#include<Windows.h> // for MS Windows

#include<GL\glut.h> // GLUT, include glu.h and gl.h

//Note: GLglut.h path depending on the system in use

void init()

{

// Set display window color to as glClearColor(R,G,B,Alpha)

glClearColor(1.0, 1.0, 1.0, 1);

// Set projection parameters.

glMatrixMode(GL\_PROJECTION);

// Set 2D Transformation as gluOrtho2D(Min Width, Max Width, Min Height, Max Height)

gluOrtho2D(0.0, 800, 0.0, 600);

}

void home()

{

glClear(GL\_COLOR\_BUFFER\_BIT);

// 1 main wall

glColor3f(1.0, 1.0, 0.0); //base wall color//

glLineWidth(20);

glBegin(GL\_POLYGON);

glVertex2i(100, 250);

glVertex2i(650, 250);

glVertex2i(650, 100);

glVertex2i(100, 100);

glEnd();

//2 Partition Lines(Main Wall / Sides)

glColor3f(1.0, 0.0, 0.0);

glLineWidth(5);

glBegin(GL\_LINES);

glVertex2i(400, 100);

glVertex2i(400, 400);

glVertex2i(100, 250);

glVertex2i(100, 100);

glVertex2i(650, 100);

glVertex2i(100, 100);

glEnd();

//3 Left Side Window

glColor3f(0.752941, 0.752941, 0.752941);

glBegin(GL\_POLYGON);

glVertex2i(150, 200);

glVertex2i(250, 200);

glVertex2i(250, 150);

glVertex2i(150, 150);

glEnd();

//4 Front Door

glColor3f(0.52, 0.37, 0.26);

glBegin(GL\_POLYGON);

glVertex2i(300, 230);

glVertex2i(370, 230);

glVertex2i(370, 100);

glVertex2i(300, 100);

glEnd();

//5 Front Door Lock

glColor3f(0.0, 0.0, 0.1);

glBegin(GL\_POLYGON);

glVertex2i(320, 160);

glVertex2i(340, 160);

glVertex2i(340, 150);

glVertex2i(320, 150);

glEnd();

//6 Right Side Window

glColor3f(0.752941, 0.752941, 0.752941);

glBegin(GL\_POLYGON);

glVertex2i(470, 200);

glVertex2i(600, 200);

glVertex2i(600, 150);

glVertex2i(470, 150);

glEnd();

//7 Upper Wall

glColor3f(1.0, 1.0, 0.0);

glBegin(GL\_POLYGON);

glVertex2i(400, 400);

glVertex2i(650, 400);

glVertex2i(650, 250);

glVertex2i(400, 250);

glEnd();

//8 Right Upper Side Window

glColor3f(0.752941, 0.752941, 0.752941);

glBegin(GL\_POLYGON);

glVertex2i(470, 350);

glVertex2i(600, 350);

glVertex2i(600, 300);

glVertex2i(470, 300);

glEnd();

//9 Small Upper Door

glColor3f(0.52, 0.37, 0.26);

glBegin(GL\_POLYGON);

glVertex2i(350, 350);

glVertex2i(400, 350);

glVertex2i(400, 270);

glVertex2i(350, 270);

glEnd();

//10 Left Upper Side Window

glColor3f(0.752941, 0.752941, 0.752941);

glBegin(GL\_POLYGON);

glVertex2i(290, 330);

glVertex2i(330, 330);

glVertex2i(330, 300);

glVertex2i(290, 300);

glEnd();

//11 Reling line

glColor3f(0.60, 0.40, 0.12);

glLineWidth(3);

glBegin(GL\_LINES);

glVertex2i(130, 270);

glVertex2i(400, 270);

glEnd();

//11.1 Reling Devider lines 1/2/3/4/5

glColor3f(0.60, 0.40, 0.12);

glLineWidth(3);

glBegin(GL\_LINES);

glVertex2i(150, 270);

glVertex2i(150, 250);

glVertex2i(200, 270);

glVertex2i(200, 250);

glVertex2i(250, 270);

glVertex2i(250, 250);

glVertex2i(300, 270);

glVertex2i(300, 250);

glVertex2i(350, 270);

glVertex2i(350, 250);

glEnd();

//12 Roof Line Borders

glColor3ub(102, 51, 0);

glLineWidth(10);

glBegin(GL\_LINES);

glVertex2i(531, 571);

glVertex2i(151, 401);

glVertex2i(151, 401);

glVertex2i(101, 251);

glVertex2i(101, 251);

glVertex2i(401, 401);

glVertex2i(401, 401);

glVertex2i(651, 401);

glVertex2i(651, 401);

glVertex2i(661, 471);

glVertex2i(661, 471);

glVertex2i(531, 571);

glEnd();

//13 Back Wall Right Side

glColor3f(1.0, 1.0, 0.0);

glBegin(GL\_POLYGON);

glVertex2i(650, 400);

glVertex2i(660, 470);

glVertex2i(660, 150);

glVertex2i(650, 100);

glEnd();

//14 Partition line upper and lower Floors / Partition line top to bottom ( right Back Wall )

glColor3f(1.0, 0.0, 0.0);

glLineWidth(2);

glBegin(GL\_LINES);

glVertex2i(100, 250);

glVertex2i(650, 250);

glVertex2i(650, 400);

glVertex2i(650, 100);

glVertex2i(660, 470);

glVertex2i(660, 150);

glVertex2i(660, 150);

glVertex2i(650, 100);

glEnd();

//15 Roof

glColor3f(0.55, 0.09, 0.09);

glBegin(GL\_POLYGON);

glVertex2i(530, 570);

glVertex2i(150, 400);

glVertex2i(100, 250);

glVertex2i(400, 400);

glVertex2i(530, 570);

glVertex2i(400, 400);

glVertex2i(530, 400);

glVertex2i(530, 570);

glVertex2i(650, 400);

glVertex2i(530, 400);

glVertex2i(530, 570);

glVertex2i(660, 470);

glVertex2i(650, 400);

glEnd();

glFlush();

// Process all OpenGL routine s as quickly as possible glFlush();

}

int main(int argc, char\*\* argv)

{

// Initialize GLUT

glutInit(&argc, argv);

// Set display mode

glutInitDisplayMode(GLUT\_SINGLE | GLUT\_RGB);

// Set top - left display window position.

glutInitWindowPosition(100, 100);

// Set display window width and height

glutInitWindowSize(800, 600);

// Create display window with the given title

glutCreateWindow("2D House in OpenGL ");

// Execute initialization procedure

init();

// Send graphics to display window

glutDisplayFunc(home);

// Display everything and wait.

glutMainLoop();

}