LAPORAN PRAKTIKUM MODUL IV

INTERAKSI MOUSE DAN KEYBOARD

Disusun untuk memenuhi tugas matakuliah Grafika Komputer

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Tugas Praktikum I

Interaksi dengan *Keyboard* dan *Mouse*

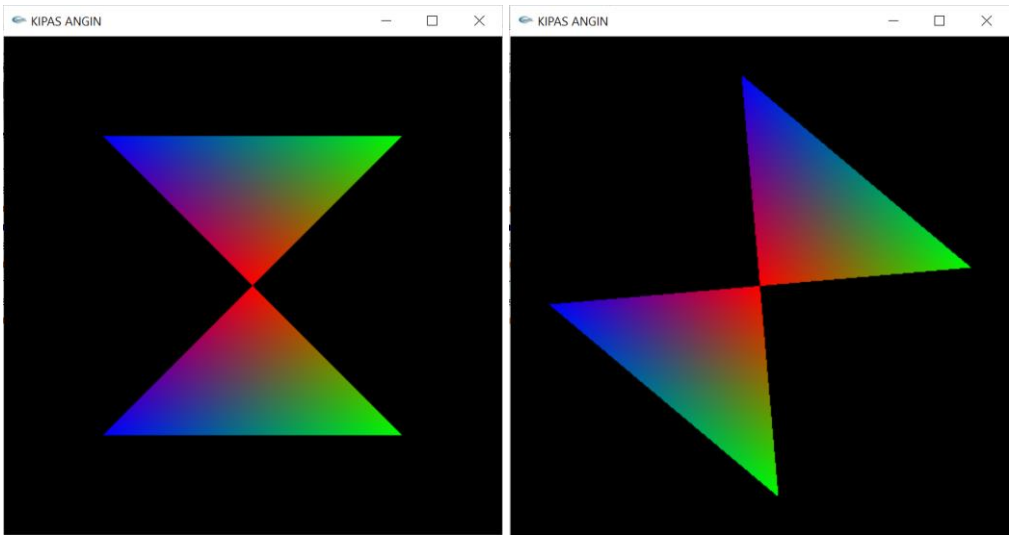
Nama program : Baling-baling Segitiga

Source code :

```
#include <stdlib.h>
#include <glut.h>
#include <iostream>

using namespace std;

void segitiga(){
    glBegin(GL_TRIANGLES);
        glColor3f(1,0,0);
        glVertex2i(0,0);
        glColor3f(0,1,0);
        glVertex2i(6,6);
        glColor3f(0,0,1);
        glVertex2i(-6,6);
    glEnd();
    glBegin(GL_TRIANGLES);
        glColor3f(1,0,0);
        glVertex2i(0,0);
        glColor3f(0,1,0);
        glVertex2i(6,-6);
        glColor3f(0,0,1);
        glVertex2i(-6,-6);
    glEnd();
}

void myKeyboard(unsigned char key, int x, int y){
    if(key=='k'){
        glRotatef(10,0,0,4);
    }
    else if(key=='l'){
        glRotatef(10,0,0,-4);
    }
    else {cout << "\nInvalid Key!!!\n'W' untuk ke atas\n'S' untuk ke
bawah\n'A' untuk ke kiri\n'D' untuk ke kanan";}
}

void renderScene(){
    glClear(GL_COLOR_BUFFER_BIT);
    glClearColor(0,0,0,0);
    segitiga();
    glFlush();
    glutSwapBuffers();
}

void timer(int value){
    glutPostRedisplay();
    glutTimerFunc(50,timer,0);
```

```
}

int main (int argc, char **argv){
    glutInit(&argc, argv);
    glutInitDisplayMode(GLUT_DEPTH | GLUT_SINGLE | GLUT_RGBA);
    glutInitWindowPosition(100,100);
    glutInitWindowSize(500,500);
    glutCreateWindow("KIPAS ANGIN");

    gluOrtho2D(-10,10,-10,10);
    glutDisplayFunc(renderScene);
    glutKeyboardFunc(myKeyboard);
    glutTimerFunc(1,timer,0);
    glutMainLoop();

    return 0;
}
```

Output :



