Lab Taks-6

Submission Guidelines-

- Rename the file to your id only. If your id is 18-XXXXX-1, then the file name must be 18-XXXXX-1.docx.
- Must include resources for all the section in the table

Question-
Develop an animation that will change the background color of the window after 20ms. Use at least two different colors.

Code-

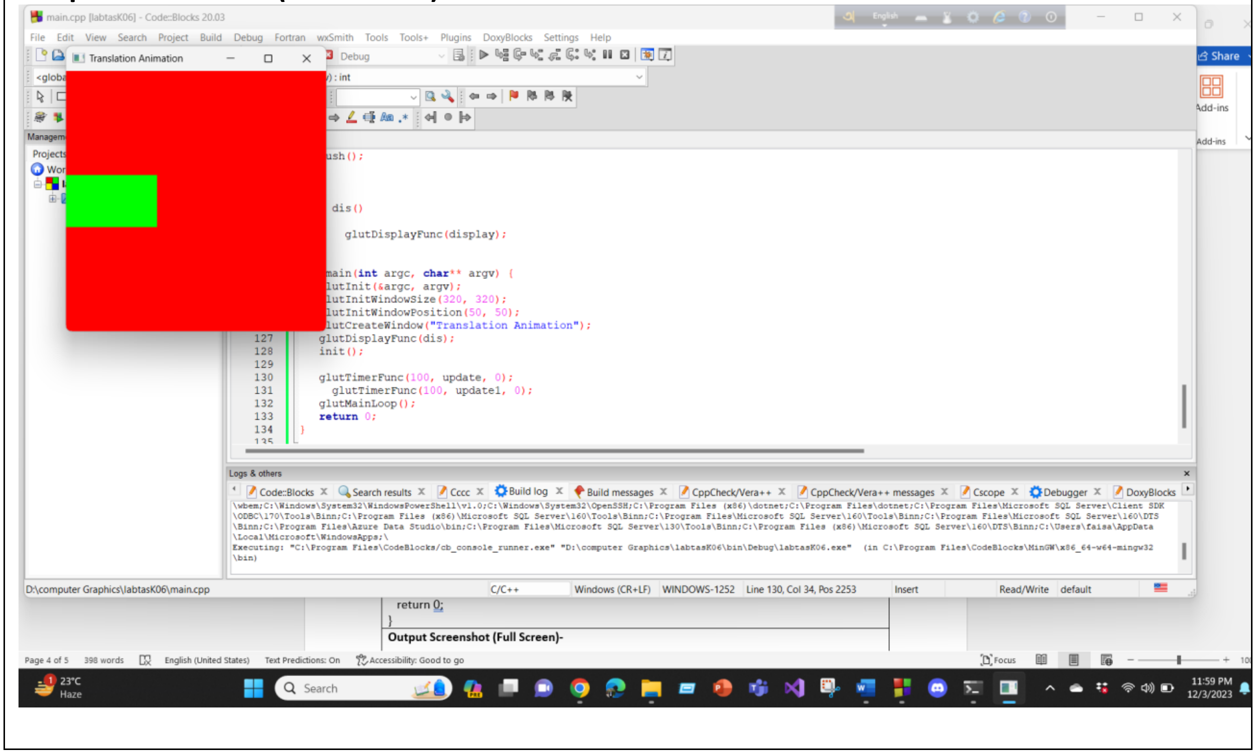
```
#include<cstdio>

#include <GL/gl.h>
#include <GL/glut.h>


GLfloat position = 0.0f;
GLfloat position1 = 0.0f;
GLfloat speed = 0.1f;
void dis();
void display();

void update(int value) {

    if(position <-1.5)
        position = 1.0f;

    position -= speed;

             glutPostRedisplay();


             glutTimerFunc(100,update,0);
}
```

```
void update1(int value) {

    if(position1 >1.0)
        position1 = -1.0f;

    position1 += speed;

             glutPostRedisplay();


             glutTimerFunc(100,update1,0);
}

void init() {
   glClearColor(0.0f, 1.0f, 0.0f, 1.0f);
}

void disback(int val)
{
    glutDisplayFunc(display);
}
void display5()
{
    glClear(GL_COLOR_BUFFER_BIT);
    glClearColor(1.0f, 0.0f, 0.0f, 1.0f);
    glPushMatrix();
    glTranslatef(0.0f,position, 0.0f);
    glBegin(GL_QUADS);
      glColor3ub(250, 232, 218);
      glVertex2f(-0.2f, -0.2f);
      glVertex2f( 0.2f, -0.2f);
      glVertex2f( 0.2f,  0.2f);
      glVertex2f(-0.2f,  0.2f);
   glEnd();
   glPopMatrix();
   //glutTimerFunc(1500,disback,0);
   glFlush();

}




void display3()
```

```
{
   glClear(GL_COLOR_BUFFER_BIT);
   glClearColor(1.0f, 0.0f, 0.0f, 1.0f);
   glPushMatrix();
glTranslatef(position1,0.0f, 0.0f);
  glBegin(GL_QUADS);
    glColor3f(0.0f, 1.0f, 0.0f);
    glVertex2f(-0.2f, -0.2f);
    glVertex2f( 0.5f, -0.2f);
    glVertex2f( 0.5f,  0.2f);
    glVertex2f(-0.2f,  0.2f);
  glEnd();
  glPopMatrix();
  glFlush();
}

void display2(int val) {

 glutDisplayFunc(display3);


}
void display() {
  glClear(GL_COLOR_BUFFER_BIT);
  glLoadIdentity();



glPushMatrix();
glTranslatef(position,0.0f, 0.0f);
  glBegin(GL_QUADS);
    glColor3f(1.0f, 0.0f, 0.0f);
    glVertex2f(-0.2f, -0.2f);
    glVertex2f( 0.2f, -0.2f);
    glVertex2f( 0.2f,  0.2f);
    glVertex2f(-0.2f,  0.2f);
  glEnd();



glutTimerFunc(1500,display2,0);
glFlush();

}
```

```
void dis()
{
      glutDisplayFunc(display);
}

int main(int argc, char** argv) {
  glutInit(&argc, argv);
  glutInitWindowSize(320, 320);
  glutInitWindowPosition(50, 50);
  glutCreateWindow("Translation Animation");
  glutDisplayFunc(dis);
  init();

  glutTimerFunc(100, update, 0);
    glutTimerFunc(100, update1, 0);
  glutMainLoop();
  return 0;
}
```

