

**AHSANULLAH UNIVERSITY OF SCIENCE AND TECHNOLOGY**

Department of Computer Science and Engineering

**Project Name**: *BuddhiJibi Sahid Minar*

Group members: 1.Soumik Das Bibon (**11.02.04.003**)

2. Md. Foisal Alam(**11.02.04.020**)

3. Rauful jamil Nibir (**11.02.04.025**)

Semester: 4-2

Section: A

Section group: A1

### ScreenShots:



#include <windows.h>

#include <GL/glut.h>

#include <math.h>

#include <stdio.h>

//Initializes 3D rendering

void initRendering() {

glEnable(GL\_DEPTH\_TEST);

glEnable(GL\_COLOR\_MATERIAL);

glEnable(GL\_LIGHTING); //Enable lighting

glEnable(GL\_LIGHT0); //Enable light #0

glEnable(GL\_LIGHT1); //Enable light #1

glEnable(GL\_NORMALIZE); //Automatically normalize normals

glShadeModel(GL\_SMOOTH); //Enable smooth shading

}

//Called when the window is resized

void handleResize(int w, int h) {

glMatrixMode(GL\_PROJECTION);

glLoadIdentity();

gluPerspective(45.0, (double)w / (double)h, 1.0, 200.0);

}

float \_angle = -7.0f,posLight1=0.1f,posLight2=0.1f,posLight3=0.1f,R=0,G=0,B=0;

int night = 1;

int p=1;

void Ground()

{

int i, p, r=25;

float x=0.0, y=-1, z=0.0, q = 0.0, radius = 20.0, Pi = 3.1412;

glBegin(GL\_TRIANGLE\_FAN); //BEGIN CIRCLE

glColor3f(0.1, 1, 0.1);

glVertex3f(x, y, z); // centre of circle

for (i = 0; i <= 2\*r; i++)

{

glVertex3f ((x + (radius \* cos(i \* Pi / r))), y, (z + (radius \* sin(i \* Pi / r))));

}

glEnd();

}

void nightLight()

{

//Add positioned light

GLfloat lightColor0[] = {posLight1, posLight2, posLight3, 1.0f}; //Color (0.5, 0.5, 0.5)

GLfloat lightPos0[] = {0.0f, 8.0f, -8.0f, 1.0f}; //Positioned at (4, 0, 8)

glLightfv(GL\_LIGHT0, GL\_DIFFUSE, lightColor0);

glLightfv(GL\_LIGHT0, GL\_POSITION, lightPos0);

}

void dayLight()

{

//Add ambient light

GLfloat ambientColor[] = {0.2f, 0.25f, 0.1f, 1.0f}; //Color (0.2, 0.2, 0.2)

glLightModelfv(GL\_LIGHT\_MODEL\_AMBIENT, ambientColor);

//Add directed light

GLfloat lightColor1[] = {0.2f, 0.25f, 0.1f, 1.0f}; //Color (0.5, 0.2, 0.2)

//Coming from the direction (-1, 0.5, 0.5)

GLfloat lightPos1[] = {0.0f, -3.5f, -7.5f, 0.0f};

glLightfv(GL\_LIGHT1, GL\_DIFFUSE, lightColor1);

glLightfv(GL\_LIGHT1, GL\_POSITION, lightPos1);

//Add positioned light

GLfloat lightColor0[] = {posLight1, posLight2, posLight3, 1.0f}; //Color (0.5, 0.5, 0.5)

GLfloat lightPos0[] = {0.0f, 8.0f, -8.0f, 1.0f}; //Positioned at (4, 0, 8)

glLightfv(GL\_LIGHT0, GL\_DIFFUSE, lightColor0);

glLightfv(GL\_LIGHT0, GL\_POSITION, lightPos0);

}

//Draws the 3D scene

void drawScene() {

glClear(GL\_COLOR\_BUFFER\_BIT | GL\_DEPTH\_BUFFER\_BIT);

glClearColor(R,G,B,1); // day night

glMatrixMode(GL\_MODELVIEW); // keep it like this

glLoadIdentity();

glTranslatef(0.0f, 0.0f, -18.0f);

// nightLight();

glRotatef(10, 1.0f, 0.0f, 0.0f);

glRotatef(-10, 0.0f, 0.0f, 1.0f);

glRotatef(\_angle,0.0f, 1.0f, 0.0f);

//glRotatef(10, 1.0f, 0.0f, 0.0f);

//glRotatef(-10, 0.0f, 0.0f, 1.0f);

//glRotatef(\_angle,0.0f, 1.0f, 0.0f);

glColor3f(1.0f, 1.0f, 0.0f);

glTranslatef(0.0f,0.0f,-3.0f);

glBegin(GL\_QUADS);

