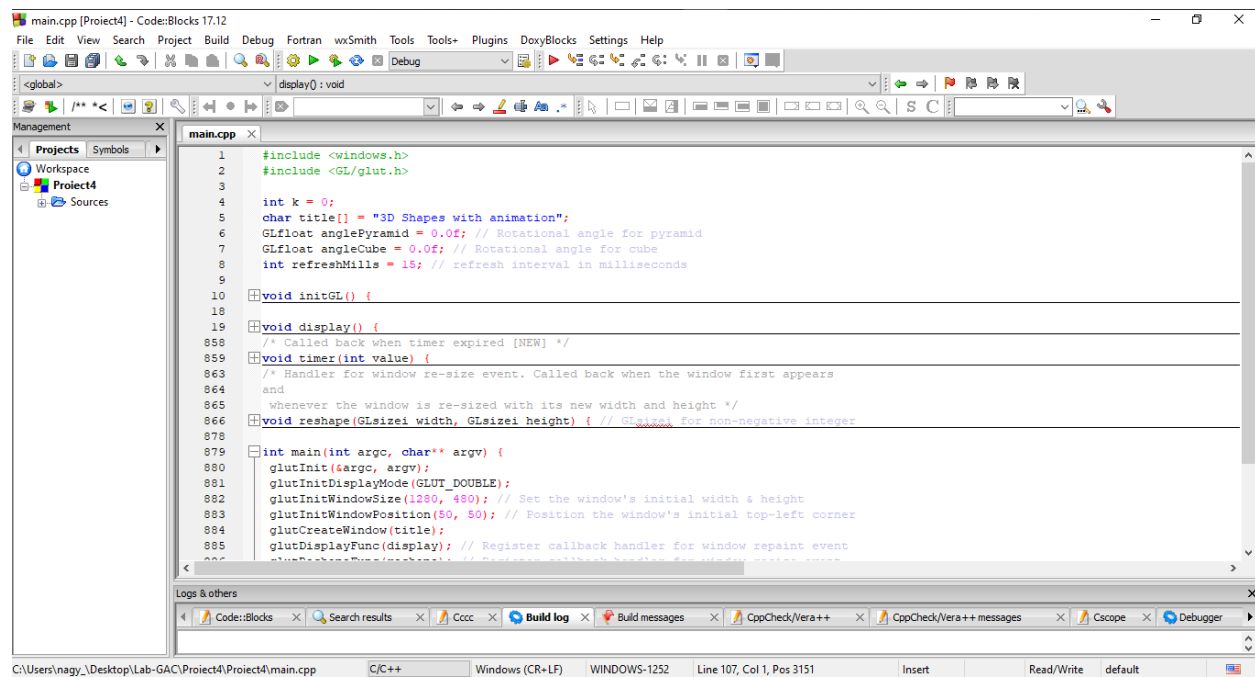
If angleCube = -90.0f The Object is rotated back to 0.0f.



The screenshot shows a C++ IDE with the following code in `main.cpp`:

```
840
841  glEnd(); // End of drawing color-cube
842  glutSwapBuffers(); // Swap the front and back frame buffers (double buffering)
843  // Update the rotational angle after each refresh [NEW]
844
845
846
847  if(k==0)
848      if (angleCube > -1.0f) angleCube -= 0.01f;
849      else if (angleCube > -90.0f)
850          angleCube -= 0.15f;
851          else (k=1);
852
853  else
854      if (angleCube < -89.0f) angleCube += 0.01f;
855      else if (angleCube < 0.0f)
856          angleCube += 0.15f;
857          else (k=0; )
858
859  /* Called back when timer expired [NEW] */
860  void timer(int value) {
861      glutPostRedisplay(); // Post re-paint request to activate display()
862      glutTimerFunc(refreshMills, timer, 0); // next timer call milliseconds later
863  }
864
865  /* Handler for window re-size event. Called back when the window first appears
866  and
867  whenever the window is re-sized with its new width and height */
868  void reshape(GLsizei width, GLsizei height) { // GLsizei for non-negative integer
```

The status bar at the bottom indicates the file path: `C:\Users\nagy\Desktop\Lab-GAC\Project4\Project4\main.cpp`, the language is `C/C++`, the window is `Windows (CR+LF)`, the editor is `WINDOWS-1252`, the cursor is at `Line 107, Col 1, Pos 3151`, and the keyboard layout is `Insert`.



The screenshot shows a C++ IDE with the following code in `main.cpp`:

```
1  #include <windows.h>
2  #include <GL/glut.h>
3
4  int k = 0;
5  char title[] = "3D Shapes with animation";
6  GLfloat anglePyramid = 0.0f; // Rotational angle for pyramid
7  GLfloat angleCube = 0.0f; // Rotational angle for cube
8  int refreshMills = 15; // refresh interval in milliseconds
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10 void initGL() {
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19 void display() {
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Commends/Functions

void initGL()

void reshape(GLsizei width, GLsizei height)

void timer(int value)

glClearColor(0.0f, 0.0f, 0.0f, 1.0f)

glTranslatef(1.5f, 0.0f, -20.0f)

glRotatef(angleCube, 10.0f, 0.0f, 0.0f)

glColor3f(1.0f, 1.0f, 1.0f)

glVertex3f(1.0f, 0.0f, 5.0f)

glutCreateWindow(title)

glutDisplayFunc(display)

glutReshapeFunc(reshape)

glutTimerFunc(0, timer, 0)

glutMainLoop()