Output Screenshot (Full Screen)-



```
ush();


 dis()

   glutDisplayFunc(display);


main(int argc, char** argv) {
lutInit(&argc, argv);
lutInitWindowSize(320, 320);
lutInitWindowPosition(50, 50);
lutCreateWindow("Translation Animation");
  glutDisplayFunc(dis);
  init();

  glutTimerFunc(100, update, 0);
    glutTimerFunc(100, update1, 0);
  glutMainLoop();
  return 0;
}
```

```
\wbem;C:\Windows\System32\WindowsPowerShell\v1.0;C:\Windows\System32\OpenSSH;C:\Program Files (x86)\dotnet;C:\Program Files\dotnet;C:\Program Files\Microsoft SQL Server\Client SDK
\ODBC\170\Tools\Binn;C:\Program Files (x86)\Microsoft SQL Server\160\Tools\Binn;C:\Program Files\Microsoft SQL Server\160\Tools\Binn;C:\Program Files\Microsoft SQL Server\160\DTS
\Binn;C:\Program Files\Azure Data Studio\bin;C:\Program Files\Microsoft SQL Server\130\Tools\Binn;C:\Program Files (x86)\Microsoft SQL Server\160\DTS\Binn;C:\Users\faisa\AppData
\Local\Microsoft\WindowsApps;\
Executing: "C:\Program Files\CodeBlocks/cb_console_runner.exe" "D:\computer Graphics\labtasK06\bin\Debug\labtasK06.exe"  (in C:\Program Files\CodeBlocks\MinGW\x86_64-w64-mingw32
\bin)
```

Question-

Develop an animation that will call four objects separately, each after 20 ms.