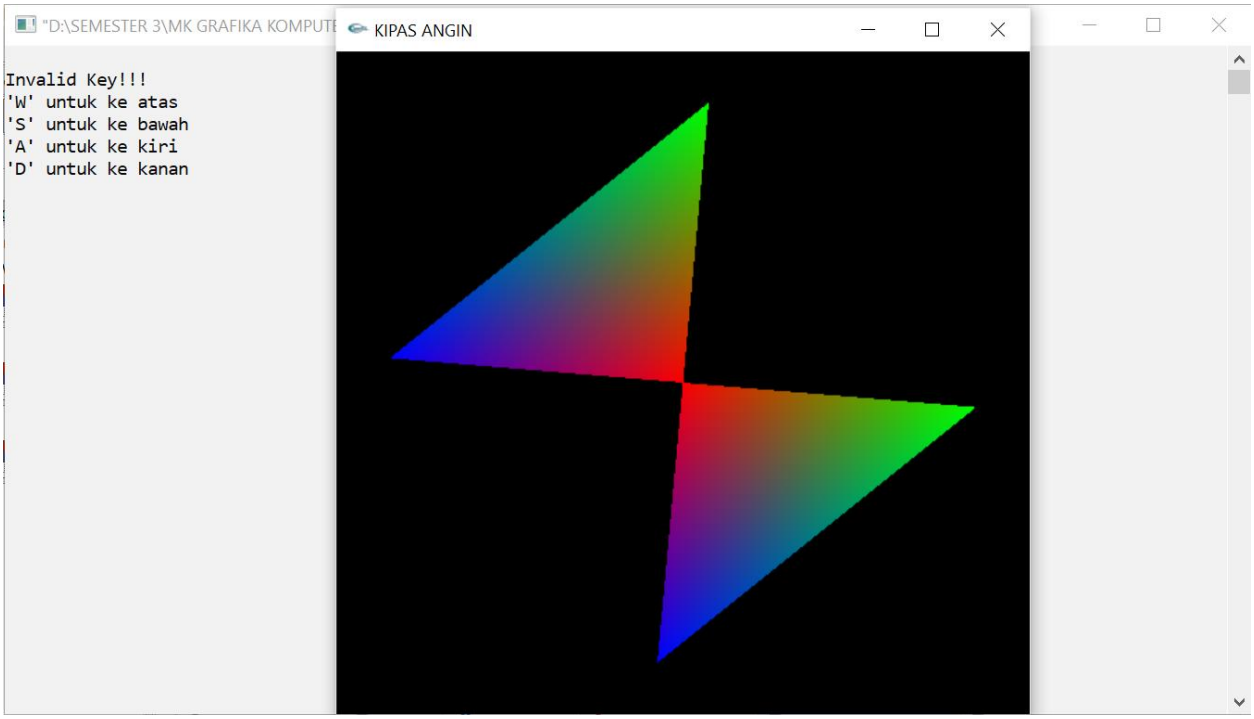


Figure 1 Jika memasukkan 'key' yang salah maka, Console akan mengeluarkan kalimat pemberitahuan.

Tugas Praktikum II

Interaksi dengan *Keyboard* dan *Mouse*

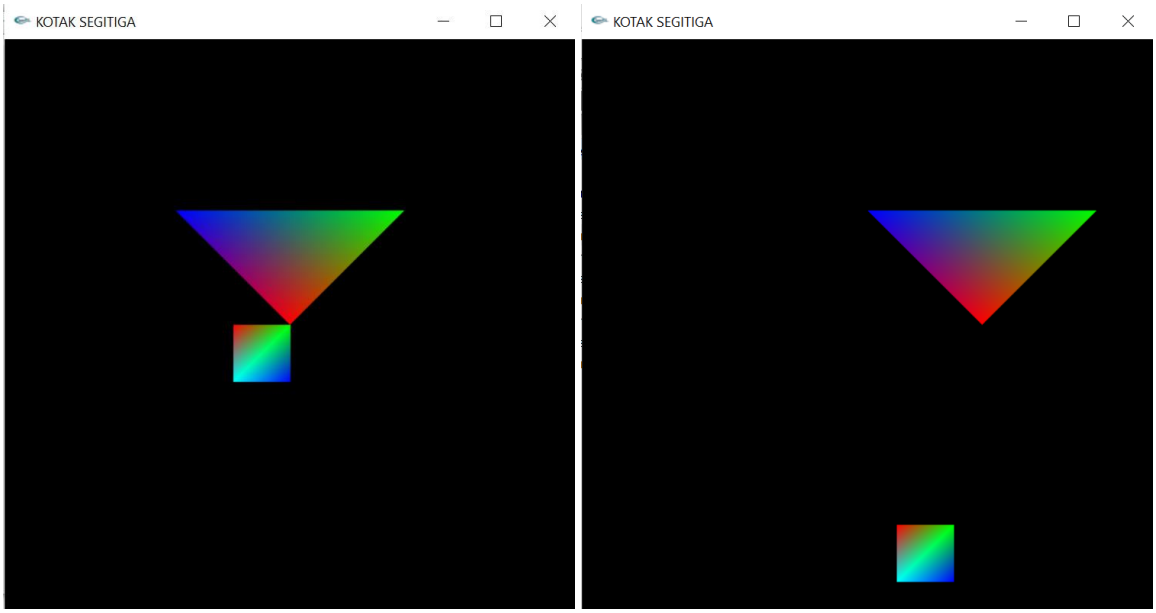
Nama program : Kotak-Segitiga Dapat Berpindah

