**Project title: City View scenario**

**Introduction:**

A city view scenario is a small project of computer graphics. We have mainly created some artifacts in this mini project like some building, sun, moon, star, clouds will be passing in the sky, car passing in the street, ship, river side lamp and so on. We can turn on the light and turn off the light whenever it is needed and It has three mode day, noon and night mode and an airplane passing in the sky. It will rain in the sky. This is an overview of the project.

**Background study:**

The purpose of this project was to create a project with what we have learned from this project. After assessing the time duration and the other constraints we have decided to implement the course-works with a scenario and named it as “City View Scenario”. From the very start we were very keen to add some dynamic movements in our scenario, which could help us in the future projects/career.

This is a small project in computer graphics. We did this project based on the things we learned in this course and tried our best to build up a good project. The reason we do each is to present an image of the city environment. We have implemented a city view so we have given the title as “city view scenario” where a large couple of buildings, there will be roads and cars will pass through the streets. The sun will rise in the day sky and the stars and moon will rise in the night sky. Some birds fly towards the sky we have designed a set of birds and we made them fly and show the motion of the objects and also we have provided motion for the clouds too. The river will flow along the side of the road and ship will move in the river. Various types of large buildings will be built along the river. The plane will fly in the sky and will go from one side to the other at a time and show the motion of plane. Lamps will be lit on the side of the road. Set the timer so that the lights will be off during the day and on at night. We remember two to see the beauty of day and night. And set the timer when it will be day and when it will be night. We added the moon and stars in the night sky to make it look beautiful. We have built colorful buildings to enhance the beauty of the city. We have used the keyboard function because of start rain from the sky and to stop the rain. Above all, we have built a clear scenario of what a city environment can be like through project and what things can make it. We will make the project bigger by adding more new features in the future.

**Implementation**

**Code:**

Due to the simplicity of the report we only include the required code of two mode (Day and Night Mode) out of four mode.

#include <windows.h>

#include <GL/glut.h>

#include<math.h>

#include <mmsystem.h>

# define PI 3.14159265358979323846

GLfloat position = 0.0f;

GLfloat speed = 0.05f;

GLfloat position2 = 0.0f;

GLfloat position3 = 0.0f;

GLfloat speed3 = 0.005f;

GLfloat position4 = 0.0f;

GLfloat position5 = 0.0f;

GLfloat position6 = 0.0f;

GLfloat position7 = 0.0f;

GLfloat position8 = 0.0f;

GLfloat position9 = 0.0f;

GLfloat position10 = 0.0f;

GLfloat speed4 = 0.02f;

GLfloat speed2 = 0.001f;

void update(int value) {

if(position >1.8)

position = -1.0f;

position += speed;

glutPostRedisplay();

glutTimerFunc(100, update, 0);

}

void update2(int value) {

if(position2 <-1.8)

position2 = 1.0f;

position2 -= speed;

glutPostRedisplay();

glutTimerFunc(100, update2, 0);

}

void update3(int value) {

if(position3 >1.8)

position3 = -1.0f;

position3 += speed3;

glutPostRedisplay();

glutTimerFunc(100, update3, 0);

}

void update4(int value) {

if(position4 >1.8)

position4 = -1.0f;

position4 += speed4;

glutPostRedisplay();

glutTimerFunc(100, update4, 0);

}

void update5(int value) {

if(position5 <-1.8)

position5 = 1.0f;

position5 -= speed4;

glutPostRedisplay();

glutTimerFunc(100, update5, 0);

}

void update6(int value) {

if(position6 <-1.8)

position6 = 1.0f;

position6 -= speed4;

glutPostRedisplay();

glutTimerFunc(100, update6, 0);

}

void update7(int value) {

if(position7 <-0.2)

position7 = 1.0f;

position7 -= speed;

glutPostRedisplay();

glutTimerFunc(100, update7, 0);

}

void update8(int value) {

if(position8 >0.1)

position8 = -0.1f;

position8 += speed2;

glutPostRedisplay();

glutTimerFunc(100, update8, 0);

}

void update9(int value) {

if(position9 <-1.8)

position9 = 1.0f;

position9 -= speed3;

glutPostRedisplay();

glutTimerFunc(100, update9, 0);

}

void update10(int value) {

if(position10 >1.8)

position10 = -1.0f;

position10 += speed3;

glutPostRedisplay();

glutTimerFunc(100, update10, 0);

}

void init()

{

glClearColor(1.0f, 1.0f, 1.0f, 1.0f);

}

void rain()

{

glClear(GL\_COLOR\_BUFFER\_BIT);

glBegin(GL\_QUADS); //road

glColor3ub(84, 84, 84);

glVertex2f(-1.0,-1.0);

glVertex2f(1.0,-1.0);

glVertex2f(1.0,-0.4);

glVertex2f(-1.0,-0.4);

glEnd();

glLineWidth(20);

glBegin(GL\_LINES); //white

glColor3ub(252, 250, 250);

glVertex2f(-1.0,-1.0);

glVertex2f(-0.8,-1.0);

glVertex2f(-0.6,-1.0);

glVertex2f(-0.4,-1.0);

glVertex2f(-0.2,-1.0);

glVertex2f(0.0,-1.0);

glVertex2f(0.2,-1.0);

glVertex2f(0.4,-1.0);

glVertex2f(0.6,-1.0);

glVertex2f(0.8,-1.0);

glEnd();

glLineWidth(20);

glBegin(GL\_LINES);//black

glColor3ub(10, 10, 10);

glVertex2f(-0.8,-1.0);

glVertex2f(-0.6,-1.0);

glVertex2f(-0.4,-1.0);

glVertex2f(-0.2,-1.0);

glVertex2f(0.0,-1.0);

glVertex2f(0.2,-1.0);

glVertex2f(0.4,-1.0);

glVertex2f(0.6,-1.0);

glVertex2f(0.8,-1.0);

glVertex2f(1.0,-1.0);

glEnd();

glLineWidth(40);

glBegin(GL\_LINES); //white

glColor3ub(252, 250, 250);

glVertex2f(-1.0,-0.4);

glVertex2f(-0.8,-0.4);

glVertex2f(-0.6,-0.4);

glVertex2f(-0.4,-0.4);

glVertex2f(-0.2,-0.4);

glVertex2f(0.0,-0.4);

glVertex2f(0.2,-0.4);

glVertex2f(0.4,-0.4);

glVertex2f(0.6,-0.4);

glVertex2f(0.8,-0.4);

glEnd();

glLineWidth(40);

glBegin(GL\_LINES);//black

glColor3ub(10, 10, 10);

glVertex2f(-0.8,-0.4);

glVertex2f(-0.6,-0.4);

glVertex2f(-0.4,-0.4);

glVertex2f(-0.2,-0.4);

glVertex2f(0.0,-0.4);

glVertex2f(0.2,-0.4);

glVertex2f(0.4,-0.4);

glVertex2f(0.6,-0.4);

glVertex2f(0.8,-0.4);

glVertex2f(1.0,-0.4);

glEnd();

glLineWidth(5);

glBegin(GL\_LINES); //road div

glColor3ub(252, 250, 250);

glVertex2f(-1.0,-0.7);

glVertex2f(-0.8,-0.7);

glVertex2f(-0.6,-0.7);

glVertex2f(-0.4,-0.7);

glVertex2f(-0.2,-0.7);

glVertex2f(0.0,-0.7);

glVertex2f(0.2,-0.7);

glVertex2f(0.4,-0.7);

glVertex2f(0.6,-0.7);

glVertex2f(0.8,-0.7);

glVertex2f(1.0,-0.7);

glEnd();

glBegin(GL\_QUADS); //river 168, 216, 240

glColor3ub(168, 216, 240);

glVertex2f(-1.0,-0.4);

glVertex2f(1.0,-0.4);

glVertex2f(1.0,0.1);

glVertex2f(-1.0,0.1);

glEnd();

glBegin(GL\_QUADS);

glColor3ub(28, 27, 27); //sky

glVertex2f(-1.0,0.1);

glVertex2f(1.0,0.1);

glVertex2f(1.0,1.0);

glVertex2f(-1.0,1.0);

glEnd();

glBegin(GL\_LINES);

glColor3ub(115, 115, 115);

glVertex2f(-1.0,0.1);

glVertex2f(1.0,0.1);

glEnd();

glBegin(GL\_QUADS); //building

glColor3ub(0, 16, 140);

glVertex2f(-1.0,0.1);

glVertex2f(-0.88,0.1);

glVertex2f(-0.88,0.3);

glVertex2f(-1.0,0.3);

glVertex2f(-0.88,0.1);

glVertex2f(-0.865,0.1);

glVertex2f(-0.865,0.25);

glVertex2f(-0.88,0.3);

glEnd();

glBegin(GL\_QUADS); //building2

glColor3ub(90, 184, 64);

glVertex2f(-0.73,0.1);

glVertex2f(-0.85,0.1);

glVertex2f(-0.85,0.4);

glVertex2f(-0.73,0.4);

glVertex2f(-0.73,0.1);

glVertex2f(-0.71,0.1);

glVertex2f(-0.71,0.35);

glVertex2f(-0.73,0.4);

glEnd();

glBegin(GL\_QUADS); //building3

glColor3ub(96, 166, 141);

glVertex2f(-0.7,0.1);

glVertex2f(-0.58,0.1);

glVertex2f(-0.58,0.45);

glVertex2f(-0.7,0.45);

glVertex2f(-0.58,0.1);

glVertex2f(-0.57,0.1);

glVertex2f(-0.57,0.4);

glVertex2f(-0.58,0.45);

glEnd();

glBegin(GL\_QUADS); //building4

glColor3ub(46, 8, 92);

glVertex2f(-0.56,0.1);

glVertex2f(-0.44,0.1);

glVertex2f(-0.44,0.33);

glVertex2f(-0.56,0.33);

glVertex2f(-0.44,0.1);

glVertex2f(-0.43,0.1);

glVertex2f(-0.43,0.3);

glVertex2f(-0.44,0.33);

glEnd();

glBegin(GL\_QUADS); //building5

glColor3ub(242, 189, 10);

glVertex2f(-0.41,0.1);

glVertex2f(-0.29,0.1);

glVertex2f(-0.29,0.55);

glVertex2f(-0.41,0.55);

glVertex2f(-0.29,0.1);

glVertex2f(-0.28,0.1);

glVertex2f(-0.28,0.5);

glVertex2f(-0.29,0.55);

glEnd();

glBegin(GL\_QUADS); //building6

glColor3ub(138, 42, 4);

glVertex2f(-0.27,0.1);

glVertex2f(-0.15,0.1);

glVertex2f(-0.15,0.45);

glVertex2f(-0.27,0.45);

glVertex2f(-0.15,0.1);

glVertex2f(-0.14,0.1);

glVertex2f(-0.14,0.4);

glVertex2f(-0.15,0.45);

glEnd();

glBegin(GL\_QUADS); //building7

glColor3ub(131, 0, 189);

glVertex2f(-0.13,0.1);

glVertex2f(-0.01,0.1);

glVertex2f(-0.01,0.3);

glVertex2f(-0.13,0.3);

glVertex2f(-0.01,0.1);

glVertex2f(-0.0,0.1);

glVertex2f(-0.0,0.25);

glVertex2f(-0.01,0.3);

glEnd();

glBegin(GL\_QUADS); //building8

glColor3ub(94, 90, 92);

glVertex2f(0.01,0.1);

glVertex2f(0.13,0.1);

glVertex2f(0.13,0.4);

glVertex2f(0.01,0.4);

glVertex2f(0.13,0.1);

glVertex2f(0.14,0.1);

glVertex2f(0.14,0.35);

glVertex2f(0.13,0.4);

glEnd();

glBegin(GL\_QUADS); //building9

glColor3ub(212, 23, 111);

glVertex2f(0.15,0.1);

glVertex2f(0.27,0.1);

glVertex2f(0.27,0.5);

glVertex2f(0.15,0.5);

glVertex2f(0.27,0.1);

glVertex2f(0.28,0.1);

glVertex2f(0.28,0.45);

glVertex2f(0.27,0.5);

glEnd();

glBegin(GL\_QUADS); //building10

glColor3ub(17, 142, 184);

glVertex2f(0.29,0.1);

glVertex2f(0.41,0.1);

glVertex2f(0.41,0.55);

glVertex2f(0.29,0.55);

glVertex2f(0.41,0.1);