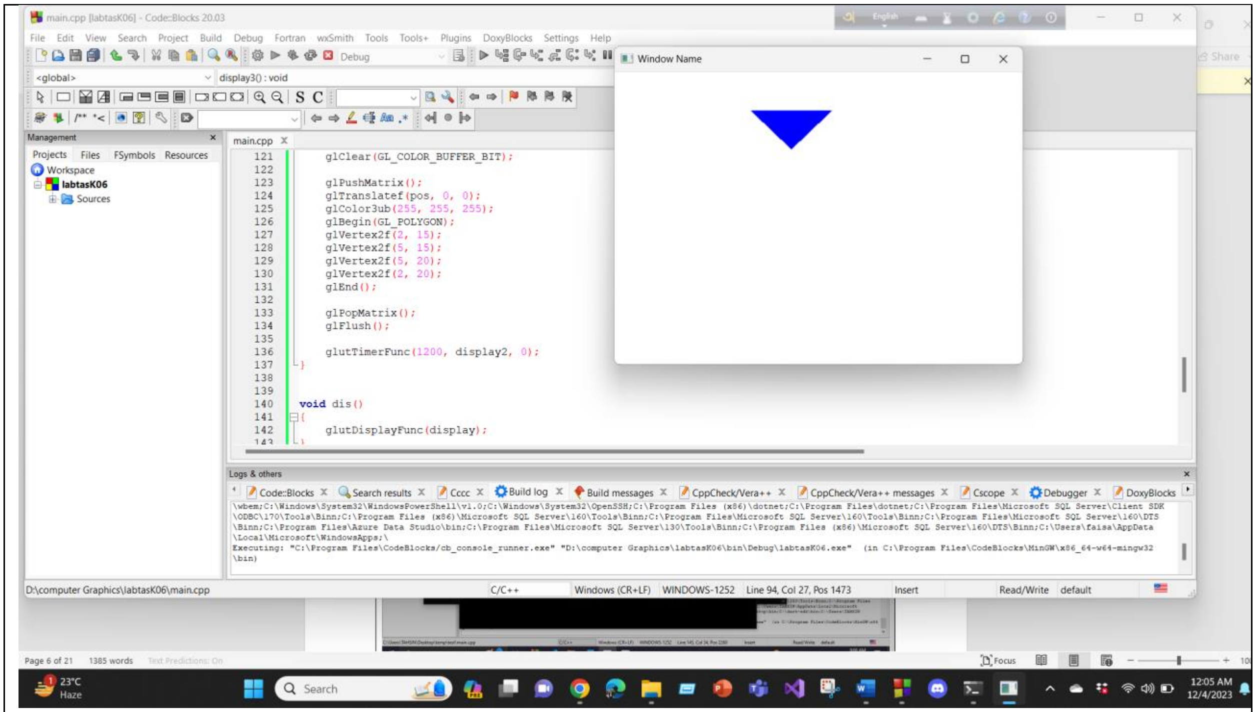
Code-

```
#include <windows.h>
#include <GL/glut.h>
#include <math.h>
#include <vector>
using namespace std;

float pos = 0;
float pos2 = 0;
float pos3 = 0;
float pos4 = 0;
float inc = 0.5;

void dis();
void display();


void LeftToRight(int val)
{
   glutPostRedisplay();
   glutTimerFunc(20, LeftToRight, 0);
}


void init()
{
   glClearColor(1,1,1,1.0f);
}

void disback(int val)
{
   glutDisplayFunc(display);
}

void display7()
{
   glClear(GL_COLOR_BUFFER_BIT);
   glClearColor(1.0f, 1.0f, 1.0f, 1.0f);
   glPushMatrix();

   glTranslatef(0, pos4, 0);
   glColor3ub(0,100,255);
   glBegin(GL_POLYGON);
   glVertex2f(13, 2);
   glVertex2f(16, 6);
   glVertex2f(13, 8);
   glVertex2f(10, 6);
   glEnd();

   glPopMatrix();
   glFlush();

   glutTimerFunc(1200, disback, 0);
}

void display6(int val)
{
   glutDisplayFunc(display7);
}

// top to bottom
void display5()
{
   glClear(GL_COLOR_BUFFER_BIT);
   glClearColor(1.0f, 1.0f, 1.0f, 1.0f);
   glPushMatrix();

   glTranslatef(0, pos3, 0);
   glColor3ub(0,0,255);
   glBegin(GL_POLYGON);
   glVertex2f(13, 22);
   glVertex2f(16, 26);
   glVertex2f(10, 26);
   glEnd();

   glPopMatrix();
   glFlush();

   glutTimerFunc(1200, display6, 0);

}


void display4(int val)
{
   glutDisplayFunc(display5);
}
```

```
// right to left
void display3()
{
   glClear(GL_COLOR_BUFFER_BIT);
   glColor3ub(0, 255, 0);
   glPushMatrix();

   glTranslatef(pos2, 0, 1);
   glColor3ub(0, 255, 0);
   glBegin(GL_POLYGON);
   glVertex2f(25, 15);
   glVertex2f(28, 15);
   glVertex2f(28, 20);
   glEnd();

   glPopMatrix();
   glFlush();

   glutTimerFunc(1200, display4, 0);
}



void display2(int val)
{
   glutDisplayFunc(display3);
}


// left to right
void display() {
        glClear(GL_COLOR_BUFFER_BIT);

        glPushMatrix();
        glTranslatef(pos, 0, 0);
        glColor3ub(255, 255, 255);
        glBegin(GL_POLYGON);
        glVertex2f(2, 15);
        glVertex2f(5, 15);
        glVertex2f(5, 20);
        glVertex2f(2, 20);
        glEnd();
```

```
          glPopMatrix();
          glFlush();

          glutTimerFunc(1200, display2, 0);
}


void dis()
{
   glutDisplayFunc(display);
}


int main(int argc, char** argv) {
          glutInit(&argc, argv);
          glutInitWindowSize(360, 360);

          //glutInitWindowPosition((glutGet(GLUT_SCREEN_WIDTH)-
1100)/2,(glutGet(GLUT_SCREEN_HEIGHT)-600)/2);
          glutInitWindowPosition(200, 50);
          glutCreateWindow("Window Name");

   //this line must be below of glutCreateWindow();
   gluOrtho2D(0, 30, 0, 30);
          glutDisplayFunc(display);

          glutTimerFunc(20, LeftToRight, 0);

          glutMainLoop();
          return 0;
}
```

Output Screenshot (Full Screen)-



```
    glClear(GL_COLOR_BUFFER_BIT);

    glPushMatrix();
    glTranslatef(pos, 0, 0);
    glColor3ub(255, 255, 255);
    glBegin(GL_POLYGON);
    glVertex2f(2, 15);
    glVertex2f(5, 15);
    glVertex2f(5, 20);
    glVertex2f(2, 20);
    glEnd();

    glPopMatrix();
    glFlush();

    glutTimerFunc(1200, display2, 0);
}


void dis()
{
    glutDisplayFunc(display);
}
```

```
\wbem;C:\Windows\System32\WindowsPowerShell\v1.0;C:\Windows\System32\OpenSSH;C:\Program Files (x86)\dotnet;C:\Program Files\dotnet;C:\Program Files\Microsoft SQL Server\Client SDK
\ODBC\170\Tools\Binn;C:\Program Files (x86)\Microsoft SQL Server\160\Tools\Binn;C:\Program Files\Microsoft SQL Server\160\Tools\Binn;C:\Program Files\Microsoft SQL Server\160\DTS
\Binn;C:\Program Files\Azure Data Studio\bin;C:\Program Files\Microsoft SQL Server\130\Tools\Binn;C:\Program Files (x86)\Microsoft SQL Server\160\DTS\Binn;C:\Users\faisa\AppData
\Local\Microsoft\WindowsApps;\
Executing: "C:\Program Files\CodeBlocks/cb_console_runner.exe" "D:\computer Graphics\labtasK06\bin\Debug\labtasK06.exe"  (in C:\Program Files\CodeBlocks\MinGW\x86_64-w64-mingw32
\bin)
```

