**Lab Taks-1**

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 submit within the given deadline in VUES to the section named Lab Tak-1
* Must include resources for all the section in the table

|  |
| --- |
| **Question-**  Draw the object- |
| **Graph Plot (Picture)-** |
| **Code-**  **#include <windows.h>**  **#include <GL/glut.h>**  **void Rectangle()**  **{**  **glColor3f(0.0,0.0,0.0);**  **glLineWidth(5);**  **glBegin(GL\_LINES);**  **glVertex2f(-0.5,-0.3);**  **glVertex2f(-0.5,0.3);**  **glVertex2f(-0.5,0.3);**  **glVertex2f(0.5,0.3 );**  **glVertex2f(0.5,0.3);**  **glVertex2f(0.5, -0.3);**  **glVertex2f(0.5, -0.3);**  **glVertex2f(-0.5, -0.3);**  **glEnd();**  **}**  **void display()**  **{**  **glClear(GL\_COLOR\_BUFFER\_BIT);**  **glClearColor(1.0, 1.0, 1.0, 1.0);**  **glClear(GL\_COLOR\_BUFFER\_BIT);**  **Rectangle();**  **glFlush();**  **}**  **int main(int argc, char\*\* argv)**  **{**  **glutInit(&argc, argv);**  **glutInitDisplayMode(GLUT\_RGB | GLUT\_SINGLE);**  **glutInitWindowSize(800, 600);**  **glutCreateWindow("OpenGL Rectangle");**  **glutDisplayFunc(display);**  **glutMainLoop();**  **return 0;**  **}** |
| **Output Screenshot (Full Screen)-** |

|  |
| --- |
| **Question-**  Draw the object- |
| **Graph Plot (Picture)-** |
| **Code:**  **#include <windows.h>**  **#include <GL/glut.h>**  **void Trapezium()**  **{**  **glBegin(GL\_POLYGON);**  **glColor3f(1.0f,0.0f,0.0f);**  **glVertex2f(-0.6, -0.4);**  **glVertex2f(0.6, -0.4);**  **glVertex2f(0.4, 0.4);**  **glVertex2f(-0.4, 0.4);**  **glEnd();**  **}**  **void display()**  **{**  **glClearColor(1.0f, 1.0f, 1.0f, 1.0f);**  **glClear(GL\_COLOR\_BUFFER\_BIT);**  **Trapezium();**  **glFlush();**  **}**  **int main(int argc, char\*\* argv)**  **{**  **glutInit(&argc, argv);**  **glutInitWindowSize(1320, 320);**  **glutCreateWindow("OpenGL Setup Test");**  **glutInitWindowSize(1320, 320);**  **glutDisplayFunc(display);**  **gluOrtho2D(-20,10,-30,15);**  **glutMainLoop();**  **return 0;**  **}** |
| **Output Screenshot (Full Screen)-** |

|  |
| --- |
| **Question-**  Draw the object-  Octagon Shape | Area & Angles - Video & Lesson Transcript | Study.com |
| **Graph Plot (Picture)-** |
| **Code-**  **#include <windows.h>**  **#include <GL/glut.h>**  **void Octagon()**  **{**  **glBegin(GL\_POLYGON);**  **glColor3f(1,0,0);**  **glVertex2f(-1,2);**  **glVertex2f(1,2);**  **glVertex2f(2,1);**  **glVertex2f(2,-1);**  **glVertex2f(1,-2);**  **glVertex2f(-1,-2);**  **glVertex2f(-2,-1);**  **glVertex2f(-2,1);**  **glEnd();**  **}**  **void Line()**  **{**  **glLineWidth(5);**  **glBegin(GL\_LINES);**  **glColor3f(0,0,0);**  **glVertex2f(-1,2);**  **glVertex2f(1,2);**  **glVertex2f(1,2);**  **glVertex2f(2,1);**  **glVertex2f(2,1);**  **glVertex2f(2,-1);**  **glVertex2f(2,-1);**  **glVertex2f(1,-2);**  **glVertex2f(1,-2);**  **glVertex2f(-1,-2);**  **glVertex2f(-1,-2);**  **glVertex2f(-2,-1);**  **glVertex2f(-2,-1);**  **glVertex2f(-2,1);**  **glVertex2f(-2,1);**  **glVertex2f(-1,2);**  **glEnd();**  **}**  **void display()**  **{**  **glClearColor(1.0f, 1.0f, 1.0f, 0.0f);**  **glClear(GL\_COLOR\_BUFFER\_BIT);**  **Octagon();**  **Line();**  **glFlush();**  **}**  **int main(int argc, char\*\* argv)**  **{**  **glutInit(&argc, argv);**  **glutCreateWindow("OpenGL Setup Test");**  **glutInitWindowSize(1320, 320);**  **glutDisplayFunc(display);**  **gluOrtho2D(-10,10,-10,10);**  **glutMainLoop();**  **return 0;**  **}** |
| **Output Screenshot (Full Screen)-** |