glVertex2f(0.42,0.1);

glVertex2f(0.42,0.5);

glVertex2f(0.41,0.55);

glEnd();

glBegin(GL\_QUADS); //building11

glColor3ub(140, 82, 0);

glVertex2f(0.43,0.1);

glVertex2f(0.55,0.1);

glVertex2f(0.55,0.33);

glVertex2f(0.43,0.33);

glVertex2f(0.55,0.1);

glVertex2f(0.56,0.1);

glVertex2f(0.56,0.3);

glVertex2f(0.55,0.33);

glEnd();

glBegin(GL\_QUADS); //building12

glColor3ub(94, 90, 92);

glVertex2f(0.57,0.1);

glVertex2f(0.69,0.1);

glVertex2f(0.69,0.5);

glVertex2f(0.57,0.5);

glVertex2f(0.69,0.1);

glVertex2f(0.7,0.1);

glVertex2f(0.7,0.45);

glVertex2f(0.69,0.5);

glEnd();

glBegin(GL\_QUADS); //building13

glColor3ub(125, 6, 6);

glVertex2f(0.71,0.1);

glVertex2f(0.83,0.1);

glVertex2f(0.83,0.4);

glVertex2f(0.71,0.4);

glVertex2f(0.83,0.1);

glVertex2f(0.84,0.1);

glVertex2f(0.84,0.35);

glVertex2f(0.83,0.4);

glEnd();

glBegin(GL\_QUADS); //building14

glColor3ub(153, 105, 0);

glVertex2f(0.85,0.1);

glVertex2f(0.97,0.1);

glVertex2f(0.97,0.6);

glVertex2f(0.85,0.6);

glVertex2f(0.97,0.1);

glVertex2f(0.98,0.1);

glVertex2f(0.98,0.55);

glVertex2f(0.97,0.6);

glEnd();

glPointSize(30);

glBegin(GL\_POINTS);

glColor3ub(227, 212, 129);//255, 236, 173 227, 212, 129 240, 255, 77

glVertex2f(-0.97,0.2);////building1

glVertex2f(-0.92,0.2);

glVertex2f(-0.82,0.3);////building2

glVertex2f(-0.77,0.3);

glVertex2f(-0.82,0.2);////building2

glVertex2f(-0.77,0.2);

glVertex2f(-0.67,0.35);////building3

glVertex2f(-0.62,0.35);

glVertex2f(-0.67,0.22);////building3

glVertex2f(-0.62,0.22);

glVertex2f(-0.53,0.27);////building4

glVertex2f(-0.48,0.27);

glVertex2f(-0.53,0.18);////building4

glVertex2f(-0.48,0.18);

glVertex2f(-0.38,0.47);////building5

glVertex2f(-0.33,0.47);

glVertex2f(-0.38,0.36);////building5

glVertex2f(-0.33,0.36);

glVertex2f(-0.38,0.24);////building5

glVertex2f(-0.33,0.24);

glVertex2f(-0.24,0.35);////building6

glVertex2f(-0.19,0.35);

glVertex2f(-0.24,0.25);////building6

glVertex2f(-0.19,0.25);

glVertex2f(-0.1,0.2);////building7

glVertex2f(-0.05,0.2);

glVertex2f(0.04,0.3);////building8

glVertex2f(0.09,0.3);

glVertex2f(0.04,0.2);////building8

glVertex2f(0.09,0.2);

glVertex2f(0.18,0.4);////building9

glVertex2f(0.23,0.4);

glVertex2f(0.18,0.3);////building9

glVertex2f(0.23,0.3);

glVertex2f(0.18,0.2);////building9

glVertex2f(0.23,0.2);

glVertex2f(0.32,0.45);////building10

glVertex2f(0.37,0.45);

glVertex2f(0.32,0.35);////building10

glVertex2f(0.37,0.35);

glVertex2f(0.32,0.25);////building10

glVertex2f(0.37,0.25);

glVertex2f(0.46,0.27);////building11

glVertex2f(0.51,0.27);

glVertex2f(0.46,0.18);////building11

glVertex2f(0.51,0.18);

glVertex2f(0.6,0.4);////building12

glVertex2f(0.65,0.4);

glVertex2f(0.6,0.3);////building12

glVertex2f(0.65,0.3);

glVertex2f(0.6,0.2);////building12

glVertex2f(0.65,0.2);

glVertex2f(0.74,0.3);////building13

glVertex2f(0.79,0.3);

glVertex2f(0.74,0.2);////building13

glVertex2f(0.79,0.2);

glVertex2f(0.88,0.5);////building14

glVertex2f(0.93,0.5);

glVertex2f(0.88,0.4);////building14

glVertex2f(0.93,0.4);

glVertex2f(0.88,0.3);////building14

glVertex2f(0.93,0.3);

glVertex2f(0.88,0.2);////building14

glVertex2f(0.93,0.2);

glEnd();

glPushMatrix();

glTranslatef(position5,0.0f, 0.0f);

glBegin(GL\_QUADS);//ship2

glColor3ub(156, 156, 156);

glVertex2f(0.6,-0.05);

glVertex2f(0.8,-0.05);

glVertex2f(0.8,0.1);

glVertex2f(0.5,0.1);

glEnd();

glBegin(GL\_QUADS);//ship2floor1

glColor3ub(30, 124, 133);

glVertex2f(0.78,0.1);

glVertex2f(0.78,0.18);

glVertex2f(0.6,0.18);

glVertex2f(0.55,0.1);

glEnd();

glBegin(GL\_QUADS);//ship2floor2

glColor3ub(30, 64, 133);

glVertex2f(0.75,0.18);

glVertex2f(0.75,0.25);

glVertex2f(0.66,0.25);

glVertex2f(0.62,0.18);

glEnd();

glPointSize(20);

glBegin(GL\_POINTS);//ship2 window

glColor3ub(227, 212, 129);

glVertex2f(0.72,0.14);

glVertex2f(0.65,0.14);

glVertex2f(0.69,0.21);

glEnd();

glPopMatrix();

glPushMatrix();

glTranslatef(position4,0.0f, 0.0f);

glBegin(GL\_QUADS);//ship1

glColor3ub(156, 156, 156);

glVertex2f(-0.8,-0.2);

glVertex2f(-0.4,-0.2);

glVertex2f(-0.25,-0.02);

glVertex2f(-0.8,-0.02);

glEnd();

glBegin(GL\_QUADS);//shipfloor1

glColor3ub(79, 78, 78);

glVertex2f(-0.78,-0.02);

glVertex2f(-0.4,-0.02);

glVertex2f(-0.45,0.07);

glVertex2f(-0.78,0.07);

glEnd();

glBegin(GL\_QUADS);//shipfloor2

glColor3ub(30, 124, 133);

glVertex2f(-0.75,0.07);

glVertex2f(-0.5,0.07);

glVertex2f(-0.55,0.15);

glVertex2f(-0.75,0.15);

glEnd();

glBegin(GL\_QUADS);//shipfloor3

glColor3ub(30, 64, 133);

glVertex2f(-0.72,0.15);

glVertex2f(-0.58,0.15);

glVertex2f(-0.63,0.22);

glVertex2f(-0.72,0.22);

glEnd();

glPointSize(20);

glBegin(GL\_POINTS);//ship window

glColor3ub(227, 212, 129);

glVertex2f(-0.7,0.025);

glVertex2f(-0.6,0.025);

glVertex2f(-0.5,0.025);

glVertex2f(-0.68,0.11);

glVertex2f(-0.6,0.11);

glVertex2f(-0.67,0.185);

// glVertex2f(-0.7,0.025);

glEnd();//end ship

glPopMatrix();

glLineWidth(10);//lamp

glBegin(GL\_LINES);

glColor3ub(18, 18, 18);

glVertex2f(0.6,-0.4);//lampstand1

glVertex2f(0.6,-0.15);

glVertex2f(0.0,-0.4);//lampstand2

glVertex2f(0.0,-0.15);

glVertex2f(-0.6,-0.4);//lampstand3

glVertex2f(-0.6,-0.15);

glEnd();

glLineWidth(5);//lampbulb

glBegin(GL\_LINES);

glColor3ub(18, 18, 18);

glVertex2f(0.72,-0.25);

glVertex2f(0.48,-0.25);

glVertex2f(0.72,-0.25);

glVertex2f(0.72,-0.2);

glVertex2f(0.48,-0.25);

glVertex2f(0.48,-0.2);

glVertex2f(-0.12,-0.25);//lamp2

glVertex2f(0.12,-0.25);

glVertex2f(-0.12,-0.25);

glVertex2f(-0.12,-0.2);

glVertex2f(0.12,-0.25);

glVertex2f(0.12,-0.2);

glVertex2f(-0.72,-0.25);//lamp3

glVertex2f(-0.48,-0.25);

glVertex2f(-0.72,-0.25);

glVertex2f(-0.72,-0.2);

glVertex2f(-0.48,-0.25);

glVertex2f(-0.48,-0.2);

glEnd();

glEnable(GL\_LIGHTING);

GLfloat global\_ambient[] = {4.9,3.9,0.0, 0.1};

glLightModelfv(GL\_LIGHT\_MODEL\_AMBIENT, global\_ambient);

int l;//lampmidbulb2

GLfloat m1=0.6f; GLfloat m2 =-0.1f; GLfloat radi1 =0.06f;

int triangleAmount1 = 20;

GLfloat twicePi1 = 2.0f \* PI;

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(245, 240, 240);

glVertex2f(m1, m2);

for(l = 0; l <= triangleAmount1;l++) {

glVertex2f(

m1+ (radi1 \* cos(l \* twicePi1/ triangleAmount1)),

m2 + (radi1 \* sin(l \* twicePi1 / triangleAmount1))

);

}

glEnd();

glDisable(GL\_LIGHTING);

int l1;//lampbulb1

GLfloat m3=0.72f; GLfloat m4 =-0.17f; GLfloat radi2 =0.04f;

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 244, 84);

glVertex2f(m3, m4);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

m3+ (radi2 \* cos(l1 \* twicePi1/ triangleAmount1)),

m4 + (radi2 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat m5=0.48f; GLfloat m6 =-0.17f;//lampbulb3

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 244, 84);

glVertex2f(m5, m6);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

m5+ (radi2 \* cos(l1 \* twicePi1/ triangleAmount1)),

m6 + (radi2 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

glEnable(GL\_LIGHTING);

glLightModelfv(GL\_LIGHT\_MODEL\_AMBIENT, global\_ambient);

GLfloat m11=0.0f; GLfloat m12 =-0.1f; //lampmidbulb2

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(245, 240, 240);

glVertex2f(m11, m12);

for(l = 0; l <= triangleAmount1;l++) {

glVertex2f(

m11+ (radi1 \* cos(l \* twicePi1/ triangleAmount1)),

m12 + (radi1 \* sin(l \* twicePi1 / triangleAmount1))

);

}

glEnd();

glDisable(GL\_LIGHTING);

GLfloat m31=-0.12f; GLfloat m41=-0.17f; //lampbulb1

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 244, 84);

glVertex2f(m31, m41);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

m31+ (radi2 \* cos(l1 \* twicePi1/ triangleAmount1)),

m41 + (radi2 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat m32=0.12f; GLfloat m42=-0.17f; //lampbulb2

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 244, 84);

glVertex2f(m32, m42);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

m32+ (radi2 \* cos(l1 \* twicePi1/ triangleAmount1)),

m42 + (radi2 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

glEnable(GL\_LIGHTING);

glLightModelfv(GL\_LIGHT\_MODEL\_AMBIENT, global\_ambient);

GLfloat mm=-0.6f; GLfloat mm2 =-0.1f; //lampleftbulb2

glBegin(GL\_TRIANGLE\_FAN);

glColor3f(1,0,0);

glVertex2f(mm, mm2);

for(l = 0; l <= triangleAmount1;l++) {

glVertex2f(

mm+ (radi1 \* cos(l \* twicePi1/ triangleAmount1)),

mm2 + (radi1 \* sin(l \* twicePi1 / triangleAmount1))

);

}

glEnd();

glDisable(GL\_LIGHTING);

GLfloat mm3=-0.72f; GLfloat mm4 =-0.17f;//lampleftbulb1

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 244, 84);

glVertex2f(mm3, mm4);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

mm3+ (radi2 \* cos(l1 \* twicePi1/ triangleAmount1)),

mm4 + (radi2 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat mm5=-0.48f; GLfloat mm6 =-0.17f;