main.cpp [labtasK06] - Code::Blocks 20.03
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
Debug
<global>
display3() : void
Management
Projects Files FSymbols Resources
Workspace
labtasK06
Sources
main.cpp
Window Name
Logs & others
Code::Blocks Search results Cccc Build log Build messages CppCheck/Vera++ CppCheck/Vera++ messages Cscope Debugger DoxyBlocks
D:\computer Graphics\labtasK06\main.cpp
C/C++
Windows (CR+LF)
WINDOWS-1252
Line 94, Col 27, Pos 1473
Insert
Read/Write
default
Page 6 of 21
1385 words
Focus
23°C
Haze
Search
12:05 AM
12/4/2023

Question-

Develop a code that will have four different objects (keep it simple). The objects will move to the left, right, up and down in a loop.

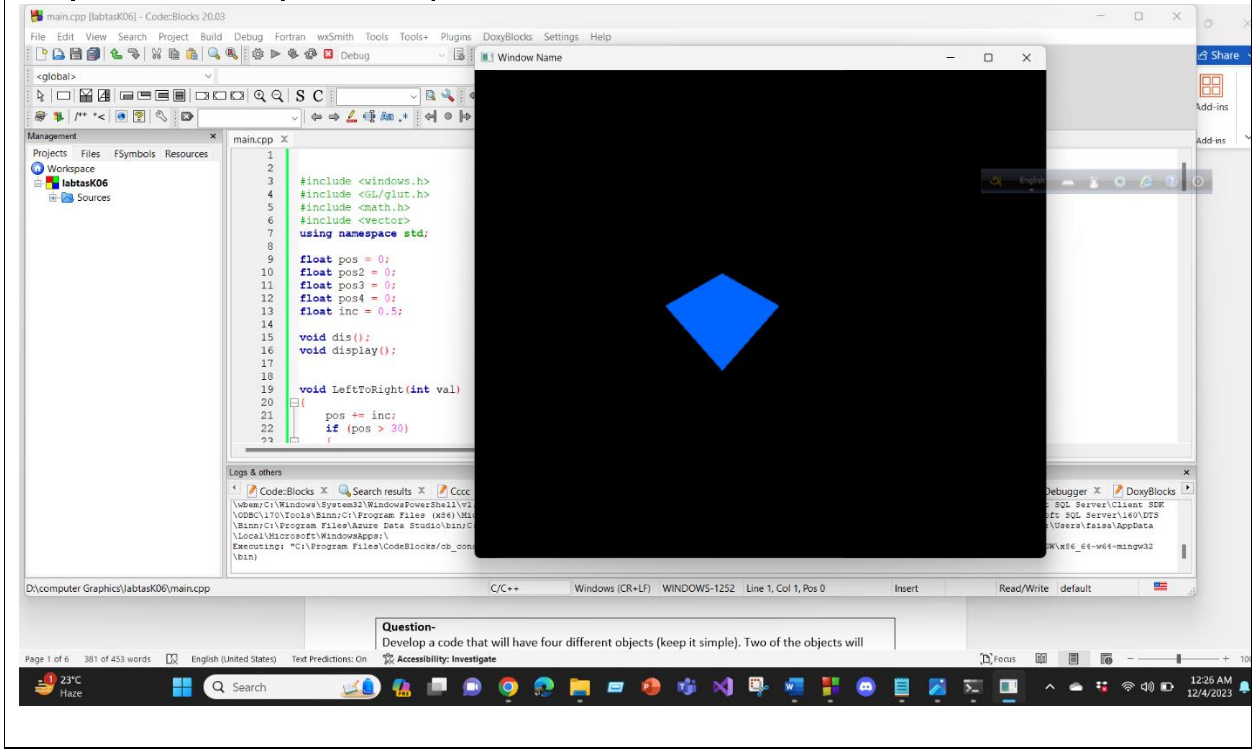
Code-

```
#include <windows.h>
#include <GL/glut.h>
#include <math.h>
#include <vector>
using namespace std;

float pos = 0;
float pos2 = 0;
float pos3 = 0;
float pos4 = 0;
float inc = 0.5;

void dis();
void display();



void LeftToRight(int val)
{
   pos += inc;
   if (pos > 30)
   {
      pos = -5;
   }
   glutPostRedisplay();
   glutTimerFunc(20, LeftToRight, 0);

}

void RightToLeft(int val)
{
   pos2 += inc * -1;
   if (pos2 < -30)
   {
      pos2 = 0;
   }
   glutPostRedisplay();
   glutTimerFunc(20, RightToLeft, 0);
}

void TopToBottom(int val)
{
   if (pos3 < -30)
   {
      pos3 = 0;
   }
   pos3 -= inc;
   glutPostRedisplay();
   glutTimerFunc(20, TopToBottom, 0);
}

void BottomToTop(int val)
{
   pos4 += inc;
   if (pos4 > 30)
   {
      pos4 = 0;
   }
   glutPostRedisplay();
   glutTimerFunc(20, BottomToTop, 0);
}

void init()
```

```
{
   glClearColor(1,1,1,1.0f);
}

void disback(int val)
{
   glutDisplayFunc(display);
}

void display7()
{
   glClear(GL_COLOR_BUFFER_BIT);
   glClearColor(0.0f, 0.0f, 0.0f, 1.0f);
   glPushMatrix();

   glTranslatef(0, pos4, 0);
   glColor3ub(0,100,255);
   glBegin(GL_POLYGON);
   glVertex2f(13, 2);
   glVertex2f(16, 6);
   glVertex2f(13, 8);
   glVertex2f(10, 6);
   glEnd();

   glPopMatrix();
   glFlush();

   glutTimerFunc(1200, disback, 0);
}

void display6(int val)
{
   glutDisplayFunc(display7);
}

// top to bottom
void display5()
{
   glClear(GL_COLOR_BUFFER_BIT);
   glClearColor(0.0f, 0.0f, 0.0f, 1.0f);
   glPushMatrix();

   glTranslatef(0, pos3, 0);
   glColor3ub(0,0,255);
   glBegin(GL_POLYGON);
   glVertex2f(13, 22);
   glVertex2f(16, 26);
   glVertex2f(10, 26);
   glEnd();

   glPopMatrix();
   glFlush();

   glutTimerFunc(1200, display6, 0);

}


void display4(int val)
{
   glutDisplayFunc(display5);
}


// right to left
void display3()
{
   glClear(GL_COLOR_BUFFER_BIT);
   glClearColor(0.0f, 0.0f, 0.0f, 1.0f);
   glPushMatrix();

   glTranslatef(pos2, 0, 1);
   glColor3ub(0, 255, 0);
   glBegin(GL_POLYGON);
   glVertex2f(25, 15);
   glVertex2f(28, 15);
   glVertex2f(28, 20);
   glEnd();

   glPopMatrix();
   glFlush();