//---------------------------- Top start ----------------

//Front

glColor3f(1,0.6,0.2);

glVertex3f(-2.0f, 2.0f, 1.0f); //1

glVertex3f(2.0f, 2.0f, 1.0f);

glVertex3f(2.0f, 1.0f, 1.0f);

glVertex3f(-2.0f, 1.0f, 1.0f);

glVertex3f(-2.0f, 1.0f, 1.0f); //2

glVertex3f(-0.75f, 1.0f, 1.0f);

glVertex3f(-0.75f, -1.0f, 1.0f);

glVertex3f(-2.0f, -1.0f, 1.0f);

glVertex3f(0.75f, 1.0f, 1.0f); //3

glVertex3f(2.0f, 1.0f, 1.0f);

glVertex3f(2.0f, -1.0f, 1.0f);

glVertex3f(0.75f, -1.0f, 1.0f);

glVertex3f(-0.75f, -0.5f, 1.0f); //4

glVertex3f(-0.75f, -1.0f, 1.0f);

glVertex3f(0.75f, -1.0f, 1.0f);

glVertex3f(0.75f, -0.5f, 1.0f);

glVertex3f(-2.0f, 2.0f, 0.5f); //1

glVertex3f(2.0f, 2.0f, 0.5f);

glVertex3f(2.0f, 1.0f, 0.5f);

glVertex3f(-2.0f, 1.0f, 0.5f);

glVertex3f(-2.0f, 1.0f, 0.5f); //2

glVertex3f(-0.75f, 1.0f, 0.5f);

glVertex3f(-0.75f, -1.0f, 0.5f);

glVertex3f(-2.0f, -1.0f, 0.5f);

glVertex3f(0.75f, 1.0f, 0.5f); //3

glVertex3f(2.0f, 1.0f, 0.5f);

glVertex3f(2.0f, -1.0f, 0.5f);

glVertex3f(0.75f, -1.0f, 0.5f);

glVertex3f(-0.75f, -0.5f, 0.5f); //4

glVertex3f(-0.75f, -1.0f, 0.5f);

glVertex3f(0.75f, -1.0f, 0.5f);

glVertex3f(0.75f, -0.5f, 0.5f);

glVertex3f(-2.0f, 2.0f, 0.5f); //1234 top

glVertex3f(2.0f, 2.0f, 0.5f);

glVertex3f(2.0f, 2.0f, 1.0f);

glVertex3f(-2.0f, 2.0f, 1.0f);

glVertex3f(0.75f, 1.0f, 0.5f); //1234 middle

glVertex3f(0.75f, 1.0f, 1.0f);

glVertex3f(0.75f, -1.0f, 1.0f);

glVertex3f(0.75f, -1.0f, 0.5f);

glVertex3f(-0.75f, 1.0f, 0.5f); //1234 middle

glVertex3f(-0.75f, 1.0f, 1.0f);

glVertex3f(-0.75f, -1.0f, 1.0f);

glVertex3f(-0.75f, -1.0f, 0.5f);

glVertex3f(-2.0f, 2.0f, 0.5f); //5 back

glVertex3f(-2.5f, 1.75f, 0.5f);

glVertex3f(-2.5f, -1.0f, 0.5f);

glVertex3f(-2.0f, -1.0f, 0.5f);

glVertex3f(-2.0f, 2.0f, 1.0f); //5 front

glVertex3f(-2.5f, 1.75f, 1.0f);

glVertex3f(-2.5f, -1.0f, 1.0f);

glVertex3f(-2.0f, -1.0f, 1.0f);

glVertex3f(-2.0f, 2.0f, 1.0f); //5 top

glVertex3f(-2.0f, 2.0f, 0.5f);

glVertex3f(-2.5f, 1.75f, 0.5f);

glVertex3f(-2.5f, 1.75f, 1.0f);

glVertex3f(-2.5f, 1.75f, 0.5f); //6 back

glVertex3f(-2.75f, 1.50f, 0.5f);

glVertex3f(-2.75f, -1.0f, 0.5f);

glVertex3f(-2.5f, -1.0f, 0.5f);

glVertex3f(-2.5f, 1.75f, 1.0f); //6 back

glVertex3f(-2.75f, 1.50f, 1.0f);

glVertex3f(-2.75f, -1.0f, 1.0f);

glVertex3f(-2.5f, -1.0f, 1.0f);

glVertex3f(-2.50f, 1.75f, 1.0f); //6 top

glVertex3f(-2.50f, 1.75f, 0.5f);

glVertex3f(-2.75f, 1.5f, 0.5f);

glVertex3f(-2.75f, 1.5f, 1.0f);

glEnd();

glBegin(GL\_POLYGON);

glVertex3f(-2.75f,1.5f,1.0f); //1

glVertex3f(-3.00f,1.5f,1.0f); //2

glVertex3f(-3.25f,1.25f,1.0f); //3

glVertex3f(-3.50f,1.25f,1.0f); //4

glVertex3f(-3.70f,1.00f,1.0f); //5

glVertex3f(-4.00f,0.75f,1.0f); //6

glVertex3f(-4.10f,0.60f,1.0f); //7

glVertex3f(-4.50f,0.30f,1.0f); //8 -------------------

//------------------------------

glVertex3f(-4.50f,-1.0f,1.0f);

glVertex3f(-2.75f,-1.0f,1.0f);

glVertex3f(-2.75f,1.5f,0.5f); //1

glVertex3f(-3.00f,1.5f,0.5f); //2

glVertex3f(-3.25f,1.25f,0.5f); //3

glVertex3f(-3.50f,1.25f,0.5f); //4

glVertex3f(-3.70f,1.00f,0.5f); //5

glVertex3f(-4.00f,0.75f,0.5f); //6

glVertex3f(-4.10f,0.60f,0.5f); //7

glVertex3f(-4.50f,0.30f,0.5f); //8 -------------------

//------------------------------

glVertex3f(-4.50f,-1.0f,0.5f);

glVertex3f(-2.75f,-1.0f,0.5f);

glEnd();