Source code :

```
#include <stdlib.h>
#include <glut.h>
#include <iostream>

using namespace std;

int v, b, n, m;

void segitiga(){
    glBegin(GL_TRIANGLES);
        glColor3f(1,0,0);
        glVertex2i(0,0);
        glColor3f(0,1,0);
        glVertex2i(4,4);
        glColor3f(0,0,1);
        glVertex2i(-4,4);
    glEnd();
    glFlush();
}

void keySegitiga(unsigned char key, int x, int y){
    if(key=='a' || key=='A'){
        v -= 1;
    }
    else if(key=='d' || key=='D'){
        v += 1;
    }
    else if(key=='s' || key=='S'){
        b -= 1;
    }
    else if(key=='w' || key=='W'){
        b += 1;
    }
    else {
        cout << "\nInvalid Key!!!\n'W' untuk ke atas\n'S' untuk ke
bawah\n'A' untuk ke kiri\n'D' untuk ke kanan";
    }
}

void kotak(){
    glBegin(GL_QUADS);
        glColor3f(1,0,0);
        glVertex2i(-2,0);
        glColor3f(0,1,0);
        glVertex2i(0,0);
        glColor3f(0,0,1);
        glVertex2i(0,-2);
```

```
        glColor3f(0,1,1);
        glVertex2i(-2,-2);
    glEnd();
    glFlush();
}

void keyKotak(int key, int x, int y){
    switch(key){
    case GLUT_KEY_UP:
        m += 1;
        break;
    case GLUT_KEY_DOWN:
        m -= 1;
        break;
    case GLUT_KEY_LEFT:
        n -= 1;
        break;
    case GLUT_KEY_RIGHT:
        n += 1;
        break;
    }
}

void timer(int value){
    glutPostRedisplay();
    glutTimerFunc(50,timer,0);
}

void renderScene(){
    glClear(GL_COLOR_BUFFER_BIT);
    glPushMatrix();
    glTranslatef(v,b,0);
    kotak();
    glPopMatrix();
    glPushMatrix();
    glTranslatef(n,m,0);
    segitiga();
    glPopMatrix();
    glFlush();
}

int main (int argc, char **argv){
    glutInit(&argc, argv);
    glutInitDisplayMode(GLUT_DEPTH | GLUT_SINGLE | GLUT_RGBA);
    glutInitWindowPosition(100,100);
    glutInitWindowSize(500,500);
    glutCreateWindow("KOTAK SEGITIGA");

    gluOrtho2D(-10,10,-10,10);
    glutDisplayFunc(renderScene);
    glutKeyboardFunc(keySegitiga);
    glutSpecialFunc(keyKotak);
    glutTimerFunc(1,timer,0);
    glutMainLoop();

    return 0;
}
```

Output :