   glutTimerFunc(1200, display4, 0);
}



void display2(int val)
```

```
{
   glutDisplayFunc(display3);
}


// left to right
void display() {
        glClear(GL_COLOR_BUFFER_BIT);

        glPushMatrix();
        glTranslatef(pos, 0, 0);
        glColor3ub(255, 0, 0);
        glBegin(GL_POLYGON);
        glVertex2f(2, 15);
        glVertex2f(5, 15);
        glVertex2f(5, 20);
        glVertex2f(2, 20);
        glEnd();

        glPopMatrix();
        glFlush();

        glutTimerFunc(1200, display2, 0);
}


void dis()
{
   glutDisplayFunc(display);
}


int main(int argc, char** argv) {
        glutInit(&argc, argv);
        glutInitWindowSize(800, 600);

        //glutInitWindowPosition((glutGet(GLUT_SCREEN_WIDTH)-
1100)/2,(glutGet(GLUT_SCREEN_HEIGHT)-600)/2);
        glutInitWindowPosition(200, 50);
        glutCreateWindow("Window Name");

   //this line must be below of glutCreateWindow();
   gluOrtho2D(0, 30, 0, 30);
        glutDisplayFunc(display);
        glutTimerFunc(20, LeftToRight, 0);
        glutTimerFunc(20, RightToLeft, 0);
        glutTimerFunc(20, TopToBottom, 0);
        glutTimerFunc(20, BottomToTop, 0);
        glutMainLoop();
        return 0;
}
```

Output Screenshot (Full Screen)-


main.cpp [labtasK06] - Code::Blocks 20.03
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
Debug
<global>
Management
Projects Files FSymbols Resources
Workspace
labtasK06
Sources
main.cpp
Window Name
Logs & others
Code::Blocks Search results Cccc Debugger DoxyBlocks
D:\computer Graphics\labtasK06\main.cpp
C/C++
Windows (CR+LF)
WINDOWS-1252
Line 1, Col 1, Pos 0
Insert
Read/Write
default
Share
Add-ins
Page 1 of 6
381 of 453 words
English (United States)
Text Predictions: On
Accessibility: Investigate
Focus
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Haze
Search
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12/4/2023

```


#include <windows.h>
#include <GL/glut.h>
#include <math.h>
#include <vector>
using namespace std;

float pos = 0;
float pos2 = 0;
float pos3 = 0;
float pos4 = 0;
float inc = 0.5;

void dis();
void display();


void LeftToRight(int val)
{
    pos += inc;
    if (pos > 30)
```

```
\wbem;C:\Windows\System32\WindowsPowerShell\v1
\ODBC\170\Tools\Binn;C:\Program Files (x86)\Mi
\Binn;C:\Program Files\Azure Data Studio\bin;C
\Local\Microsoft\WindowsApps;\
Executing: "C:\Program Files\CodeBlocks/cb_con
\bin)
```

```
t SQL Server\Client SDK
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:\Users\faisa\AppData

GW\x86_64-w64-mingw32
```

Question-
Develop a code that will have four different objects (keep it simple). Two of the objects will

Question-

Develop a code that will have four different objects (keep it simple). Four different keys will be dedicated each objects. The objects will move to the left, right, up and down in a loop as the keys are pressed individually.