//glutSolidTeapot(2.5);

glBegin(GL\_QUADS);

glVertex3f(-4.50f,0.30f,0.5f);

glVertex3f(-5.50f,0.30f,0.5f);

glVertex3f(-5.50f,-1.0f,0.5f);

glVertex3f(-4.50f,-1.0f,0.5f);

glVertex3f(-4.50f,0.30f,1.0f);

glVertex3f(-5.50f,0.30f,1.0f);

glVertex3f(-5.50f,-1.0f,1.0f);

glVertex3f(-4.50f,-1.0f,1.0f);

glVertex3f(-4.50f,0.30f,1.0f);

glVertex3f(-5.50f,0.30f,1.0f);

glVertex3f(-5.50f,0.30f,0.5f);

glVertex3f(-4.50f,0.30f,0.5f);

glEnd();

glBegin(GL\_POLYGON);

glVertex3f(-5.50f,0.30f,0.5f);

glVertex3f(-5.75f,0.50f,0.5f);

glVertex3f(-6.25f,0.65f,0.5f);

glVertex3f(-6.75f,0.45f,0.5f);

glVertex3f(-7.25f,0.10f,0.5f);

glVertex3f(-7.25f,-1.0f,0.5f);

glVertex3f(-5.50f,-1.0f,0.5f);

glEnd();

//-------------------------

glBegin(GL\_POLYGON);

glVertex3f(-5.50f,0.30f,1.0f);

glVertex3f(-5.75f,0.50f,1.0f);

glVertex3f(-6.25f,0.65f,1.0f);

glVertex3f(-6.75f,0.45f,1.0f);

glVertex3f(-7.25f,0.10f,1.0f);

glVertex3f(-7.25f,-1.0f,1.0f);

glVertex3f(-5.50f,-1.0f,1.0f);

//------------------------

glEnd();

glBegin(GL\_QUADS);

glVertex3f(-7.25f,-1.0f,1.0f);

glVertex3f(-7.25f,-1.0f,0.5f);

glVertex3f(-7.25f,0.10f,0.5f);

glVertex3f(-7.25f,0.10f,1.0f); //-------- left fill side wall

glVertex3f(-7.25f,0.10f,1.0f);

glVertex3f(-6.75f,0.45f,1.0f);

glVertex3f(-6.75f,0.45f,0.5f);

glVertex3f(-7.25f,0.10f,0.5f);

glVertex3f(-6.75f,0.45f,1.0f);

glVertex3f(-6.25f,0.65f,1.0f);

glVertex3f(-6.25f,0.65f,0.5f);

glVertex3f(-6.75f,0.45f,0.5f);

glVertex3f(-6.25f,0.65f,1.0f);

glVertex3f(-5.75f,0.50f,1.0f);

glVertex3f(-5.75f,0.50f,0.5f);

glVertex3f(-6.25f,0.65f,0.5f);

glVertex3f(-5.75f,0.50f,1.0f);

glVertex3f(-5.50f,0.30f,1.0f);

glVertex3f(-5.50f,0.30f,0.5f);

glVertex3f(-5.75f,0.50f,0.5f);

glEnd();

glBegin(GL\_QUADS);

glVertex3f(2.0f,2.0f,1.0f);

glVertex3f(2.50f,1.80f,1.15f);

glVertex3f(2.50f,-1.0f,1.15f);

glVertex3f(2.0f,-1.0f,1.0f);

glVertex3f(2.0f,2.0f,0.5f);

glVertex3f(2.50f,1.80f,0.65f);

glVertex3f(2.50f,-1.0f,0.65f);

glVertex3f(2.0f,-1.0f,0.5f);

glVertex3f(2.0f,2.0f,1.0f);

glVertex3f(2.0f,2.0f,0.5f);

glVertex3f(2.50f,1.80f,0.65f);

glVertex3f(2.50f,1.80f,1.15f);//----------------right wall

glVertex3f(2.50f,1.80f,1.15f);

glVertex3f(3.00f,2.0f,1.20f);

glVertex3f(3.00f,-1.0f,1.20f);

glVertex3f(2.50f,-1.0f,1.15f);

glVertex3f(2.50f,1.80f,0.65f);

glVertex3f(3.00f,2.0f,0.70f);

glVertex3f(3.00f,-1.0f,0.70f);

glVertex3f(2.50f,-1.0f,0.65f);

glVertex3f(2.50f,1.80f,1.15f);

glVertex3f(2.50f,1.80f,0.65f);

glVertex3f(3.00f,2.0f,0.70f);

glVertex3f(3.00f,2.0f,1.20f); //-----------------------------------

glVertex3f(3.00f,2.0f,1.20f);

glVertex3f(4.00f,2.0f,1.35f);

glVertex3f(4.00f,-1.0f,1.35f);

glVertex3f(3.00f,-1.0f,1.20f);

glVertex3f(3.00f,2.0f,0.70f);

glVertex3f(4.00f,2.0f,0.85f);

glVertex3f(4.00f,-1.0f,0.85f);