Tugas Praktikum III

Interaksi dengan *Keyboard* dan *Mouse*

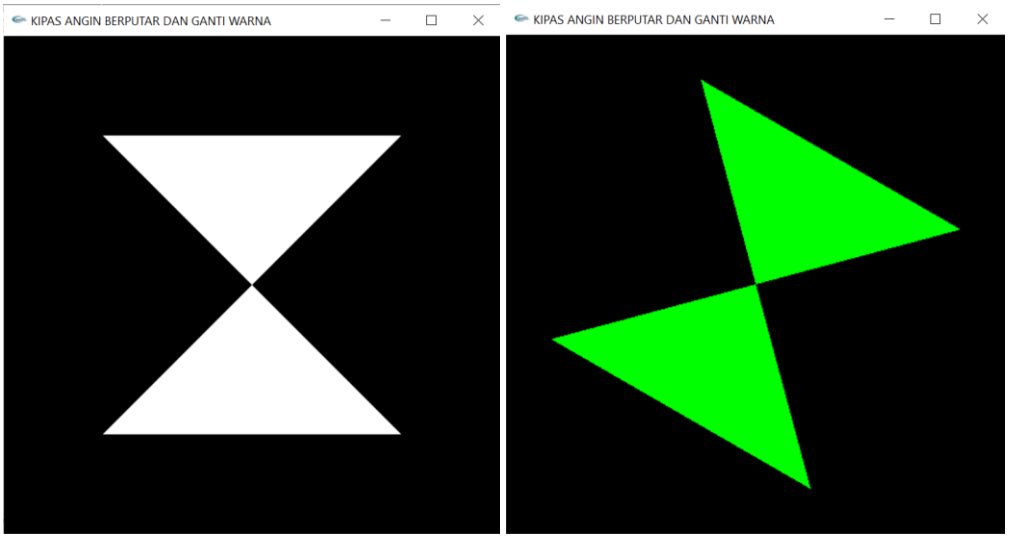
Nama program : Baling-Baling Berputar dan Berganti Warna

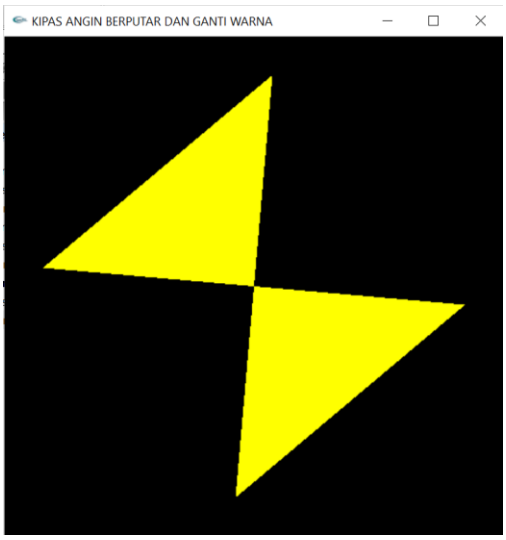
Source code :

```
#include <stdlib.h>
#include <glut.h>
#include <iostream>

using namespace std;

void segitiga(){
    glBegin(GL_TRIANGLES);
        glVertex2i(0,0);
        glVertex2i(6,6);
        glVertex2i(-6,6);
    glEnd();
    glBegin(GL_TRIANGLES);
        glVertex2i(0,0);
        glVertex2i(6,-6);
        glVertex2i(-6,-6);
    glEnd();
}

void myKeyboard(unsigned char key, int x, int y){
    if(key=='k' || key=='K'){
        glRotatef(10,0,0,4);
    }
    else if(key=='l' || key=='L'){
        glRotatef(10,0,0,-4);
    }
    else if(key=='p' || key=='P'){
        glColor3f(0,1,0);
    }
    else if(key=='o' || key=='O'){
        glColor3f(1,1,0);
    }
    else {cout << "\nInvalid Key!!!\n'W' untuk ke atas\n'S' untuk ke
bawah\n'A' untuk ke kiri\n'D' untuk ke kanan";}
}

void renderScene(){
    glClear(GL_COLOR_BUFFER_BIT);
    glClearColor(0,0,0,0);
    segitiga();
    glFlush();
    glutSwapBuffers();
}

void timer(int value){
    glutPostRedisplay();
    glutTimerFunc(50,timer,0);
```

```
}

int main (int argc, char **argv){
    glutInit(&argc, argv);
    glutInitDisplayMode(GLUT_DEPTH | GLUT_SINGLE | GLUT_RGBA);
    glutInitWindowPosition(100,100);
    glutInitWindowSize(500,500);
    glutCreateWindow("KIPAS ANGIN BERPUTAR DAN GANTI WARNA");

    gluOrtho2D(-10,10,-10,10);
    glutDisplayFunc(renderScene);
    glutKeyboardFunc(myKeyboard);
    glutTimerFunc(1,timer,0);
    glutMainLoop();

    return 0;
}
```

Output :




KIPAS ANGIN BERPUTAR DAN GANTI WARNA