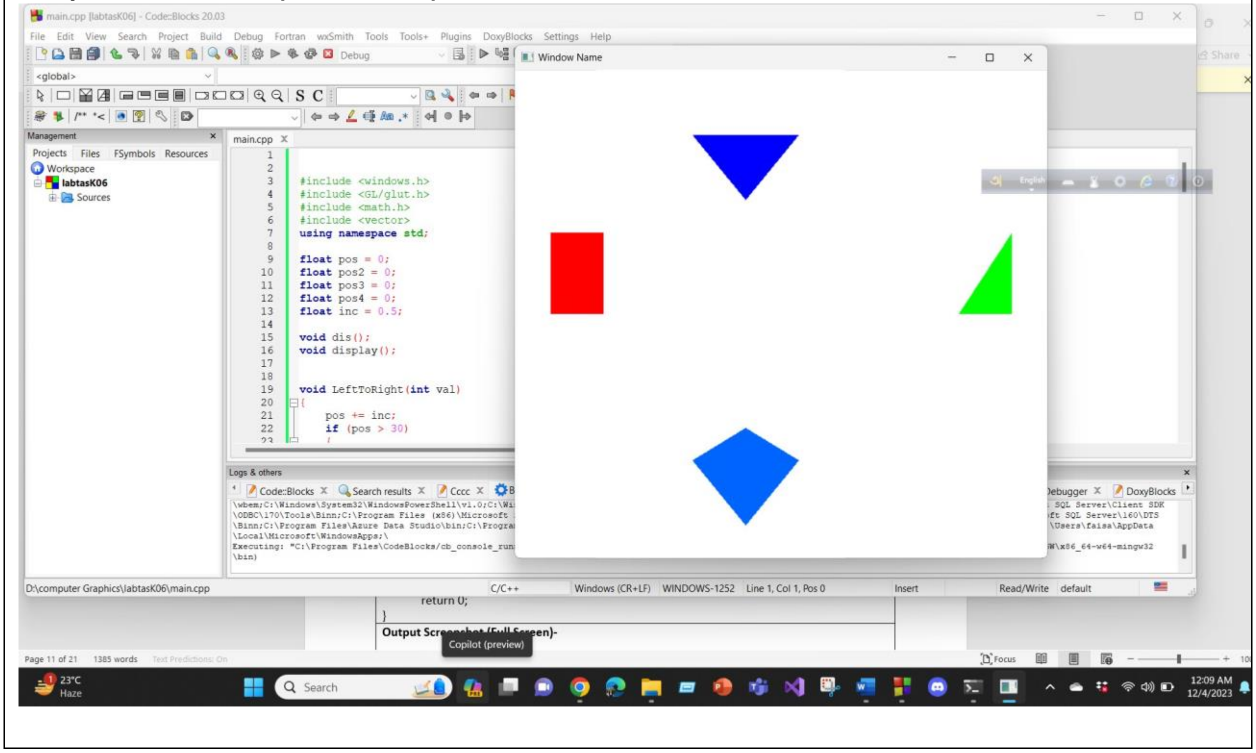
Code-

```
#include <windows.h>
#include <GL/glut.h>
#include <math.h>
#include <vector>
```

```
using namespace std;

float pos = 0;
float pos2 = 0;
float pos3 = 0;
float pos4 = 0;
float inc = 0.5;

void dis();
void display();


void LeftToRight(int val)
{
   pos += inc;
   if (pos > 30)
   {
      pos = -5;
   }
   glutPostRedisplay();
   glutTimerFunc(20, LeftToRight, 0);

}

void RightToLeft(int val)
{
   pos2 += inc * -1;
   if (pos2 < -30)
   {
      pos2 = 0;
   }
   glutPostRedisplay();
   glutTimerFunc(20, RightToLeft, 0);
}


void object4()
{
   glPushMatrix();

   glTranslatef(pos2, 0, 0);
   glColor3ub(0,100,255);
   glBegin(GL_POLYGON);
   glVertex2f(13, 2);
   glVertex2f(16, 6);
   glVertex2f(13, 8);
   glVertex2f(10, 6);
   glEnd();

   glPopMatrix();
}


void object3()
{
   glPushMatrix();

   glTranslatef(pos, 0, 0);
   glColor3ub(0,0,255);
   glBegin(GL_POLYGON);
   glVertex2f(13, 22);
   glVertex2f(16, 26);
   glVertex2f(10, 26);
   glEnd();

   glPopMatrix();
}


void object2()
{
   glPushMatrix();

   glTranslatef(pos2, 0, 1);
   glColor3ub(0, 255, 0);
   glBegin(GL_POLYGON);
   glVertex2f(25, 15);
   glVertex2f(28, 15);
   glVertex2f(28, 20);
   glEnd();

   glPopMatrix();
}


void object1()
{
   glPushMatrix();
```

```
	glTranslatef(pos, 0, 0);
	glColor3ub(255, 0, 0);
	glBegin(GL_POLYGON);
	glVertex2f(2, 15);
	glVertex2f(5, 15);
	glVertex2f(5, 20);
	glVertex2f(2, 20);
	glEnd();

	glPopMatrix();
}


void display()
{
   glClearColor(1, 1, 1, 1.0f);
   glClear(GL_COLOR_BUFFER_BIT);

   object1();
   object2();
   object3();
   object4();
   glFlush();
   glutSwapBuffers();
}




void handleMouse(int button, int state, int x, int y) {
	if (button == GLUT_LEFT_BUTTON) {
      glutTimerFunc(20, RightToLeft, 0);
	}
   if (button == GLUT_RIGHT_BUTTON) {
      glutTimerFunc(20, LeftToRight, 0);
   }
   glutPostRedisplay();
}


int main(int argc, char** argv) {
	glutInit(&argc, argv);
	glutInitWindowSize(800, 600);
	//glutInitWindowPosition((glutGet(GLUT_SCREEN_WIDTH)-1100)/2,(glutGet(GLUT_SCREEN_HEIGHT)-600)/2);
	glutInitWindowPosition(200, 50);
	glutCreateWindow("Window Name");

   //this line must be below of glutCreateWindow();
   gluOrtho2D(0, 30, 0, 30);
   glutMouseFunc(handleMouse);
   glutDisplayFunc(display);



	glutMainLoop();
	return 0;
}
```