glVertex3f(3.00f,-1.0f,0.70f);

glVertex3f(3.0f,2.0f,1.20f);

glVertex3f(3.0f,2.0f,0.70f);

glVertex3f(4.00f,2.0f,0.85f);

glVertex3f(4.00f,2.0f,1.35f);//---------------------------

glVertex3f(4.00f,2.0f,1.35f);

glVertex3f(4.25f,1.80f,1.45f);

glVertex3f(4.25f,-1.0f,1.45f);

glVertex3f(4.00f,-1.0f,1.35f);

glVertex3f(4.00f,2.0f,0.85f);

glVertex3f(4.25f,1.80f,0.95f);

glVertex3f(4.25f,-1.0f,0.95f);

glVertex3f(4.00f,-1.0f,0.85f);

glVertex3f(4.00f,2.0f,0.85f);

glVertex3f(4.00f,2.0f,1.35f);

glVertex3f(4.25f,1.80f,1.45f);

glVertex3f(4.25f,1.80f,0.95f); //-----------------------

glVertex3f(4.25f,1.80f,1.45f);

glVertex3f(5.00f,0.50f,1.65f);

glVertex3f(5.00f,-1.0f,1.65f);

glVertex3f(4.25f,-1.0f,1.45f);

glVertex3f(4.25f,1.80f,0.95f);

glVertex3f(5.00f,0.50f,1.15f);

glVertex3f(5.00f,-1.0f,1.15f);

glVertex3f(4.25f,-1.0f,0.95f);

glVertex3f(4.25f,1.80f,0.95f);

glVertex3f(4.25f,1.80f,1.45f);

glVertex3f(5.00f,0.50f,1.65f);

glVertex3f(5.00f,0.50f,1.15f); //-------------------

glVertex3f(5.00f,0.50f,1.65f);

glVertex3f(5.25f,0.50f,1.75f);

glVertex3f(5.25f,-1.0f,1.75f);

glVertex3f(5.00f,-1.0f,1.65f);

glVertex3f(5.00f,0.50f,1.15f);

glVertex3f(5.25f,0.50f,1.25f);

glVertex3f(5.25f,-1.0f,1.25f);

glVertex3f(5.00f,-1.0f,1.15f);

glVertex3f(5.00f,0.50f,1.15f);

glVertex3f(5.00f,0.50f,1.65f);

glVertex3f(5.25f,0.50f,1.75f);

glVertex3f(5.25f,0.50f,1.25f); //-----------------------

glVertex3f(5.25f,0.50f,1.75f);

glVertex3f(5.75f,0.35f,1.95f);

glVertex3f(5.75f,-1.0f,1.95f);

glVertex3f(5.25f,-1.0f,1.75f);

glVertex3f(5.25f,0.50f,1.25f);

glVertex3f(5.75f,0.35f,1.45f);

glVertex3f(5.75f,-1.0f,1.45f);

glVertex3f(5.25f,-1.0f,1.25f);

glVertex3f(5.25f,0.50f,1.25f);

glVertex3f(5.25f,0.50f,1.75f);

glVertex3f(5.75f,0.35f,1.95f);

glVertex3f(5.75f,0.35f,1.45f); //----------------

glVertex3f(5.75f,0.35f,1.95f);

glVertex3f(6.25f,0.25f,2.15f);

glVertex3f(6.25f,-1.0f,2.15f);

glVertex3f(5.75f,-1.0f,1.95f);

glVertex3f(5.75f,0.35f,1.45f);

glVertex3f(6.25f,0.25f,1.65f);

glVertex3f(6.25f,-1.0f,1.65f);

glVertex3f(5.75f,-1.0f,1.45f);

glVertex3f(5.75f,0.35f,1.45f);

glVertex3f(5.75f,0.35f,1.95f);

glVertex3f(6.25f,0.25f,2.15f);

glVertex3f(6.25f,0.25f,1.65f); //------------------

glVertex3f(6.25f,0.25f,2.15f);

glVertex3f(6.25f,0.25f,1.65f);

glVertex3f(6.25f,-1.0f,1.65f);

glVertex3f(6.25f,-1.0f,2.15f); //-------------right fill side wall

glVertex3f(-7.25f,-0.7f,4.5f);

glVertex3f(-7.25f,-1.0f,4.5f);

glVertex3f(6.25f,-1.0f,4.5f);

glVertex3f(6.25f,-0.7f,4.5f); //----------black front red boundary

glVertex3f(-7.25f,-0.7f,4.5f);

glVertex3f(-7.25f,-0.7f,4.3f);

glVertex3f(6.25f,-0.7f,4.3f);

glVertex3f(6.25f,-0.7f,4.5f); //----------black front red boundary

glVertex3f(2.75f,-0.6f,5.5f);

glVertex3f(2.75f,-1.0f,5.5f);

glVertex3f(2.75f,-1.0f,8.5f);

glVertex3f(2.75f,-0.6f,8.5f); // right decor

glVertex3f(2.75f,-0.6f,5.5f);

glVertex3f(3.00f,-0.6f,5.5f);

glVertex3f(3.00f,-0.6f,8.5f);

glVertex3f(2.75f,-0.6f,8.5f); // right decor

glVertex3f(2.75f,-0.6f,8.5f);