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 244, 84);

glVertex2f(mm5, mm6);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

mm5+ (radi2 \* cos(l1 \* twicePi1/ triangleAmount1)),

mm6 + (radi2 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

//glLoadIdentity();

glPushMatrix();

glTranslatef(position3,0.0f, 0.0f);

GLfloat c1=-0.8f; GLfloat c2 =0.8f;GLfloat radi3 =0.08f; //cloud

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(69, 67, 67);

glVertex2f(c1, c2);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c1+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c2 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat c12=-0.7f; GLfloat c22 =0.85f;//cloud

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(69, 67, 67);

glVertex2f(c12, c22);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c12+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c22 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat c13=-0.72f; GLfloat c23 =0.7f;//cloud

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(69, 67, 67);

glVertex2f(c13, c23);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c13+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c23 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat c14=-0.62f; GLfloat c24 =0.8f;//cloud

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(69, 67, 67);

glVertex2f(c14, c24);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c14+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c24 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat c15=-0.85f; GLfloat c25 =0.7f;//cloud

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(69, 67, 67);

glVertex2f(c15, c25);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c15+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c25 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

glPopMatrix();

glPushMatrix();

glTranslatef(position9,0.0f, 0.0f);

glTranslatef(1.2,0.0,0.0);//Cloud 2

glBegin(GL\_TRIANGLE\_FAN);//cloud 2

glColor3ub(69, 67, 67);

glVertex2f(c1, c2);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c1+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c2 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

//GLfloat c12=-0.7f; GLfloat c22 =0.85f;//cloud

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(69, 67, 67);

glVertex2f(c12, c22);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c12+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c22 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(69, 67, 67);

glVertex2f(c13, c23);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c13+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c23 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(69, 67, 67);

glVertex2f(c14, c24);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c14+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c24 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(69, 67, 67);

glVertex2f(c15, c25);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c15+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c25 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

glPopMatrix();

glLoadIdentity();

glPushMatrix();

glTranslatef(position,0.0f, 0.0f);

glBegin(GL\_POLYGON);//Private Car

glColor3ub(18, 54, 128);

glVertex2f(-0.95,-0.45);

glVertex2f(-0.95,-0.58);

glVertex2f(-0.46,-0.58);

glVertex2f(-0.46,-0.49);

glVertex2f(-0.52,-0.45);

glEnd();

//glLoadIdentity();

//glTranslatef(-0.45,0.05,0);

glBegin(GL\_QUADS);

glColor3ub(232, 23, 93);

glVertex2f(-0.86,-0.45);

glVertex2f(-0.79,-0.37);

glVertex2f(-0.67,-0.37);

glVertex2f(-0.59,-0.45);

glEnd();

//glLoadIdentity();

int j;

GLfloat a=-0.84f; GLfloat b =-0.58f;GLfloat radi =0.05f;

int triangleAmount = 20;

GLfloat twicePi = 2.0f \* PI;

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(31, 31, 28);

glVertex2f(a, b);

for(j = 0; j <= triangleAmount;j++) {

glVertex2f(

a+ (radi \* cos(j \* twicePi/ triangleAmount)),

b + (radi \* sin(j \* twicePi / triangleAmount))

);

}

glEnd();

GLfloat c=-0.57f; GLfloat d =-0.58f;

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(31, 31, 28);

glVertex2f(c, d);

for(j = 0; j <= triangleAmount;j++) {

glVertex2f(

c+ (radi \* cos(j \* twicePi/ triangleAmount)),

d + (radi \* sin(j \* twicePi / triangleAmount))

);

}

glEnd();

glPointSize(7);

glBegin(GL\_POINTS);//private car light

glColor3ub(237, 229, 185);

glVertex2f(-0.46,-0.56);

glEnd();

glPointSize(28);

glBegin(GL\_POINTS);//private car window

glColor3ub(227, 212, 129);

glVertex2f(-0.77,-0.41);

glVertex2f(-0.69,-0.41);

glEnd();//Private Car end

glPopMatrix();

glLoadIdentity();

glPushMatrix();

glTranslatef(position2,0.0f, 0.0f);

glBegin(GL\_QUADS); //Micro Car

glColor3ub(97, 34, 110);

glVertex2f(0.3,-0.7);

glVertex2f(0.3,-0.85);

glVertex2f(0.7,-0.85);

glVertex2f(0.7,-0.7);

glVertex2f(0.4,-0.64);

glVertex2f(0.4,-0.7);

glVertex2f(0.7,-0.7);

glVertex2f(0.7,-0.64);

glEnd();

glBegin(GL\_QUADS);

glColor3ub(148, 16, 146);

glVertex2f(0.4,-0.6);

glVertex2f(0.4,-0.7);

glVertex2f(0.7,-0.7);

glVertex2f(0.7,-0.6);

glEnd();

glBegin(GL\_TRIANGLES);

glColor3ub(163, 193, 227);

glVertex2f(0.4,-0.6);

glVertex2f(0.3,-0.7);

glVertex2f(0.4,-0.7);

glEnd();

glPointSize(7);

glBegin(GL\_POINTS);

glColor3ub(247, 246, 218);

glVertex2f(0.295,-0.82);

glEnd();

GLfloat r=0.4f; GLfloat s =-0.85f;

//int triangleAmount = 20;

//GLfloat twicePi = 2.0f \* PI;

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(31, 31, 28);

glVertex2f(r, s);

for(j = 0; j <= triangleAmount;j++) {

glVertex2f(

r+ (radi \* cos(j \* twicePi/ triangleAmount)),

s + (radi \* sin(j \* twicePi / triangleAmount))

);

}

glEnd();

GLfloat x=0.6f; GLfloat y =-0.85f;

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(31, 31, 28);

glVertex2f(x, y);

for(j = 0; j <= triangleAmount;j++) {

glVertex2f(

x+ (radi \* cos(j \* twicePi/ triangleAmount)),

y + (radi \* sin(j \* twicePi / triangleAmount))

);

}

glEnd();

glPointSize(30);

glBegin(GL\_POINTS);//Micro window

glColor3ub(227, 212, 129);

glVertex2f(0.45,-0.65);

glVertex2f(0.55,-0.65);

glVertex2f(0.65,-0.65);

glEnd();//End Micro

glPopMatrix();

//glTranslatef(-0.4,0.05,0);

glPushMatrix();

glTranslatef(position6,0.0f, 0.0f);

glBegin(GL\_QUADS);//Plane

glColor3ub(20, 97, 23);//body

glVertex2f(0.22,0.76);

glVertex2f(0.62,0.76);

//glColor3ub(163, 2, 2);

glVertex2f(0.62,0.82);

glVertex2f(0.28,0.82);

glColor3ub(163, 2, 2);

glVertex2f(0.6,0.82);//back body

glVertex2f(0.62,0.76);

glVertex2f(0.7,0.88);

glVertex2f(0.66,0.88);

glVertex2f(0.38,0.82);//wing1

glVertex2f(0.46,0.9);

glVertex2f(0.51,0.9);

glVertex2f(0.43,0.82);

glVertex2f(0.38,0.76);//wing2

glVertex2f(0.44,0.64);

glVertex2f(0.48,0.64);

glVertex2f(0.42,0.76);

glEnd();

glPointSize(15);

glBegin(GL\_POINTS);//plane window

glColor3ub(227, 212, 129);

glVertex2f(0.3,0.79);

glVertex2f(0.38,0.79);

glVertex2f(0.46,0.79);

glVertex2f(0.54,0.79);

glEnd();//End Plane

glPopMatrix();

glPushMatrix();

glTranslatef(0.0f, position7,0.0f);

glLineWidth(2);//Rain

glBegin(GL\_LINES);

glColor3f(1,1,1);

glVertex2f(-0.95,0.95);

glVertex2f(-0.96,0.85);

glVertex2f(-0.9,0.95);

glVertex2f(-0.91,0.85);

glVertex2f(-0.85,0.95);

glVertex2f(-0.86,0.85);

glVertex2f(-0.8,0.95);

glVertex2f(-0.81,0.85);

glVertex2f(-0.75,0.95);

glVertex2f(-0.76,0.85);

glVertex2f(-0.7,0.95);

glVertex2f(-0.71,0.85);

glVertex2f(-0.65,0.95);

glVertex2f(-0.66,0.85);

glVertex2f(-0.6,0.95);

glVertex2f(-0.61,0.85);

glVertex2f(-0.55,0.95);

glVertex2f(-0.56,0.85);

glVertex2f(-0.5,0.95);

glVertex2f(-0.51,0.85);

glVertex2f(-0.45,0.95);

glVertex2f(-0.46,0.85);

glVertex2f(-0.4,0.95);

glVertex2f(-0.41,0.85);

glVertex2f(-0.35,0.95);

glVertex2f(-0.36,0.85);

glVertex2f(-0.3,0.95);

glVertex2f(-0.31,0.85);

glVertex2f(-0.25,0.95);

glVertex2f(-0.26,0.85);

glVertex2f(-0.2,0.95);

glVertex2f(-0.21,0.85);

glVertex2f(-0.15,0.95);

glVertex2f(-0.16,0.85);

glVertex2f(-0.1,0.95);

glVertex2f(-0.11,0.85);

glVertex2f(-0.05,0.95);

glVertex2f(-0.06,0.85);

glVertex2f(0.0,0.95);

glVertex2f(-0.01,0.85);

glVertex2f(-0.95,0.65);

glVertex2f(-0.96,0.55);

glVertex2f(-0.9,0.65);

glVertex2f(-0.91,0.55);

glVertex2f(-0.85,0.65);

glVertex2f(-0.86,0.55);

glVertex2f(-0.8,0.65);

glVertex2f(-0.81,0.55);

glVertex2f(-0.75,0.65);

glVertex2f(-0.76,0.55);

glVertex2f(-0.7,0.65);

glVertex2f(-0.71,0.55);

glVertex2f(-0.65,0.65);

glVertex2f(-0.66,0.55);

glVertex2f(-0.6,0.65);

glVertex2f(-0.61,0.55);

glVertex2f(-0.55,0.65);

glVertex2f(-0.56,0.55);

glVertex2f(-0.5,0.65);

glVertex2f(-0.51,0.55);

glVertex2f(-0.45,0.65);

glVertex2f(-0.46,0.55);

glVertex2f(-0.4,0.65);

glVertex2f(-0.41,0.55);

glVertex2f(-0.35,0.65);

glVertex2f(-0.36,0.55);

glVertex2f(-0.3,0.65);

glVertex2f(-0.31,0.55);

glVertex2f(-0.25,0.65);

glVertex2f(-0.26,0.55);

glVertex2f(-0.2,0.65);

glVertex2f(-0.21,0.55);

glVertex2f(-0.15,0.65);

glVertex2f(-0.16,0.55);

glVertex2f(-0.1,0.65);

glVertex2f(-0.11,0.55);

glVertex2f(-0.05,0.65);

glVertex2f(-0.06,0.55);

glVertex2f(0.0,0.65);

glVertex2f(-0.01,0.55);

glVertex2f(-0.95,0.35);

glVertex2f(-0.96,0.25);

glVertex2f(-0.9,0.35);

glVertex2f(-0.91,0.25);

glVertex2f(-0.85,0.35);

glVertex2f(-0.86,0.25);

glVertex2f(-0.8,0.35);

glVertex2f(-0.81,0.25);

glVertex2f(-0.75,0.35);

glVertex2f(-0.76,0.25);

glVertex2f(-0.7,0.35);

glVertex2f(-0.71,0.25);

glVertex2f(-0.65,0.35);

glVertex2f(-0.66,0.25);

glVertex2f(-0.6,0.35);

glVertex2f(-0.61,0.25);

glVertex2f(-0.55,0.35);

glVertex2f(-0.56,0.25);

glVertex2f(-0.5,0.35);

glVertex2f(-0.51,0.25);

glVertex2f(-0.45,0.35);

glVertex2f(-0.46,0.25);

glVertex2f(-0.4,0.35);

glVertex2f(-0.41,0.25);

glVertex2f(-0.35,0.35);

glVertex2f(-0.36,0.25);

glVertex2f(-0.3,0.35);

glVertex2f(-0.31,0.25);

glVertex2f(-0.25,0.35);

glVertex2f(-0.26,0.25);

glVertex2f(-0.2,0.35);

glVertex2f(-0.21,0.25);

glVertex2f(-0.15,0.35);