Output Screenshot (Full Screen)-



main.cpp [labtasK06] - Code::Blocks 20.03
File Edit View Search Project Build Debug Fortran wxSmith Tools Tools+ Plugins DoxyBlocks Settings Help
Debug
<global>
Management
Projects Files FSymbols Resources
Workspace
labtasK06
Sources
main.cpp
Window Name
Logs & others
Code::Blocks Search results Cccc Debugger DoxyBlocks
D:\computer Graphics\labtasK06\main.cpp
C/C++ Windows (CR+LF) WINDOWS-1252 Line 1, Col 1, Pos 0 Insert Read/Write default
Page 11 of 21 1385 words
Copilot (preview)
Focus
23°C Haze
Search
12:09 AM 12/4/2023

```


#include <windows.h>
#include <GL/glut.h>
#include <math.h>
#include <vector>
using namespace std;

float pos = 0;
float pos2 = 0;
float pos3 = 0;
float pos4 = 0;
float inc = 0.5;

void dis();
void display();


void LeftToRight(int val)
{
    pos += inc;
    if (pos > 30)
```

```
\wbem;C:\Windows\System32\WindowsPowerShell\v1.0;C:\Wi
\ODBC\170\Tools\Binn;C:\Program Files (x86)\Microsoft
\Binn;C:\Program Files\Azure Data Studio\bin;C:\Progra
\Local\Microsoft\WindowsApps;\
Executing: "C:\Program Files\CodeBlocks/cb_console_run
\bin)
```

```
 SQL Server\Client SDK
ft SQL Server\160\DTS
\Users\faisa\AppData

W\x86_64-w64-mingw32
```

```
	return 0;
}
```

Output Screenshot (Full Screen)-

Question-

Develop a code that will have four different objects (keep it simple). Two of the objects will move to the right as the right click is made on the mouse and two of the objects will move to the left as the left key is pressed on the mouse.