glVertex3f(2.75f,-1.0f,8.5f);

glVertex3f(5.75f,-1.0f,8.5f);

glVertex3f(5.75f,-0.6f,8.5f); // right decor

glVertex3f(2.75f,-0.6f,8.5f);

glVertex3f(5.75f,-0.6f,8.5f);

glVertex3f(5.75f,-0.6f,8.25f);

glVertex3f(2.75f,-0.6f,8.25f); // right decor

glVertex3f(5.75f,-0.6f,5.5f);

glVertex3f(5.75f,-1.0f,5.5f);

glVertex3f(5.75f,-1.0f,8.5f);

glVertex3f(5.75f,-0.6f,8.5f); // right decor

glVertex3f(5.75f,-0.6f,5.5f);

glVertex3f(5.50f,-0.6f,5.5f);

glVertex3f(5.50f,-0.6f,8.5f);

glVertex3f(5.75f,-0.6f,8.5f); // right decor

glVertex3f(2.75f,-0.6f,5.5f);

glVertex3f(2.75f,-1.0f,5.5f);

glVertex3f(5.75f,-1.0f,5.5f);

glVertex3f(5.75f,-0.6f,5.5f); // right decor

glVertex3f(2.75f,-0.6f,5.5f);

glVertex3f(2.75f,-0.6f,5.75f);

glVertex3f(5.75f,-0.6f,5.75f);

glVertex3f(5.75f,-0.6f,5.5f); // right decor

glColor3f(0.5,1,0.0);

glVertex3f(2.75f,-0.6f,5.75f);

glVertex3f(2.75f,-0.6f,8.25f);

glVertex3f(5.75f,-0.6f,8.25f);

glVertex3f(5.75f,-0.6f,5.75f); // right decor

glVertex3f(2.75f,-0.55f,5.75f);

glVertex3f(2.75f,-0.55f,8.25f);

glVertex3f(5.75f,-0.55f,8.25f);

glVertex3f(5.75f,-0.55f,5.75f); // right decor

glVertex3f(2.75f,-0.55f,5.75f);

glVertex3f(2.75f,-0.60f,5.75f);

glVertex3f(2.75f,-0.60f,8.25f);

glVertex3f(2.75f,-0.55f,8.25f); // right decor

glVertex3f(2.75f,-0.55f,8.25f);

glVertex3f(2.75f,-0.60f,8.25f);

glVertex3f(5.75f,-0.60f,8.25f);

glVertex3f(5.75f,-0.55f,8.25f); // right decor

glVertex3f(5.75f,-0.55f,5.75f);

glVertex3f(5.75f,-0.60f,5.75f);

glVertex3f(5.75f,-0.60f,8.25f);

glVertex3f(5.75f,-0.55f,8.25f); // right decor

glVertex3f(2.75f,-0.55f,5.75f);

glVertex3f(2.75f,-0.60f,5.75f);

glVertex3f(5.75f,-0.60f,5.75f);

glVertex3f(5.75f,-0.55f,5.75f); // 1st right decor end

glColor3f(1,0.5,0.0);

glVertex3f(-4.25f,-1.0f,4.5f);

glVertex3f(-4.25f,-1.0f,9.5f);

glVertex3f(2.55f,-1.0f,9.5f);

glVertex3f(2.55f,-1.0f,4.5f); // front base

glVertex3f(-4.25f,-0.7f,4.5f);

glVertex3f(-4.25f,-0.7f,9.5f);

glVertex3f(2.55f,-0.7f,9.5f);

glVertex3f(2.55f,-0.7f,4.5f); //front base

glVertex3f(2.55f,-0.7f,4.5f);

glVertex3f(2.55f,-1.0f,4.5f);

glVertex3f(2.55f,-1.0f,9.5f);

glVertex3f(2.55f,-0.7f,9.5f); //front base

glVertex3f(-4.25f,-0.7f,4.5f);

glVertex3f(-4.25f,-1.0f,4.5f);

glVertex3f(-4.25f,-1.0f,9.5f);

glVertex3f(-4.25f,-0.7f,9.5f); //front base

glVertex3f(-4.25f,-0.7f,9.5f);

glVertex3f(-4.25f,-1.0f,9.5f);

glVertex3f(2.55f,-1.0f,9.5f);

glVertex3f(2.55f,-0.7f,9.5f); //front base

glColor3f(1,0.6,0.1);

glVertex3f(-4.25f,-0.7f,9.5f);

glVertex3f(-4.25f,-0.7f,9.7f);

glVertex3f(2.25f,-0.7f,9.7f);

glVertex3f(2.25f,-0.7f,9.5f); //----------staircase

glColor3f(1,0.5,0.0);

glVertex3f(-4.25f,-0.7f,9.7f);

glVertex3f(-4.25f,-1.0f,9.7f);

glVertex3f(2.25f,-1.0f,9.7f);

glVertex3f(2.25f,-0.7f,9.7f); //----------staircase

//glColor3f(1,0.6,0.1);

glVertex3f(-4.25f,-0.7f,9.5f);

glVertex3f(-4.25f,-1.0f,9.5f);

glVertex3f(-4.25f,-1.0f,9.7f);

glVertex3f(-4.25f,-0.7f,9.7f); //----------staircase

glColor3f(1,0.5,0.0);