|  |
| --- |
| **Question-**  Draw the object- |
| **Graph Plot (Picture)-** |
| **Code-**  **#include <windows.h>**  **#include <GL/glut.h>**  **void Axis()**  **{**  **glLineWidth(3.5);**  **glBegin(GL\_LINES);**  **glColor3f(0.0f, 0.0f, 0.0f);**  **glVertex2d(-10.0,0.0);**  **glVertex2d(10.0,0.0);**  **glEnd();**  **glBegin(GL\_LINES);**  **glColor3f(0.0f, 0.0f, 0.0f);**  **glVertex2d(0.0,5.0);**  **glVertex2d(0.0,-5.0);**  **glEnd();**  **}**  **void Rectangle()**  **{**  **glBegin(GL\_QUADS);**  **glColor3f(1.0f, 0.0f, 0.0f);**  **glVertex2f(-3.0,1.0);**  **glVertex2f(-3.0,4.0);**  **glVertex2f(-7.0,4.0);**  **glVertex2f(-7.0,1.0);**  **glEnd();**  **}**  **void TriangelB()**  **{**  **glBegin(GL\_TRIANGLES);**  **glColor3ub(127, 0, 255);**  **glVertex2f(-3.0,-4.5);**  **glVertex2f(-3.0,-0.5);**  **glVertex2f(-7.0,-2.50);**  **glEnd();**  **}**  **void TriangelY()**  **{**  **glBegin(GL\_TRIANGLES);**  **glColor3f(1.0f, 1.0f, 0.0f);**  **glVertex2f(8.0,-4.0);**  **glVertex2f(5.50,-0.5);**  **glVertex2f(3.0,-4.0);**  **glEnd();**  **}**  **void Arrow()**  **{**  **glBegin(GL\_POLYGON);**  **glColor3f(0.0f, 1.0f, 0.0f);**  **glVertex2d(9.0,2.5);**  **glVertex2d(6.5,4.0);**  **glVertex2d(6.5,3.3);**  **glVertex2d(3.0,3.3);**  **glVertex2d(3.0,1.7);**  **glVertex2d(6.5,1.7);**  **glVertex2d(6.5,1.0);**  **glEnd();**  **}**  **void display()**  **{**  **glClearColor(1.0f, 1.0f, 1.0f, 1.0f);**  **glClear(GL\_COLOR\_BUFFER\_BIT);**  **Axis();**  **Rectangle();**  **TriangelB();**  **TriangelY();**  **Arrow();**  **glFlush();**  **}**  **int main(int argc, char\*\* argv)**  **{**  **glutInit(&argc, argv);**  **glutCreateWindow("Different Shape");**  **glutInitWindowSize(320, 320);**  **glutDisplayFunc(display);**  **gluOrtho2D(-20,20,-20,20);**  **glutMainLoop();**  **return 0;**  **}** |
| **Output Screenshot (Full Screen)-** |