glVertex2f(-0.16,0.25);

glVertex2f(-0.1,0.35);

glVertex2f(-0.11,0.25);

glVertex2f(-0.05,0.35);

glVertex2f(-0.06,0.25);

glVertex2f(0.0,0.35);

glVertex2f(-0.01,0.25);

glVertex2f(-0.95,0.05);

glVertex2f(-0.96,-0.05);

glVertex2f(-0.9,0.05);

glVertex2f(-0.91,-0.05);

glVertex2f(-0.85,0.05);

glVertex2f(-0.86,-0.05);

glVertex2f(-0.8,0.05);

glVertex2f(-0.81,-0.05);

glVertex2f(-0.75,0.05);

glVertex2f(-0.76,-0.05);

glVertex2f(-0.7,0.05);

glVertex2f(-0.71,-0.05);

glVertex2f(-0.65,0.05);

glVertex2f(-0.66,-0.05);

glVertex2f(-0.6,0.05);

glVertex2f(-0.61,-0.05);

glVertex2f(-0.55,0.05);

glVertex2f(-0.56,-0.05);

glVertex2f(-0.5,0.05);

glVertex2f(-0.51,-0.05);

glVertex2f(-0.45,0.05);

glVertex2f(-0.46,-0.05);

glVertex2f(-0.4,0.05);

glVertex2f(-0.41,-0.05);

glVertex2f(-0.35,0.05);

glVertex2f(-0.36,-0.05);

glVertex2f(-0.3,0.05);

glVertex2f(-0.31,-0.05);

glVertex2f(-0.25,0.05);

glVertex2f(-0.26,-0.05);

glVertex2f(-0.2,0.05);

glVertex2f(-0.21,-0.05);

glVertex2f(-0.15,0.05);

glVertex2f(-0.16,-0.05);

glVertex2f(-0.1,0.05);

glVertex2f(-0.11,-0.05);

glVertex2f(-0.05,0.05);

glVertex2f(-0.06,-0.05);

glVertex2f(0.0,0.05);

glVertex2f(-0.01,-0.05);

glVertex2f(-0.95,-0.25);

glVertex2f(-0.96,-0.35);

glVertex2f(-0.9,-0.25);

glVertex2f(-0.91,-0.35);

glVertex2f(-0.85,-0.25);

glVertex2f(-0.86,-0.35);

glVertex2f(-0.8,-0.25);

glVertex2f(-0.81,-0.35);

glVertex2f(-0.75,-0.25);

glVertex2f(-0.76,-0.35);

glVertex2f(-0.7,-0.25);

glVertex2f(-0.71,-0.35);

glVertex2f(-0.65,-0.25);

glVertex2f(-0.66,-0.35);

glVertex2f(-0.6,-0.25);

glVertex2f(-0.61,-0.35);

glVertex2f(-0.55,-0.25);

glVertex2f(-0.56,-0.35);

glVertex2f(-0.5,-0.25);

glVertex2f(-0.51,-0.35);

glVertex2f(-0.45,-0.25);

glVertex2f(-0.46,-0.35);

glVertex2f(-0.4,-0.25);

glVertex2f(-0.41,-0.35);

glVertex2f(-0.35,-0.25);

glVertex2f(-0.36,-0.35);

glVertex2f(-0.3,-0.25);

glVertex2f(-0.31,-0.35);

glVertex2f(-0.25,-0.25);

glVertex2f(-0.26,-0.35);

glVertex2f(-0.2,-0.25);

glVertex2f(-0.21,-0.35);

glVertex2f(-0.15,-0.25);

glVertex2f(-0.16,-0.35);

glVertex2f(-0.1,-0.25);

glVertex2f(-0.11,-0.35);

glVertex2f(-0.05,-0.25);

glVertex2f(-0.06,-0.35);

glVertex2f(0.0,-0.25);

glVertex2f(-0.01,-0.35);

glVertex2f(-0.95,-0.55);

glVertex2f(-0.96,-0.65);

glVertex2f(-0.9,-0.55);

glVertex2f(-0.91,-0.65);

glVertex2f(-0.85,-0.55);

glVertex2f(-0.86,-0.65);

glVertex2f(-0.8,-0.55);

glVertex2f(-0.81,-0.65);

glVertex2f(-0.75,-0.55);

glVertex2f(-0.76,-0.65);

glVertex2f(-0.7,-0.55);

glVertex2f(-0.71,-0.65);

glVertex2f(-0.65,-0.55);

glVertex2f(-0.66,-0.65);

glVertex2f(-0.6,-0.55);

glVertex2f(-0.61,-0.65);

glVertex2f(-0.55,-0.55);

glVertex2f(-0.56,-0.65);

glVertex2f(-0.5,-0.55);

glVertex2f(-0.51,-0.65);

glVertex2f(-0.45,-0.55);

glVertex2f(-0.46,-0.65);

glVertex2f(-0.4,-0.55);

glVertex2f(-0.41,-0.65);

glVertex2f(-0.35,-0.55);

glVertex2f(-0.36,-0.65);

glVertex2f(-0.3,-0.55);

glVertex2f(-0.31,-0.65);

glVertex2f(-0.25,-0.55);

glVertex2f(-0.26,-0.65);

glVertex2f(-0.2,-0.55);

glVertex2f(-0.21,-0.65);

glVertex2f(-0.15,-0.55);

glVertex2f(-0.16,-0.65);

glVertex2f(-0.1,-0.55);

glVertex2f(-0.11,-0.65);

glVertex2f(-0.05,-0.55);

glVertex2f(-0.06,-0.65);

glVertex2f(0.0,-0.55);

glVertex2f(-0.01,-0.65);

glVertex2f(-0.95,-0.85);

glVertex2f(-0.96,-0.95);

glVertex2f(-0.9,-0.85);

glVertex2f(-0.91,-0.95);

glVertex2f(-0.85,-0.85);

glVertex2f(-0.86,-0.95);

glVertex2f(-0.8,-0.85);

glVertex2f(-0.81,-0.95);

glVertex2f(-0.75,-0.85);

glVertex2f(-0.76,-0.95);

glVertex2f(-0.7,-0.85);

glVertex2f(-0.71,-0.95);

glVertex2f(-0.65,-0.85);

glVertex2f(-0.66,-0.95);

glVertex2f(-0.6,-0.85);

glVertex2f(-0.61,-0.95);

glVertex2f(-0.55,-0.85);

glVertex2f(-0.56,-0.95);

glVertex2f(-0.5,-0.85);

glVertex2f(-0.51,-0.95);

glVertex2f(-0.45,-0.85);

glVertex2f(-0.46,-0.95);

glVertex2f(-0.4,-0.85);

glVertex2f(-0.41,-0.95);

glVertex2f(-0.35,-0.85);

glVertex2f(-0.36,-0.95);

glVertex2f(-0.3,-0.85);

glVertex2f(-0.31,-0.95);

glVertex2f(-0.25,-0.85);

glVertex2f(-0.26,-0.95);

glVertex2f(-0.2,-0.85);

glVertex2f(-0.21,-0.95);

glVertex2f(-0.15,-0.85);

glVertex2f(-0.16,-0.95);

glVertex2f(-0.1,-0.85);

glVertex2f(-0.11,-0.95);

glVertex2f(-0.05,-0.85);

glVertex2f(-0.06,-0.95);

glVertex2f(0.0,-0.85);

glVertex2f(-0.01,-0.95);

glVertex2f(0.95,0.95);

glVertex2f(0.94,0.85);

glVertex2f(0.9,0.95);

glVertex2f(0.89,0.85);

glVertex2f(0.85,0.95);

glVertex2f(0.84,0.85);

glVertex2f(0.8,0.95);

glVertex2f(0.79,0.85);

glVertex2f(0.75,0.95);

glVertex2f(0.74,0.85);

glVertex2f(0.7,0.95);

glVertex2f(0.69,0.85);

glVertex2f(0.65,0.95);

glVertex2f(0.64,0.85);

glVertex2f(0.6,0.95);

glVertex2f(0.59,0.85);

glVertex2f(0.55,0.95);

glVertex2f(0.54,0.85);

glVertex2f(0.5,0.95);

glVertex2f(0.49,0.85);

glVertex2f(0.45,0.95);

glVertex2f(0.44,0.85);

glVertex2f(0.4,0.95);

glVertex2f(0.39,0.85);

glVertex2f(0.35,0.95);

glVertex2f(0.34,0.85);

glVertex2f(0.3,0.95);

glVertex2f(0.29,0.85);

glVertex2f(0.25,0.95);

glVertex2f(0.24,0.85);

glVertex2f(0.2,0.95);

glVertex2f(0.19,0.85);

glVertex2f(0.15,0.95);

glVertex2f(0.14,0.85);

glVertex2f(0.1,0.95);

glVertex2f(0.09,0.85);

glVertex2f(0.05,0.95);

glVertex2f(0.04,0.85);

glVertex2f(0.95,0.65);

glVertex2f(0.94,0.55);

glVertex2f(0.9,0.65);

glVertex2f(0.89,0.55);

glVertex2f(0.85,0.65);

glVertex2f(0.84,0.55);

glVertex2f(0.8,0.65);

glVertex2f(0.79,0.55);

glVertex2f(0.75,0.65);

glVertex2f(0.74,0.55);

glVertex2f(0.7,0.65);

glVertex2f(0.69,0.55);

glVertex2f(0.65,0.65);

glVertex2f(0.64,0.55);

glVertex2f(0.6,0.65);

glVertex2f(0.59,0.55);

glVertex2f(0.55,0.65);

glVertex2f(0.54,0.55);

glVertex2f(0.5,0.65);

glVertex2f(0.49,0.55);

glVertex2f(0.45,0.65);

glVertex2f(0.44,0.55);

glVertex2f(0.4,0.65);

glVertex2f(0.39,0.55);

glVertex2f(0.35,0.65);

glVertex2f(0.34,0.55);

glVertex2f(0.3,0.65);

glVertex2f(0.29,0.55);

glVertex2f(0.25,0.65);

glVertex2f(0.24,0.55);

glVertex2f(0.2,0.65);

glVertex2f(0.19,0.55);

glVertex2f(0.15,0.65);

glVertex2f(0.14,0.55);

glVertex2f(0.1,0.65);

glVertex2f(0.09,0.55);

glVertex2f(0.05,0.65);

glVertex2f(0.04,0.55);

glVertex2f(0.95,0.35);

glVertex2f(0.94,0.25);

glVertex2f(0.9,0.35);

glVertex2f(0.89,0.25);

glVertex2f(0.85,0.35);

glVertex2f(0.84,0.25);

glVertex2f(0.8,0.35);

glVertex2f(0.79,0.25);

glVertex2f(0.75,0.35);

glVertex2f(0.74,0.25);

glVertex2f(0.7,0.35);

glVertex2f(0.69,0.25);

glVertex2f(0.65,0.35);

glVertex2f(0.64,0.25);

glVertex2f(0.6,0.35);

glVertex2f(0.59,0.25);

glVertex2f(0.55,0.35);

glVertex2f(0.54,0.25);

glVertex2f(0.5,0.35);

glVertex2f(0.49,0.25);

glVertex2f(0.45,0.35);

glVertex2f(0.44,0.25);

glVertex2f(0.4,0.35);

glVertex2f(0.39,0.25);

glVertex2f(0.35,0.35);

glVertex2f(0.34,0.25);

glVertex2f(0.3,0.35);

glVertex2f(0.29,0.25);

glVertex2f(0.25,0.35);

glVertex2f(0.24,0.25);

glVertex2f(0.2,0.35);

glVertex2f(0.19,0.25);

glVertex2f(0.15,0.35);

glVertex2f(0.14,0.25);

glVertex2f(0.1,0.35);

glVertex2f(0.09,0.25);

glVertex2f(0.05,0.35);

glVertex2f(0.04,0.25);

glVertex2f(0.95,0.05);

glVertex2f(0.94,-0.05);

glVertex2f(0.9,0.05);

glVertex2f(0.89,-0.05);

glVertex2f(0.85,0.05);

glVertex2f(0.84,-0.05);

glVertex2f(0.8,0.05);

glVertex2f(0.79,-0.05);

glVertex2f(0.75,0.05);

glVertex2f(0.74,-0.05);

glVertex2f(0.7,0.05);

glVertex2f(0.69,-0.05);

glVertex2f(0.65,0.05);

glVertex2f(0.64,-0.05);

glVertex2f(0.6,0.05);