glVertex3f(2.25f,-0.7f,9.5f);

glVertex3f(2.25f,-1.0f,9.5f);

glVertex3f(2.25f,-1.0f,9.7f);

glVertex3f(2.25f,-0.7f,9.7f); //----------staircase

glColor3f(1,0.6,0.1);

glVertex3f(-4.25f,-0.85f,9.7f);

glVertex3f(-4.25f,-0.85f,10.0f);

glVertex3f(2.25f,-0.85f,10.0f);

glVertex3f(2.25f,-0.85f,9.7f); //----------staircase

glColor3f(1,0.5,0.0);

glVertex3f(-4.25f,-0.85f,10.0f);

glVertex3f(-4.25f,-1.0f,10.0f);

glVertex3f(2.25f,-1.0f,10.0f);

glVertex3f(2.25f,-0.85f,10.0f); //----------staircase

glVertex3f(-4.25f,-0.85f,9.7f);

glVertex3f(-4.25f,-1.0f,9.7f);

glVertex3f(-4.25f,-1.0f,10.0f);

glVertex3f(-4.25f,-0.85f,10.0f); //----------staircase

glVertex3f(2.25f,-0.85f,9.7f);

glVertex3f(2.25f,-1.0f,9.7f);

glVertex3f(2.25f,-1.0f,10.0f);

glVertex3f(2.25f,-0.85f,10.0f); //----------staircase END

glColor3f(1,0.5,0.0);

glVertex3f(2.75f,-0.6f,9.5f);

glVertex3f(2.75f,-1.0f,9.5f);

glVertex3f(2.75f,-1.0f,12.5f);

glVertex3f(2.75f,-0.6f,12.5f); // right decor

glVertex3f(2.75f,-0.6f,9.5f);

glVertex3f(3.00f,-0.6f,9.5f);

glVertex3f(3.00f,-0.6f,12.5f);

glVertex3f(2.75f,-0.6f,12.5f); // right decor

glVertex3f(2.75f,-0.6f,12.5f);

glVertex3f(2.75f,-1.0f,12.5f);

glVertex3f(5.75f,-1.0f,12.5f);

glVertex3f(5.75f,-0.6f,12.5f); // right decor

glVertex3f(2.75f,-0.6f,12.5f);

glVertex3f(5.75f,-0.6f,12.5f);

glVertex3f(5.75f,-0.6f,12.25f);

glVertex3f(2.75f,-0.6f,12.25f); // right decor

glVertex3f(5.75f,-0.6f,9.5f);

glVertex3f(5.75f,-1.0f,9.5f);

glVertex3f(5.75f,-1.0f,12.5f);

glVertex3f(5.75f,-0.6f,12.5f); // right decor

glVertex3f(5.75f,-0.6f,12.5f);

glVertex3f(5.50f,-0.6f,12.5f);

glVertex3f(5.50f,-0.6f,12.5f);

glVertex3f(5.75f,-0.6f,12.5f); // right decor

glVertex3f(2.75f,-0.6f,9.5f);

glVertex3f(2.75f,-1.0f,9.5f);

glVertex3f(5.75f,-1.0f,9.5f);

glVertex3f(5.75f,-0.6f,9.5f); // right decor

glVertex3f(2.75f,-0.6f,9.5f);

glVertex3f(2.75f,-0.6f,9.75f);

glVertex3f(5.75f,-0.6f,9.75f);

glVertex3f(5.75f,-0.6f,9.5f); // right decor

glColor3f(0.5,1,0.0);

glVertex3f(2.75f,-0.6f,9.75f);

glVertex3f(2.75f,-0.6f,12.25f);

glVertex3f(5.75f,-0.6f,12.25f);

glVertex3f(5.75f,-0.6f,9.75f); // right decor

glVertex3f(2.75f,-0.55f,9.75f);

glVertex3f(2.75f,-0.55f,12.25f);

glVertex3f(5.75f,-0.55f,12.25f);

glVertex3f(5.75f,-0.55f,9.75f); // right decor

glVertex3f(2.75f,-0.55f,9.75f);

glVertex3f(2.75f,-0.60f,9.75f);

glVertex3f(2.75f,-0.60f,12.25f);

glVertex3f(2.75f,-0.55f,12.25f); // right decor

glVertex3f(2.75f,-0.55f,12.25f);

glVertex3f(2.75f,-0.60f,12.25f);

glVertex3f(5.75f,-0.60f,12.25f);

glVertex3f(5.75f,-0.55f,12.25f); // right decor

glVertex3f(5.75f,-0.55f,9.75f);

glVertex3f(5.75f,-0.60f,9.75f);

glVertex3f(5.75f,-0.60f,12.25f);

glVertex3f(5.75f,-0.55f,12.25f); // right decor

glVertex3f(2.75f,-0.55f,9.75f);

glVertex3f(2.75f,-0.60f,9.75f);

glVertex3f(5.75f,-0.60f,9.75f);

glVertex3f(5.75f,-0.55f,9.75f); //2nd right decor end

glColor3f(1,0.5,0.0);

glVertex3f(-5.25f,-0.70f,5.25f);

glVertex3f(-5.25f,-0.70f,7.75f);

glVertex3f(-5.6f,-0.70f,7.75f);