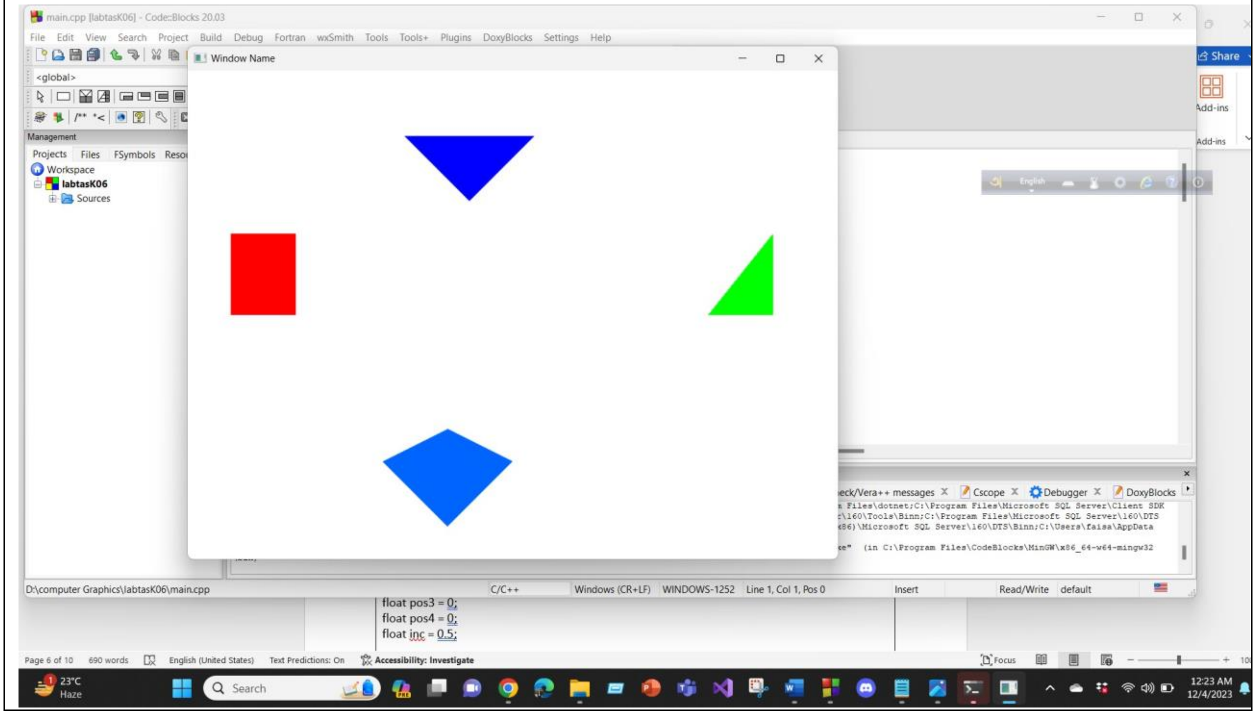
Code-

```
#include <windows.h>
#include <GL/glut.h>
#include <math.h>
#include <vector>
using namespace std;

float pos = 0;
float pos2 = 0;
float pos3 = 0;
float pos4 = 0;
float inc = 0.5;

void dis();
void display();


void LeftToRight(int val)
{
   pos += inc;
   if (pos > 30)
   {
      pos = -5;
   }
   glutPostRedisplay();
   glutTimerFunc(20, LeftToRight, 0);

}

void RightToLeft(int val)
{
   pos2 += inc * -1;
   if (pos2 < -30)
   {
      pos2 = 0;
   }
   glutPostRedisplay();
   glutTimerFunc(20, RightToLeft, 0);
}


void object4()
{
   glPushMatrix();
   glTranslatef(pos2, 0, 0);
   glColor3ub(0,100,255);
   glBegin(GL_POLYGON);
   glVertex2f(13, 2);
   glVertex2f(16, 6);
   glVertex2f(13, 8);
   glVertex2f(10, 6);
   glEnd();

   glPopMatrix();
}


void object3()
{
   glPushMatrix();

   glTranslatef(pos, 0, 0);
   glColor3ub(0,0,255);
   glBegin(GL_POLYGON);
   glVertex2f(13, 22);
   glVertex2f(16, 26);
   glVertex2f(10, 26);
   glEnd();

   glPopMatrix();
}


void object2()
{
   glPushMatrix();

   glTranslatef(pos2, 0, 1);
   glColor3ub(0, 255, 0);
   glBegin(GL_POLYGON);
   glVertex2f(25, 15);
   glVertex2f(28, 15);
   glVertex2f(28, 20);
   glEnd();

   glPopMatrix();
}
```

```
void object1()
{
   glPushMatrix();

          glTranslatef(pos, 0, 0);
          glColor3ub(255, 0, 0);
          glBegin(GL_POLYGON);
          glVertex2f(2, 15);
          glVertex2f(5, 15);
          glVertex2f(5, 20);
          glVertex2f(2, 20);
          glEnd();

          glPopMatrix();
}


void display()
{
   glClearColor(1, 1, 1, 1.0f);
   glClear(GL_COLOR_BUFFER_BIT);

   object1();
   object2();
   object3();
   object4();
   glFlush();
   glutSwapBuffers();
}




void handleMouse(int button, int state, int x, int y) {
          if (button == GLUT_LEFT_BUTTON) {
      glutTimerFunc(20, RightToLeft, 0);
          }
   if (button == GLUT_RIGHT_BUTTON) {
      glutTimerFunc(20, LeftToRight, 0);
   }
   glutPostRedisplay();
}
```

```
int main(int argc, char** argv) {
        glutInit(&argc, argv);
        glutInitWindowSize(800, 600);

        //glutInitWindowPosition((glutGet(GLUT_SCREEN_WIDTH)-
1100)/2,(glutGet(GLUT_SCREEN_HEIGHT)-600)/2);
        glutInitWindowPosition(200, 50);
        glutCreateWindow("Window Name");

   //this line must be below of glutCreateWindow();
   gluOrtho2D(0, 30, 0, 30);
   glutMouseFunc(handleMouse);
   glutDisplayFunc(display);



        glutMainLoop();
        return 0;
}
```

Output Screenshot (Full Screen)-



```
n Files\dotnet;C:\Program Files\Microsoft SQL Server\Client SDK
:\160\Tools\Binn;C:\Program Files\Microsoft SQL Server\160\DTS
x86)\Microsoft SQL Server\160\DTS\Binn;C:\Users\faisa\AppData

ke"  (in C:\Program Files\CodeBlocks\MinGW\x86_64-w64-mingw32
```

```
float pos3 = 0;
float pos4 = 0;
float inc = 0.5;
```