glVertex2f(0.59,-0.05);

glVertex2f(0.55,0.05);

glVertex2f(0.54,-0.05);

glVertex2f(0.5,0.05);

glVertex2f(0.49,-0.05);

glVertex2f(0.45,0.05);

glVertex2f(0.44,-0.05);

glVertex2f(0.4,0.05);

glVertex2f(0.39,-0.05);

glVertex2f(0.35,0.05);

glVertex2f(0.34,-0.05);

glVertex2f(0.3,0.05);

glVertex2f(0.29,-0.05);

glVertex2f(0.25,0.05);

glVertex2f(0.24,-0.05);

glVertex2f(0.2,0.05);

glVertex2f(0.19,-0.05);

glVertex2f(0.15,0.05);

glVertex2f(0.14,-0.05);

glVertex2f(0.1,0.05);

glVertex2f(0.09,-0.05);

glVertex2f(0.05,0.05);

glVertex2f(0.04,-0.05);

glVertex2f(0.95,-0.25);

glVertex2f(0.94,-0.35);

glVertex2f(0.9,-0.25);

glVertex2f(0.89,-0.35);

glVertex2f(0.85,-0.25);

glVertex2f(0.84,-0.35);

glVertex2f(0.8,-0.25);

glVertex2f(0.79,-0.35);

glVertex2f(0.75,-0.25);

glVertex2f(0.74,-0.35);

glVertex2f(0.7,-0.25);

glVertex2f(0.69,-0.35);

glVertex2f(0.65,-0.25);

glVertex2f(0.64,-0.35);

glVertex2f(0.6,-0.25);

glVertex2f(0.59,-0.35);

glVertex2f(0.55,-0.25);

glVertex2f(0.54,-0.35);

glVertex2f(0.5,-0.25);

glVertex2f(0.49,-0.35);

glVertex2f(0.45,-0.25);

glVertex2f(0.44,-0.35);

glVertex2f(0.4,-0.25);

glVertex2f(0.39,-0.35);

glVertex2f(0.35,-0.25);

glVertex2f(0.34,-0.35);

glVertex2f(0.3,-0.25);

glVertex2f(0.29,-0.35);

glVertex2f(0.25,-0.25);

glVertex2f(0.24,-0.35);

glVertex2f(0.2,-0.25);

glVertex2f(0.19,-0.35);

glVertex2f(0.15,-0.25);

glVertex2f(0.14,-0.35);

glVertex2f(0.1,-0.25);

glVertex2f(0.09,-0.35);

glVertex2f(0.05,-0.25);

glVertex2f(0.04,-0.35);

glVertex2f(0.95,-0.55);

glVertex2f(0.94,-0.65);

glVertex2f(0.9,-0.55);

glVertex2f(0.89,-0.65);

glVertex2f(0.85,-0.55);

glVertex2f(0.84,-0.65);

glVertex2f(0.8,-0.55);

glVertex2f(0.79,-0.65);

glVertex2f(0.75,-0.55);

glVertex2f(0.74,-0.65);

glVertex2f(0.7,-0.55);

glVertex2f(0.69,-0.65);

glVertex2f(0.65,-0.55);

glVertex2f(0.64,-0.65);

glVertex2f(0.6,-0.55);

glVertex2f(0.59,-0.65);

glVertex2f(0.55,-0.55);

glVertex2f(0.54,-0.65);

glVertex2f(0.5,-0.55);

glVertex2f(0.49,-0.65);

glVertex2f(0.45,-0.55);

glVertex2f(0.44,-0.65);

glVertex2f(0.4,-0.55);

glVertex2f(0.39,-0.65);

glVertex2f(0.35,-0.55);

glVertex2f(0.34,-0.65);

glVertex2f(0.3,-0.55);

glVertex2f(0.29,-0.65);

glVertex2f(0.25,-0.55);

glVertex2f(0.24,-0.65);

glVertex2f(0.2,-0.55);

glVertex2f(0.19,-0.65);

glVertex2f(0.15,-0.55);

glVertex2f(0.14,-0.65);

glVertex2f(0.1,-0.55);

glVertex2f(0.09,-0.65);

glVertex2f(0.05,-0.55);

glVertex2f(0.04,-0.65);

glVertex2f(0.95,-0.85);

glVertex2f(0.94,-0.95);

glVertex2f(0.9,-0.85);

glVertex2f(0.89,-0.95);

glVertex2f(0.85,-0.85);

glVertex2f(0.84,-0.95);

glVertex2f(0.8,-0.85);

glVertex2f(0.79,-0.95);

glVertex2f(0.75,-0.85);

glVertex2f(0.74,-0.95);

glVertex2f(0.7,-0.85);

glVertex2f(0.69,-0.95);

glVertex2f(0.65,-0.85);

glVertex2f(0.64,-0.95);

glVertex2f(0.6,-0.85);

glVertex2f(0.59,-0.95);

glVertex2f(0.55,-0.85);

glVertex2f(0.54,-0.95);

glVertex2f(0.5,-0.85);

glVertex2f(0.49,-0.95);

glVertex2f(0.45,-0.85);

glVertex2f(0.44,-0.95);

glVertex2f(0.4,-0.85);

glVertex2f(0.39,-0.95);

glVertex2f(0.35,-0.85);

glVertex2f(0.34,-0.95);

glVertex2f(0.3,-0.85);

glVertex2f(0.29,-0.95);

glVertex2f(0.25,-0.85);

glVertex2f(0.24,-0.95);

glVertex2f(0.2,-0.85);

glVertex2f(0.19,-0.95);

glVertex2f(0.15,-0.85);

glVertex2f(0.14,-0.95);

glVertex2f(0.1,-0.85);

glVertex2f(0.09,-0.95);

glVertex2f(0.05,-0.85);

glVertex2f(0.04,-0.95);

glEnd();

glPopMatrix();

glFlush();

}

//----------End Rain-------------

void Demorain(int c)

{

glutDisplayFunc(rain);

//glutPostRedisplay();

}

void night()

{

glClear(GL\_COLOR\_BUFFER\_BIT);

glBegin(GL\_QUADS); //road

glColor3ub(84, 84, 84);

glVertex2f(-1.0,-1.0);

glVertex2f(1.0,-1.0);

glVertex2f(1.0,-0.4);

glVertex2f(-1.0,-0.4);

glEnd();

glLineWidth(20);

glBegin(GL\_LINES); //white

glColor3ub(252, 250, 250);

glVertex2f(-1.0,-1.0);

glVertex2f(-0.8,-1.0);

glVertex2f(-0.6,-1.0);

glVertex2f(-0.4,-1.0);

glVertex2f(-0.2,-1.0);

glVertex2f(0.0,-1.0);

glVertex2f(0.2,-1.0);

glVertex2f(0.4,-1.0);

glVertex2f(0.6,-1.0);

glVertex2f(0.8,-1.0);

glEnd();

glLineWidth(20);

glBegin(GL\_LINES);//black

glColor3ub(10, 10, 10);

glVertex2f(-0.8,-1.0);

glVertex2f(-0.6,-1.0);

glVertex2f(-0.4,-1.0);

glVertex2f(-0.2,-1.0);

glVertex2f(0.0,-1.0);

glVertex2f(0.2,-1.0);

glVertex2f(0.4,-1.0);

glVertex2f(0.6,-1.0);

glVertex2f(0.8,-1.0);

glVertex2f(1.0,-1.0);

glEnd();

glLineWidth(40);

glBegin(GL\_LINES); //white

glColor3ub(252, 250, 250);

glVertex2f(-1.0,-0.4);

glVertex2f(-0.8,-0.4);

glVertex2f(-0.6,-0.4);

glVertex2f(-0.4,-0.4);

glVertex2f(-0.2,-0.4);

glVertex2f(0.0,-0.4);

glVertex2f(0.2,-0.4);

glVertex2f(0.4,-0.4);

glVertex2f(0.6,-0.4);

glVertex2f(0.8,-0.4);

glEnd();

glLineWidth(40);

glBegin(GL\_LINES);//black

glColor3ub(10, 10, 10);

glVertex2f(-0.8,-0.4);

glVertex2f(-0.6,-0.4);

glVertex2f(-0.4,-0.4);

glVertex2f(-0.2,-0.4);

glVertex2f(0.0,-0.4);

glVertex2f(0.2,-0.4);

glVertex2f(0.4,-0.4);

glVertex2f(0.6,-0.4);

glVertex2f(0.8,-0.4);

glVertex2f(1.0,-0.4);

glEnd();

glLineWidth(5);

glBegin(GL\_LINES); //road div

glColor3ub(252, 250, 250);

glVertex2f(-1.0,-0.7);

glVertex2f(-0.8,-0.7);

glVertex2f(-0.6,-0.7);

glVertex2f(-0.4,-0.7);

glVertex2f(-0.2,-0.7);

glVertex2f(0.0,-0.7);

glVertex2f(0.2,-0.7);

glVertex2f(0.4,-0.7);

glVertex2f(0.6,-0.7);

glVertex2f(0.8,-0.7);

glVertex2f(1.0,-0.7);

glEnd();

glBegin(GL\_QUADS); //river 168, 216, 240

glColor3ub(168, 216, 240);

glVertex2f(-1.0,-0.4);

glVertex2f(1.0,-0.4);

glVertex2f(1.0,0.1);

glVertex2f(-1.0,0.1);

glEnd();

glBegin(GL\_QUADS);

glColor3ub(3,0,46 ); //sky

glVertex2f(-1.0,0.1);

glVertex2f(1.0,0.1);

glVertex2f(1.0,1.0);

glVertex2f(-1.0,1.0);

glEnd();

glBegin(GL\_LINES);

glColor3ub(115, 115, 115);

glVertex2f(-1.0,0.1);

glVertex2f(1.0,0.1);

glEnd();

glPointSize(3);//star

glBegin(GL\_POINTS);

glColor3f(1.0,1.0,1.0);

glVertex2f(-0.9,0.9);

glVertex2f(-0.85,0.85);

glVertex2f(-0.8,0.75);

glVertex2f(-0.75,0.85);

glVertex2f(-0.78,0.75);

glVertex2f(-0.65,0.75);

glVertex2f(-0.6,0.9);

glVertex2f(-0.55,0.85);

glVertex2f(-0.45,0.85);

glVertex2f(-0.38,0.75);

glVertex2f(-0.2,0.9);

glVertex2f(-0.15,0.85);

glVertex2f(-0.1,0.85);

glVertex2f(-0.0,0.75);

glVertex2f(-0.7,0.9);

glVertex2f(-0.3,0.85);

glVertex2f(-0.48,0.85);

glVertex2f(-0.25,0.75);

glVertex2f(-0.32,0.75);

glVertex2f(-0.18,0.75);

glVertex2f(0.32,0.75);

glVertex2f(0.18,0.75);

glVertex2f(0.9,0.9);

glVertex2f(0.85,0.85);

glVertex2f(0.75,0.85);

glVertex2f(0.78,0.75);

glVertex2f(0.6,0.9);

glVertex2f(0.55,0.85);

glVertex2f(0.45,0.85);

glVertex2f(0.38,0.75);

glVertex2f(0.2,0.9);

glVertex2f(0.15,0.85);

glVertex2f(0.1,0.85);

glVertex2f(0.0,0.75);

glVertex2f(0.7,0.9);

glVertex2f(0.3,0.85);

glVertex2f(0.48,0.85);

glVertex2f(0.25,0.75);

glEnd();

glBegin(GL\_QUADS); //building

glColor3ub(0, 16, 140);

glVertex2f(-1.0,0.1);

glVertex2f(-0.88,0.1);

glVertex2f(-0.88,0.3);

glVertex2f(-1.0,0.3);

glVertex2f(-0.88,0.1);

glVertex2f(-0.865,0.1);

glVertex2f(-0.865,0.25);

glVertex2f(-0.88,0.3);

glEnd();

glBegin(GL\_QUADS); //building2

glColor3ub(90, 184, 64);

glVertex2f(-0.73,0.1);

glVertex2f(-0.85,0.1);

glVertex2f(-0.85,0.4);

glVertex2f(-0.73,0.4);

glVertex2f(-0.73,0.1);

glVertex2f(-0.71,0.1);

glVertex2f(-0.71,0.35);

glVertex2f(-0.73,0.4);

glEnd();

glBegin(GL\_QUADS); //building3

glColor3ub(96, 166, 141);