glVertex3f(-5.6f,-0.70f,5.25f); // left decor end

glVertex3f(-5.25f,-0.70f,5.25f);

glVertex3f(-5.25f,-1.0f,5.25f);

glVertex3f(-5.25f,-1.0f,7.75f);

glVertex3f(-5.25f,-0.70f,7.75f); //left decor

glVertex3f(-5.6f,-0.70f,5.25f);

glVertex3f(-5.6f,-1.0f,5.25f);

glVertex3f(-5.6f,-1.0f,7.75f);

glVertex3f(-5.6f,-0.70f,7.75f); //left decor

glVertex3f(-5.6f,-0.70f,5.25f);

glVertex3f(-5.6f,-1.0f,5.25f);

glVertex3f(-5.25f,-1.0f,5.25f);

glVertex3f(-5.25f,-0.70f,5.25f); //left decor

glVertex3f(-5.25f,-1.0f,7.75f);

glVertex3f(-6.00f,-1.0f,7.75f);

glVertex3f(-6.00f,-0.70f,7.75f);

glVertex3f(-5.25f,-0.70f,7.75f); //left decor

glVertex3f(-5.25f,-1.0f,8.00f);

glVertex3f(-6.00f,-1.0f,8.00f);

glVertex3f(-6.00f,-0.70f,8.00f);

glVertex3f(-5.25f,-0.70f,8.00f); //left decor

glVertex3f(-5.25f,-0.70f,7.75f);

glVertex3f(-6.00f,-0.70f,7.75f);

glVertex3f(-6.00f,-0.70f,8.00f);

glVertex3f(-5.25f,-0.70f,8.00f); //left decor

glVertex3f(-5.25f,-0.70f,7.75f);

glVertex3f(-5.25f,-1.0f,7.75f);

glVertex3f(-5.25f,-1.0f,8.00f);

glVertex3f(-5.25f,-0.70f,8.00f); //left decor

glVertex3f(-6.00f,-0.70f,7.75f);

glVertex3f(-6.00f,-1.0f,7.75f);

glVertex3f(-6.00f,-1.0f,12.00f);

glVertex3f(-6.00f,-0.70f,12.00f); //left decor

glVertex3f(-6.25f,-0.70f,7.75f);

glVertex3f(-6.25f,-1.0f,7.75f);

glVertex3f(-6.25f,-1.0f,12.00f);

glVertex3f(-6.25f,-0.70f,12.00f); //left decor

glVertex3f(-6.00f,-0.70f,7.75f);

glVertex3f(-6.25f,-0.70f,7.75f);

glVertex3f(-6.25f,-0.70f,12.00f);

glVertex3f(-6.00f,-0.70f,12.00f); //left decor

glVertex3f(-6.00f,-0.70f,7.75f);

glVertex3f(-6.25f,-0.70f,7.75f);

glVertex3f(-6.25f,-1.0f,7.75f);

glVertex3f(-6.00f,-1.0f,7.75f); //left decor

glVertex3f(-6.00f,-0.7f,12.00f);

glVertex3f(-8.5f,-0.7f,12.00f);

glVertex3f(-8.5f,-1.0f,12.00f);

glVertex3f(-6.00f,-1.0f,12.00f); //left decor end

glEnd();

glBegin(GL\_QUADS);

glColor3f(0,0,0);

glVertex3f(0.75f, 1.0f, 4.0f); //---- black box start

glVertex3f(2.0f, 1.0f, 4.0f);

glVertex3f(2.0f, -1.0f, 4.0f);

glVertex3f(0.75f, -1.0f, 4.0f);

glVertex3f(0.75f, 1.0f, 3.0f);

glVertex3f(2.0f, 1.0f, 3.0f);

glVertex3f(2.0f, -1.0f, 3.0f);

glVertex3f(0.75f, -1.0f, 3.0f);

glVertex3f(0.75f, 1.0f, 4.0f);

glVertex3f(0.75f, 1.0f, 3.0f);

glVertex3f(0.75f, -1.0f, 3.0f);

glVertex3f(0.75f, -1.0f, 4.0f);

glVertex3f(2.0f, 1.0f, 4.0f);

glVertex3f(2.0f, 1.0f, 3.0f);

glVertex3f(2.0f, -1.0f, 3.0f);

glVertex3f(2.0f, -1.0f, 4.0f);

glVertex3f(0.75f, 1.0f, 4.0f);

glVertex3f(0.75f, 1.0f, 3.0f);

glVertex3f(2.0f, 1.0f, 3.0f);

glVertex3f(2.0f, 1.0f, 4.0f); //---------- black box end

glVertex3f(-0.25f, 1.0f, 3.5f);

glVertex3f(-0.30f, 1.0f, 3.5f);

glVertex3f(-0.30f, -1.0f, 3.5f);

glVertex3f(-0.25f, -1.0f, 3.5f); //---------- black stand

glVertex3f(-0.25f, 1.0f, 3.48f);

glVertex3f(-0.30f, 1.0f, 3.48f);

glVertex3f(-0.30f, -1.0f, 3.48f);

glVertex3f(-0.25f, -1.0f, 3.48f); //---------- black stand

glVertex3f(-7.25f, -1.0f, 4.5f);