glVertex2f(-0.7,0.1);

glVertex2f(-0.58,0.1);

glVertex2f(-0.58,0.45);

glVertex2f(-0.7,0.45);

glVertex2f(-0.58,0.1);

glVertex2f(-0.57,0.1);

glVertex2f(-0.57,0.4);

glVertex2f(-0.58,0.45);

glEnd();

glBegin(GL\_QUADS); //building4

glColor3ub(46, 8, 92);

glVertex2f(-0.56,0.1);

glVertex2f(-0.44,0.1);

glVertex2f(-0.44,0.33);

glVertex2f(-0.56,0.33);

glVertex2f(-0.44,0.1);

glVertex2f(-0.43,0.1);

glVertex2f(-0.43,0.3);

glVertex2f(-0.44,0.33);

glEnd();

glBegin(GL\_QUADS); //building5

glColor3ub(242, 189, 10);

glVertex2f(-0.41,0.1);

glVertex2f(-0.29,0.1);

glVertex2f(-0.29,0.55);

glVertex2f(-0.41,0.55);

glVertex2f(-0.29,0.1);

glVertex2f(-0.28,0.1);

glVertex2f(-0.28,0.5);

glVertex2f(-0.29,0.55);

glEnd();

glBegin(GL\_QUADS); //building6

glColor3ub(138, 42, 4);

glVertex2f(-0.27,0.1);

glVertex2f(-0.15,0.1);

glVertex2f(-0.15,0.45);

glVertex2f(-0.27,0.45);

glVertex2f(-0.15,0.1);

glVertex2f(-0.14,0.1);

glVertex2f(-0.14,0.4);

glVertex2f(-0.15,0.45);

glEnd();

glBegin(GL\_QUADS); //building7

glColor3ub(131, 0, 189);

glVertex2f(-0.13,0.1);

glVertex2f(-0.01,0.1);

glVertex2f(-0.01,0.3);

glVertex2f(-0.13,0.3);

glVertex2f(-0.01,0.1);

glVertex2f(-0.0,0.1);

glVertex2f(-0.0,0.25);

glVertex2f(-0.01,0.3);

glEnd();

glBegin(GL\_QUADS); //building8

glColor3ub(94, 90, 92);

glVertex2f(0.01,0.1);

glVertex2f(0.13,0.1);

glVertex2f(0.13,0.4);

glVertex2f(0.01,0.4);

glVertex2f(0.13,0.1);

glVertex2f(0.14,0.1);

glVertex2f(0.14,0.35);

glVertex2f(0.13,0.4);

glEnd();

glBegin(GL\_QUADS); //building9

glColor3ub(212, 23, 111);

glVertex2f(0.15,0.1);

glVertex2f(0.27,0.1);

glVertex2f(0.27,0.5);

glVertex2f(0.15,0.5);

glVertex2f(0.27,0.1);

glVertex2f(0.28,0.1);

glVertex2f(0.28,0.45);

glVertex2f(0.27,0.5);

glEnd();

glBegin(GL\_QUADS); //building10

glColor3ub(17, 142, 184);

glVertex2f(0.29,0.1);

glVertex2f(0.41,0.1);

glVertex2f(0.41,0.55);

glVertex2f(0.29,0.55);

glVertex2f(0.41,0.1);

glVertex2f(0.42,0.1);

glVertex2f(0.42,0.5);

glVertex2f(0.41,0.55);

glEnd();

glBegin(GL\_QUADS); //building11

glColor3ub(140, 82, 0);

glVertex2f(0.43,0.1);

glVertex2f(0.55,0.1);

glVertex2f(0.55,0.33);

glVertex2f(0.43,0.33);

glVertex2f(0.55,0.1);

glVertex2f(0.56,0.1);

glVertex2f(0.56,0.3);

glVertex2f(0.55,0.33);

glEnd();

glBegin(GL\_QUADS); //building12

glColor3ub(94, 90, 92);

glVertex2f(0.57,0.1);

glVertex2f(0.69,0.1);

glVertex2f(0.69,0.5);

glVertex2f(0.57,0.5);

glVertex2f(0.69,0.1);

glVertex2f(0.7,0.1);

glVertex2f(0.7,0.45);

glVertex2f(0.69,0.5);

glEnd();

glBegin(GL\_QUADS); //building13

glColor3ub(125, 6, 6);

glVertex2f(0.71,0.1);

glVertex2f(0.83,0.1);

glVertex2f(0.83,0.4);

glVertex2f(0.71,0.4);

glVertex2f(0.83,0.1);

glVertex2f(0.84,0.1);

glVertex2f(0.84,0.35);

glVertex2f(0.83,0.4);

glEnd();

glBegin(GL\_QUADS); //building14

glColor3ub(153, 105, 0);

glVertex2f(0.85,0.1);

glVertex2f(0.97,0.1);

glVertex2f(0.97,0.6);

glVertex2f(0.85,0.6);

glVertex2f(0.97,0.1);

glVertex2f(0.98,0.1);

glVertex2f(0.98,0.55);

glVertex2f(0.97,0.6);

glEnd();

glPointSize(30);

glBegin(GL\_POINTS);

glColor3ub(227, 212, 129);//255, 236, 173 227, 212, 129 240, 255, 77

glVertex2f(-0.97,0.2);////building1

glVertex2f(-0.92,0.2);

glVertex2f(-0.82,0.3);////building2

glVertex2f(-0.77,0.3);

glVertex2f(-0.82,0.2);////building2

glVertex2f(-0.77,0.2);

glVertex2f(-0.67,0.35);////building3

glVertex2f(-0.62,0.35);

glVertex2f(-0.67,0.22);////building3

glVertex2f(-0.62,0.22);

glVertex2f(-0.53,0.27);////building4

glVertex2f(-0.48,0.27);

glVertex2f(-0.53,0.18);////building4

glVertex2f(-0.48,0.18);

glVertex2f(-0.38,0.47);////building5

glVertex2f(-0.33,0.47);

glVertex2f(-0.38,0.36);////building5

glVertex2f(-0.33,0.36);

glVertex2f(-0.38,0.24);////building5

glVertex2f(-0.33,0.24);

glVertex2f(-0.24,0.35);////building6

glVertex2f(-0.19,0.35);

glVertex2f(-0.24,0.25);////building6

glVertex2f(-0.19,0.25);

glVertex2f(-0.1,0.2);////building7

glVertex2f(-0.05,0.2);

glVertex2f(0.04,0.3);////building8

glVertex2f(0.09,0.3);

glVertex2f(0.04,0.2);////building8

glVertex2f(0.09,0.2);

glVertex2f(0.18,0.4);////building9

glVertex2f(0.23,0.4);

glVertex2f(0.18,0.3);////building9

glVertex2f(0.23,0.3);

glVertex2f(0.18,0.2);////building9

glVertex2f(0.23,0.2);

glVertex2f(0.32,0.45);////building10

glVertex2f(0.37,0.45);

glVertex2f(0.32,0.35);////building10

glVertex2f(0.37,0.35);

glVertex2f(0.32,0.25);////building10

glVertex2f(0.37,0.25);

glVertex2f(0.46,0.27);////building11

glVertex2f(0.51,0.27);

glVertex2f(0.46,0.18);////building11

glVertex2f(0.51,0.18);

glVertex2f(0.6,0.4);////building12

glVertex2f(0.65,0.4);

glVertex2f(0.6,0.3);////building12

glVertex2f(0.65,0.3);

glVertex2f(0.6,0.2);////building12

glVertex2f(0.65,0.2);

glVertex2f(0.74,0.3);////building13

glVertex2f(0.79,0.3);

glVertex2f(0.74,0.2);////building13

glVertex2f(0.79,0.2);

glVertex2f(0.88,0.5);////building14

glVertex2f(0.93,0.5);

glVertex2f(0.88,0.4);////building14

glVertex2f(0.93,0.4);

glVertex2f(0.88,0.3);////building14

glVertex2f(0.93,0.3);

glVertex2f(0.88,0.2);////building14

glVertex2f(0.93,0.2);

glEnd();

glPushMatrix();

glTranslatef(position5,0.0f, 0.0f);

glBegin(GL\_QUADS);//ship2

glColor3ub(156, 156, 156);

glVertex2f(0.6,-0.05);

glVertex2f(0.8,-0.05);

glVertex2f(0.8,0.1);

glVertex2f(0.5,0.1);

glEnd();

glBegin(GL\_QUADS);//ship2floor1

glColor3ub(30, 124, 133);

glVertex2f(0.78,0.1);

glVertex2f(0.78,0.18);

glVertex2f(0.6,0.18);

glVertex2f(0.55,0.1);

glEnd();

glBegin(GL\_QUADS);//ship2floor2

glColor3ub(30, 64, 133);

glVertex2f(0.75,0.18);

glVertex2f(0.75,0.25);

glVertex2f(0.66,0.25);

glVertex2f(0.62,0.18);

glEnd();

glPointSize(20);

glBegin(GL\_POINTS);//ship2 window

glColor3ub(227, 212, 129);

glVertex2f(0.72,0.14);

glVertex2f(0.65,0.14);

glVertex2f(0.69,0.21);

glEnd();

glPopMatrix();

glPushMatrix();

glTranslatef(position4,0.0f, 0.0f);

glBegin(GL\_QUADS);//ship1

glColor3ub(156, 156, 156);

glVertex2f(-0.8,-0.2);

glVertex2f(-0.4,-0.2);

glVertex2f(-0.25,-0.02);

glVertex2f(-0.8,-0.02);

glEnd();

glBegin(GL\_QUADS);//shipfloor1

glColor3ub(79, 78, 78);

glVertex2f(-0.78,-0.02);

glVertex2f(-0.4,-0.02);

glVertex2f(-0.45,0.07);

glVertex2f(-0.78,0.07);

glEnd();

glBegin(GL\_QUADS);//shipfloor2

glColor3ub(30, 124, 133);

glVertex2f(-0.75,0.07);

glVertex2f(-0.5,0.07);

glVertex2f(-0.55,0.15);

glVertex2f(-0.75,0.15);

glEnd();

glBegin(GL\_QUADS);//shipfloor3

glColor3ub(30, 64, 133);

glVertex2f(-0.72,0.15);

glVertex2f(-0.58,0.15);

glVertex2f(-0.63,0.22);

glVertex2f(-0.72,0.22);

glEnd();

glPointSize(20);

glBegin(GL\_POINTS);//ship window

glColor3ub(227, 212, 129);

glVertex2f(-0.7,0.025);

glVertex2f(-0.6,0.025);

glVertex2f(-0.5,0.025);

glVertex2f(-0.68,0.11);

glVertex2f(-0.6,0.11);

glVertex2f(-0.67,0.185);

// glVertex2f(-0.7,0.025);

glEnd();//end ship

glPopMatrix();

glLineWidth(10);//lamp

glBegin(GL\_LINES);

glColor3ub(18, 18, 18);

glVertex2f(0.6,-0.4);//lampstand1

glVertex2f(0.6,-0.15);

glVertex2f(0.0,-0.4);//lampstand2

glVertex2f(0.0,-0.15);

glVertex2f(-0.6,-0.4);//lampstand3

glVertex2f(-0.6,-0.15);

glEnd();

glLineWidth(5);//lampbulb

glBegin(GL\_LINES);

glColor3ub(18, 18, 18);

glVertex2f(0.72,-0.25);

glVertex2f(0.48,-0.25);

glVertex2f(0.72,-0.25);

glVertex2f(0.72,-0.2);

glVertex2f(0.48,-0.25);

glVertex2f(0.48,-0.2);

glVertex2f(-0.12,-0.25);//lamp2

glVertex2f(0.12,-0.25);

glVertex2f(-0.12,-0.25);

glVertex2f(-0.12,-0.2);

glVertex2f(0.12,-0.25);

glVertex2f(0.12,-0.2);

glVertex2f(-0.72,-0.25);//lamp3

glVertex2f(-0.48,-0.25);

glVertex2f(-0.72,-0.25);

glVertex2f(-0.72,-0.2);

glVertex2f(-0.48,-0.25);

glVertex2f(-0.48,-0.2);

glEnd();

glEnable(GL\_LIGHTING);

GLfloat global\_ambient[] = {4.9,3.9,0.0, 0.1};

glLightModelfv(GL\_LIGHT\_MODEL\_AMBIENT, global\_ambient);

int l;//lampmidbulb2

GLfloat m1=0.6f; GLfloat m2 =-0.1f; GLfloat radi1 =0.06f;

int triangleAmount1 = 20;

GLfloat twicePi1 = 2.0f \* PI;

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(245, 240, 240);

glVertex2f(m1, m2);

for(l = 0; l <= triangleAmount1;l++) {

glVertex2f(

m1+ (radi1 \* cos(l \* twicePi1/ triangleAmount1)),

m2 + (radi1 \* sin(l \* twicePi1 / triangleAmount1))

);

}

glEnd();

glDisable(GL\_LIGHTING);

int l1;//lampbulb1

GLfloat m3=0.72f; GLfloat m4 =-0.17f; GLfloat radi2 =0.04f;

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 244, 84);

glVertex2f(m3, m4);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

m3+ (radi2 \* cos(l1 \* twicePi1/ triangleAmount1)),

m4 + (radi2 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat m5=0.48f; GLfloat m6 =-0.17f;//lampbulb3

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 244, 84);

glVertex2f(m5, m6);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

m5+ (radi2 \* cos(l1 \* twicePi1/ triangleAmount1)),

m6 + (radi2 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

glEnable(GL\_LIGHTING);

glLightModelfv(GL\_LIGHT\_MODEL\_AMBIENT, global\_ambient);

GLfloat m11=0.0f; GLfloat m12 =-0.1f; //lampmidbulb2

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(245, 240, 240);

glVertex2f(m11, m12);

for(l = 0; l <= triangleAmount1;l++) {

glVertex2f(

m11+ (radi1 \* cos(l \* twicePi1/ triangleAmount1)),

m12 + (radi1 \* sin(l \* twicePi1 / triangleAmount1))

);

}

glEnd();

glDisable(GL\_LIGHTING);

GLfloat m31=-0.12f; GLfloat m41=-0.17f; //lampbulb1

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 244, 84);

glVertex2f(m31, m41);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

m31+ (radi2 \* cos(l1 \* twicePi1/ triangleAmount1)),

m41 + (radi2 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat m32=0.12f; GLfloat m42=-0.17f; //lampbulb2

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 244, 84);

glVertex2f(m32, m42);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

m32+ (radi2 \* cos(l1 \* twicePi1/ triangleAmount1)),

m42 + (radi2 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

glEnable(GL\_LIGHTING);

glLightModelfv(GL\_LIGHT\_MODEL\_AMBIENT, global\_ambient);

GLfloat mm=-0.6f; GLfloat mm2 =-0.1f; //lampleftbulb2

glBegin(GL\_TRIANGLE\_FAN);

glColor3f(1,0,0);

glVertex2f(mm, mm2);

for(l = 0; l <= triangleAmount1;l++) {

glVertex2f(

mm+ (radi1 \* cos(l \* twicePi1/ triangleAmount1)),

mm2 + (radi1 \* sin(l \* twicePi1 / triangleAmount1))

);

}

glEnd();

glDisable(GL\_LIGHTING);

GLfloat mm3=-0.72f; GLfloat mm4 =-0.17f;//lampleftbulb1

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 244, 84);

glVertex2f(mm3, mm4);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

mm3+ (radi2 \* cos(l1 \* twicePi1/ triangleAmount1)),

mm4 + (radi2 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat mm5=-0.48f; GLfloat mm6 =-0.17f;

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 244, 84);

glVertex2f(mm5, mm6);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

mm5+ (radi2 \* cos(l1 \* twicePi1/ triangleAmount1)),

mm6 + (radi2 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat s1=-0.85f; GLfloat s2 =0.8f;GLfloat radi3 =0.08f;//moon

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(252, 252, 255);

glVertex2f(s1, s2);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

s1+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

s2 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

//glLoadIdentity();

glPushMatrix();

glTranslatef(position3,0.0f, 0.0f);

GLfloat c1=-0.8f; GLfloat c2 =0.8f; //cloud

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 255, 255);

glVertex2f(c1, c2);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c1+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c2 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat c12=-0.7f; GLfloat c22 =0.85f;//cloud

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 255, 255);

glVertex2f(c12, c22);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c12+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c22 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat c13=-0.72f; GLfloat c23 =0.7f;//cloud

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 255, 255);

glVertex2f(c13, c23);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c13+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c23 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat c14=-0.62f; GLfloat c24 =0.8f;//cloud

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 255, 255);

glVertex2f(c14, c24);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c14+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c24 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat c15=-0.85f; GLfloat c25 =0.7f;//cloud

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 255, 255);

glVertex2f(c15, c25);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c15+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c25 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

glPopMatrix();

glLoadIdentity();

glPushMatrix();

glTranslatef(position9,0.0f, 0.0f);

glTranslatef(1.2,0.0,0.0);//Cloud 2

glBegin(GL\_TRIANGLE\_FAN);//cloud 2

glColor3ub(255, 255, 255);

glVertex2f(c1, c2);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c1+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c2 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 255, 255);

glVertex2f(c12, c22);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c12+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c22 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 255, 255);

glVertex2f(c13, c23);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c13+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c23 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 255, 255);

glVertex2f(c14, c24);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c14+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c24 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 255, 255);

glVertex2f(c15, c25);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c15+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c25 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

glPopMatrix();

glLoadIdentity();

glPushMatrix();

glTranslatef(position,0.0f, 0.0f);

glBegin(GL\_POLYGON);//Private Car

glColor3ub(18, 54, 128);

glVertex2f(-0.95,-0.45);

glVertex2f(-0.95,-0.58);

glVertex2f(-0.46,-0.58);

glVertex2f(-0.46,-0.49);

glVertex2f(-0.52,-0.45);

glEnd();

//glLoadIdentity();

//glTranslatef(-0.45,0.05,0);

glBegin(GL\_QUADS);

glColor3ub(232, 23, 93);

glVertex2f(-0.86,-0.45);

glVertex2f(-0.79,-0.37);

glVertex2f(-0.67,-0.37);

glVertex2f(-0.59,-0.45);

glEnd();

//glLoadIdentity();

int j;

GLfloat a=-0.84f; GLfloat b =-0.58f;GLfloat radi =0.05f;

int triangleAmount = 20;

GLfloat twicePi = 2.0f \* PI;

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(31, 31, 28);

glVertex2f(a, b);

for(j = 0; j <= triangleAmount;j++) {

glVertex2f(

a+ (radi \* cos(j \* twicePi/ triangleAmount)),

b + (radi \* sin(j \* twicePi / triangleAmount))

);

}

glEnd();

GLfloat c=-0.57f; GLfloat d =-0.58f;

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(31, 31, 28);

glVertex2f(c, d);

for(j = 0; j <= triangleAmount;j++) {

glVertex2f(

c+ (radi \* cos(j \* twicePi/ triangleAmount)),

d + (radi \* sin(j \* twicePi / triangleAmount))

);

}

glEnd();

glPointSize(7);

glBegin(GL\_POINTS);//private car light

glColor3ub(237, 229, 185);

glVertex2f(-0.46,-0.56);

glEnd();

glPointSize(28);

glBegin(GL\_POINTS);//private car window

glColor3ub(227, 212, 129);

glVertex2f(-0.77,-0.41);

glVertex2f(-0.69,-0.41);

glEnd();//Private Car end

glPopMatrix();

glLoadIdentity();

glPushMatrix();

glTranslatef(position6,0.0f, 0.0f);

glBegin(GL\_QUADS);//Plane

glColor3ub(20,97,23);//body

glVertex2f(0.22,0.76);

glVertex2f(0.62,0.76);

glVertex2f(0.62,0.82);

glVertex2f(0.28,0.82);

glColor3ub(163,2,2);

glVertex2f(0.6,0.82);//back body

glVertex2f(0.62,0.76);

glVertex2f(0.7,0.88);

glVertex2f(0.66,0.88);

glVertex2f(0.38,0.82);//wing1

glVertex2f(0.46,0.9);

glVertex2f(0.51,0.9);

glVertex2f(0.43,0.82);

glVertex2f(0.38,0.76);//wing2

glVertex2f(0.44,0.64);

glVertex2f(0.48,0.64);

glVertex2f(0.42,0.76);

glEnd();

glPointSize(15);

glBegin(GL\_POINTS);//plane window

glColor3ub(227, 212, 129);

glVertex2f(0.3,0.79);

glVertex2f(0.38,0.79);

glVertex2f(0.46,0.79);

glVertex2f(0.54,0.79);

glEnd();//End Plane

glPopMatrix();

glFlush();

}

//------------------------------End night---------------=-

void Demonight(int a)

{

glutDisplayFunc(night);

}

void day()

{

glClear(GL\_COLOR\_BUFFER\_BIT);

glBegin(GL\_QUADS); //road

glColor3ub(84, 84, 84);

glVertex2f(-1.0,-1.0);

glVertex2f(1.0,-1.0);

glVertex2f(1.0,-0.4);

glVertex2f(-1.0,-0.4);

glEnd();

glLineWidth(20);

glBegin(GL\_LINES); //white

glColor3ub(252, 250, 250);

glVertex2f(-1.0,-1.0);

glVertex2f(-0.8,-1.0);

glVertex2f(-0.6,-1.0);

glVertex2f(-0.4,-1.0);

glVertex2f(-0.2,-1.0);

glVertex2f(0.0,-1.0);

glVertex2f(0.2,-1.0);

glVertex2f(0.4,-1.0);

glVertex2f(0.6,-1.0);

glVertex2f(0.8,-1.0);

glEnd();

glLineWidth(20);

glBegin(GL\_LINES);//black

glColor3ub(10, 10, 10);

glVertex2f(-0.8,-1.0);

glVertex2f(-0.6,-1.0);

glVertex2f(-0.4,-1.0);

glVertex2f(-0.2,-1.0);

glVertex2f(0.0,-1.0);

glVertex2f(0.2,-1.0);

glVertex2f(0.4,-1.0);

glVertex2f(0.6,-1.0);

glVertex2f(0.8,-1.0);

glVertex2f(1.0,-1.0);

glEnd();

glLineWidth(40);

glBegin(GL\_LINES); //white

glColor3ub(252, 250, 250);

glVertex2f(-1.0,-0.4);

glVertex2f(-0.8,-0.4);

glVertex2f(-0.6,-0.4);

glVertex2f(-0.4,-0.4);

glVertex2f(-0.2,-0.4);

glVertex2f(0.0,-0.4);

glVertex2f(0.2,-0.4);

glVertex2f(0.4,-0.4);

glVertex2f(0.6,-0.4);

glVertex2f(0.8,-0.4);

glEnd();

glLineWidth(40);

glBegin(GL\_LINES);//black

glColor3ub(10, 10, 10);

glVertex2f(-0.8,-0.4);

glVertex2f(-0.6,-0.4);

glVertex2f(-0.4,-0.4);

glVertex2f(-0.2,-0.4);

glVertex2f(0.0,-0.4);

glVertex2f(0.2,-0.4);

glVertex2f(0.4,-0.4);

glVertex2f(0.6,-0.4);

glVertex2f(0.8,-0.4);

glVertex2f(1.0,-0.4);

glEnd();

glLineWidth(5);

glBegin(GL\_LINES); //road div

glColor3ub(252, 250, 250);

glVertex2f(-1.0,-0.7);

glVertex2f(-0.8,-0.7);

glVertex2f(-0.6,-0.7);

glVertex2f(-0.4,-0.7);

glVertex2f(-0.2,-0.7);

glVertex2f(0.0,-0.7);

glVertex2f(0.2,-0.7);

glVertex2f(0.4,-0.7);

glVertex2f(0.6,-0.7);

glVertex2f(0.8,-0.7);

glVertex2f(1.0,-0.7);

glEnd();

glBegin(GL\_QUADS); //river

glColor3ub(168, 216, 240);

glVertex2f(-1.0,-0.4);

glVertex2f(1.0,-0.4);

glVertex2f(1.0,0.1);

glVertex2f(-1.0,0.1);

glEnd();

glBegin(GL\_QUADS);

glColor3ub(252, 255, 255); //sky

glVertex2f(-1.0,0.1);

glVertex2f(1.0,0.1);

glColor3ub(27, 160, 247);

glVertex2f(1.0,1.0);

glVertex2f(-1.0,1.0);

glEnd();

glBegin(GL\_LINES);

glColor3ub(115, 115, 115);

glVertex2f(-1.0,0.1);

glVertex2f(1.0,0.1);

glEnd();

glBegin(GL\_QUADS); //building

glColor3ub(0, 16, 140);