glVertex3f(-7.25f, -1.0f, 1.0f);

glVertex3f(6.25f, -1.0f, 1.8f);

glVertex3f(6.25f, -1.0f, 4.5f);

glVertex3f(-7.25f, -0.8f, 4.5f);

glVertex3f(-7.25f, -0.8f, 1.0f);

glVertex3f(6.25f, -0.8f, 1.8f);

glVertex3f(6.25f, -0.8f, 4.5f);

glVertex3f(-7.25f, -0.8f, 4.5f);

glVertex3f(-7.25f, -1.0f, 4.5f);

glVertex3f(-7.25f, -1.0f, 1.0f);

glVertex3f(-7.25f, -0.8f, 1.0f);

glVertex3f(6.25f, -0.8f, 4.5f);

glVertex3f(6.25f, -1.0f, 4.5f);

glVertex3f(6.25f, -1.0f, 1.8f);

glVertex3f(6.25f, -0.8f, 1.8f); // black ground stand end

glEnd();

glBegin(GL\_QUADS);

glColor3f(0,1,0.4);

glVertex3f(-0.25f, 1.0f, 3.49f);

glVertex3f(0.20f, 1.0f, 3.49f);

glVertex3f(0.20f, 0.65f, 3.49f);

glVertex3f(-0.25f, 0.65f, 3.49f); //---------- flag

glEnd();

glBegin(GL\_QUADS);

glColor3f(1,0,0);

glVertex3f(-0.18f, 0.85f, 3.49f); // red circle

glVertex3f(0.02f, 0.85f, 3.49f);

glVertex3f(0.02f, 0.75f, 3.49f);

glVertex3f(-0.18f, 0.75f, 3.49f);

glVertex3f(-0.1f, 0.88f, 3.49f);

glVertex3f(0.02f, 0.85f, 3.49f);

glVertex3f(-0.1f, 0.75f, 3.49f);

glVertex3f(-0.18f, 0.85f, 3.49f);

glColor3f(0,0,0);

glVertex3f(-7.25f, -0.7f, 6.5f);

glVertex3f(-7.30f, -0.7f, 6.5f);

glVertex3f(-7.30f, -1.0f, 6.5f);

glVertex3f(-7.25f, -1.0f, 6.5f); //---------- tree black stand

glVertex3f(-7.25f, -0.7f, 6.48f);

glVertex3f(-7.30f, -0.7f, 6.48f);

glVertex3f(-7.30f, -1.0f, 6.48f);

glVertex3f(-7.25f, -1.0f, 6.48f); //---------- tree black stand

glVertex3f(-4.95f, -0.7f, 6.5f);

glVertex3f(-5.0f, -0.7f, 6.5f);

glVertex3f(-5.0f, -1.0f, 6.5f);

glVertex3f(-4.95f, -1.0f, 6.5f); //---------- tree black stand

glVertex3f(-4.95f, -0.7f, 6.48f);

glVertex3f(-5.0f, -0.7f, 6.48f);

glVertex3f(-5.0f, -1.0f, 6.48f);

glVertex3f(-4.95f, -1.0f, 6.48f); //---------- tree black stand

glEnd();

glPushMatrix(); // tree leaf start

glColor3f(0,1,0);

glTranslated(-7.27,-0.5,6.49);

glutSolidSphere(0.25,10,10);

glPopMatrix();

glPushMatrix(); // tree leaf start

glColor3f(0,1,0);

glTranslated(-4.97,-0.55,6.49);

glutSolidSphere(0.25,10,10);

glPopMatrix();

Ground();

/\*

if(night==0) {

// dayLight();

}

//moon

if(night==1) {

// nightLight();

}

\*/

glutSwapBuffers();

}

void update(int value) {

\_angle += 1.0f;

if (\_angle > 360) {

\_angle -= 360;

}

glutPostRedisplay();

glutTimerFunc(25, update, 0);

}

void processSpecialKeys(int key, int x, int y) {

switch(key) {

case GLUT\_KEY\_F1 : R = 0.0; G = 0.4; B = 1.0;

// night = 0;

break;

case GLUT\_KEY\_F2 : R = 0.0; G = 0.0; B = 0.0;

// night = 1;

break;

}

}

bool texOn = true;

void handleKeypress(unsigned char key, int x, int y) {

switch (key) {

case 27: //Escape key

exit(0);

//We need to toggle texture Enabling by pressing t key

//so if texture is enabled we disabled it (by setting texOn = false) and vice versa

case 't':

texOn = !texOn;

printf("texon ");

break;

}

if(texOn){

dayLight();

p=0;

printf("%d", p);

}

if(!texOn){

nightLight();

p=1;

printf("%d", p);

}

}

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

//Initialize GLUT

glutInit(&argc, argv);

glutInitDisplayMode(GLUT\_DOUBLE | GLUT\_RGB | GLUT\_DEPTH);

glutInitWindowSize(1300, 700);

//Create the window

glutCreateWindow("buddhijibi shahid minar");

initRendering();

//Set handler functions

glutDisplayFunc(drawScene);

glutReshapeFunc(handleResize);

glutKeyboardFunc(handleKeypress);

//adding here the setting of keyboard processing

glutSpecialFunc(processSpecialKeys);

update(0);

glutMainLoop();

return 0;

}