glVertex2f(-1.0,0.1);

glVertex2f(-0.88,0.1);

glVertex2f(-0.88,0.3);

glVertex2f(-1.0,0.3);

glVertex2f(-0.88,0.1);

glVertex2f(-0.865,0.1);

glVertex2f(-0.865,0.25);

glVertex2f(-0.88,0.3);

glEnd();

glBegin(GL\_QUADS); //building2

glColor3ub(90, 184, 64);

glVertex2f(-0.73,0.1);

glVertex2f(-0.85,0.1);

glVertex2f(-0.85,0.4);

glVertex2f(-0.73,0.4);

glVertex2f(-0.73,0.1);

glVertex2f(-0.71,0.1);

glVertex2f(-0.71,0.35);

glVertex2f(-0.73,0.4);

glEnd();

glBegin(GL\_QUADS); //building3

glColor3ub(96, 166, 141);

glVertex2f(-0.7,0.1);

glVertex2f(-0.58,0.1);

glVertex2f(-0.58,0.45);

glVertex2f(-0.7,0.45);

glVertex2f(-0.58,0.1);

glVertex2f(-0.57,0.1);

glVertex2f(-0.57,0.4);

glVertex2f(-0.58,0.45);

glEnd();

glBegin(GL\_QUADS); //building4

glColor3ub(199, 181, 121);

glVertex2f(-0.56,0.1);

glVertex2f(-0.44,0.1);

glVertex2f(-0.44,0.33);

glVertex2f(-0.56,0.33);

glVertex2f(-0.44,0.1);

glVertex2f(-0.43,0.1);

glVertex2f(-0.43,0.3);

glVertex2f(-0.44,0.33);

glEnd();

glBegin(GL\_QUADS); //building5

glColor3ub(242, 189, 10);

glVertex2f(-0.41,0.1);

glVertex2f(-0.29,0.1);

glVertex2f(-0.29,0.55);

glVertex2f(-0.41,0.55);

glVertex2f(-0.29,0.1);

glVertex2f(-0.28,0.1);

glVertex2f(-0.28,0.5);

glVertex2f(-0.29,0.55);

glEnd();

glBegin(GL\_QUADS); //building6

glColor3ub(138, 42, 4);

glVertex2f(-0.27,0.1);

glVertex2f(-0.15,0.1);

glVertex2f(-0.15,0.45);

glVertex2f(-0.27,0.45);

glVertex2f(-0.15,0.1);

glVertex2f(-0.14,0.1);

glVertex2f(-0.14,0.4);

glVertex2f(-0.15,0.45);

glEnd();

glBegin(GL\_QUADS); //building7

glColor3ub(131, 0, 189);

glVertex2f(-0.13,0.1);

glVertex2f(-0.01,0.1);

glVertex2f(-0.01,0.3);

glVertex2f(-0.13,0.3);

glVertex2f(-0.01,0.1);

glVertex2f(-0.0,0.1);

glVertex2f(-0.0,0.25);

glVertex2f(-0.01,0.3);

glEnd();

glBegin(GL\_QUADS); //building8

glColor3ub(196, 194, 195);

glVertex2f(0.01,0.1);

glVertex2f(0.13,0.1);

glVertex2f(0.13,0.4);

glVertex2f(0.01,0.4);

glVertex2f(0.13,0.1);

glVertex2f(0.14,0.1);

glVertex2f(0.14,0.35);

glVertex2f(0.13,0.4);

glEnd();

glBegin(GL\_QUADS); //building9

glColor3ub(212, 23, 111);

glVertex2f(0.15,0.1);

glVertex2f(0.27,0.1);

glVertex2f(0.27,0.5);

glVertex2f(0.15,0.5);

glVertex2f(0.27,0.1);

glVertex2f(0.28,0.1);

glVertex2f(0.28,0.45);

glVertex2f(0.27,0.5);

glEnd();

glBegin(GL\_QUADS); //building10

glColor3ub(17, 142, 184);

glVertex2f(0.29,0.1);

glVertex2f(0.41,0.1);

glVertex2f(0.41,0.55);

glVertex2f(0.29,0.55);

glVertex2f(0.41,0.1);

glVertex2f(0.42,0.1);

glVertex2f(0.42,0.5);

glVertex2f(0.41,0.55);

glEnd();

glBegin(GL\_QUADS); //building11

glColor3ub(140, 82, 0);

glVertex2f(0.43,0.1);

glVertex2f(0.55,0.1);

glVertex2f(0.55,0.33);

glVertex2f(0.43,0.33);

glVertex2f(0.55,0.1);

glVertex2f(0.56,0.1);

glVertex2f(0.56,0.3);

glVertex2f(0.55,0.33);

glEnd();

glBegin(GL\_QUADS); //building12

glColor3ub(191, 190, 189);

glVertex2f(0.57,0.1);

glVertex2f(0.69,0.1);

glVertex2f(0.69,0.5);

glVertex2f(0.57,0.5);

glVertex2f(0.69,0.1);

glVertex2f(0.7,0.1);

glVertex2f(0.7,0.45);

glVertex2f(0.69,0.5);

glEnd();

glBegin(GL\_QUADS); //building13

glColor3ub(255, 133, 190);

glVertex2f(0.71,0.1);

glVertex2f(0.83,0.1);

glVertex2f(0.83,0.4);

glVertex2f(0.71,0.4);

glVertex2f(0.83,0.1);

glVertex2f(0.84,0.1);

glVertex2f(0.84,0.35);

glVertex2f(0.83,0.4);

glEnd();

glBegin(GL\_QUADS); //building14

glColor3ub(153, 105, 0);

glVertex2f(0.85,0.1);

glVertex2f(0.97,0.1);

glVertex2f(0.97,0.6);

glVertex2f(0.85,0.6);

glVertex2f(0.97,0.1);

glVertex2f(0.98,0.1);

glVertex2f(0.98,0.55);

glVertex2f(0.97,0.6);

glEnd();

glPointSize(30);

glBegin(GL\_POINTS);

glColor3f(0.0,0.0,0.0);

glVertex2f(-0.97,0.2);////building1

glVertex2f(-0.92,0.2);

glVertex2f(-0.82,0.3);////building2

glVertex2f(-0.77,0.3);

glVertex2f(-0.82,0.2);////building2

glVertex2f(-0.77,0.2);

glVertex2f(-0.67,0.35);////building3

glVertex2f(-0.62,0.35);

glVertex2f(-0.67,0.22);////building3

glVertex2f(-0.62,0.22);

glVertex2f(-0.53,0.27);////building4

glVertex2f(-0.48,0.27);

glVertex2f(-0.53,0.18);////building4

glVertex2f(-0.48,0.18);

glVertex2f(-0.38,0.47);////building5

glVertex2f(-0.33,0.47);

glVertex2f(-0.38,0.36);////building5

glVertex2f(-0.33,0.36);

glVertex2f(-0.38,0.24);////building5

glVertex2f(-0.33,0.24);

glVertex2f(-0.24,0.35);////building6

glVertex2f(-0.19,0.35);

glVertex2f(-0.24,0.25);////building6

glVertex2f(-0.19,0.25);

glVertex2f(-0.1,0.2);////building7

glVertex2f(-0.05,0.2);

glVertex2f(0.04,0.3);////building8

glVertex2f(0.09,0.3);

glVertex2f(0.04,0.2);////building8

glVertex2f(0.09,0.2);

glVertex2f(0.18,0.4);////building9

glVertex2f(0.23,0.4);

glVertex2f(0.18,0.3);////building9

glVertex2f(0.23,0.3);

glVertex2f(0.18,0.2);////building9

glVertex2f(0.23,0.2);

glVertex2f(0.32,0.45);////building10

glVertex2f(0.37,0.45);

glVertex2f(0.32,0.35);////building10

glVertex2f(0.37,0.35);

glVertex2f(0.32,0.25);////building10

glVertex2f(0.37,0.25);

glVertex2f(0.46,0.27);////building11

glVertex2f(0.51,0.27);

glVertex2f(0.46,0.18);////building11

glVertex2f(0.51,0.18);

glVertex2f(0.6,0.4);////building12

glVertex2f(0.65,0.4);

glVertex2f(0.6,0.3);////building12

glVertex2f(0.65,0.3);

glVertex2f(0.6,0.2);////building12

glVertex2f(0.65,0.2);

glVertex2f(0.74,0.3);////building13

glVertex2f(0.79,0.3);

glVertex2f(0.74,0.2);////building13

glVertex2f(0.79,0.2);

glVertex2f(0.88,0.5);////building14

glVertex2f(0.93,0.5);

glVertex2f(0.88,0.4);////building14

glVertex2f(0.93,0.4);

glVertex2f(0.88,0.3);////building14

glVertex2f(0.93,0.3);

glVertex2f(0.88,0.2);////building14

glVertex2f(0.93,0.2);

glEnd();

//glLoadIdentity();

glPushMatrix();

glTranslatef(position4,0.0f, 0.0f);

glBegin(GL\_QUADS);//ship1

glColor3ub(156, 156, 156);

glVertex2f(-0.8,-0.2);

glVertex2f(-0.4,-0.2);

glVertex2f(-0.25,-0.02);

glVertex2f(-0.8,-0.02);

glEnd();

glBegin(GL\_QUADS);//shipfloor1

glColor3ub(79, 78, 78);

glVertex2f(-0.78,-0.02);

glVertex2f(-0.4,-0.02);

glVertex2f(-0.45,0.07);

glVertex2f(-0.78,0.07);

glEnd();

glBegin(GL\_QUADS);//shipfloor2

glColor3ub(30, 124, 133);

glVertex2f(-0.75,0.07);

glVertex2f(-0.5,0.07);

glVertex2f(-0.55,0.15);

glVertex2f(-0.75,0.15);

glEnd();

glBegin(GL\_QUADS);//shipfloor3

glColor3ub(30, 64, 133);

glVertex2f(-0.72,0.15);

glVertex2f(-0.58,0.15);

glVertex2f(-0.63,0.22);

glVertex2f(-0.72,0.22);

glEnd();

glPointSize(20);

glBegin(GL\_POINTS);//ship window

glColor3ub(225, 225, 230);

glVertex2f(-0.7,0.025);

glVertex2f(-0.6,0.025);

glVertex2f(-0.5,0.025);

glVertex2f(-0.68,0.11);

glVertex2f(-0.6,0.11);

glVertex2f(-0.67,0.185);

// glVertex2f(-0.7,0.025);

glEnd();//end ship

glPopMatrix();

glLineWidth(10);//lamp

glBegin(GL\_LINES);

glColor3ub(18, 18, 18);

glVertex2f(0.6,-0.4);//lampstand1

glVertex2f(0.6,-0.15);

glVertex2f(0.0,-0.4);//lampstand2

glVertex2f(0.0,-0.15);

glVertex2f(-0.6,-0.4);//lampstand3

glVertex2f(-0.6,-0.15);

glEnd();

glLineWidth(5);//lampbulb

glBegin(GL\_LINES);

glColor3ub(18, 18, 18);

glVertex2f(0.72,-0.25);

glVertex2f(0.48,-0.25);

glVertex2f(0.72,-0.25);

glVertex2f(0.72,-0.2);

glVertex2f(0.48,-0.25);

glVertex2f(0.48,-0.2);

glVertex2f(-0.12,-0.25);//lamp2

glVertex2f(0.12,-0.25);

glVertex2f(-0.12,-0.25);

glVertex2f(-0.12,-0.2);

glVertex2f(0.12,-0.25);

glVertex2f(0.12,-0.2);

glVertex2f(-0.72,-0.25);//lamp3

glVertex2f(-0.48,-0.25);

glVertex2f(-0.72,-0.25);

glVertex2f(-0.72,-0.2);

glVertex2f(-0.48,-0.25);

glVertex2f(-0.48,-0.2);

glEnd();

int l;//lampbulb2

GLfloat m1=0.6f; GLfloat m2 =-0.1f; GLfloat radi1 =0.06f;

int triangleAmount1 = 20;

GLfloat twicePi1 = 2.0f \* PI;

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(245, 240, 240);

glVertex2f(m1, m2);

for(l = 0; l <= triangleAmount1;l++) {

glVertex2f(

m1+ (radi1 \* cos(l \* twicePi1/ triangleAmount1)),

m2 + (radi1 \* sin(l \* twicePi1 / triangleAmount1))

);

}

glEnd();

int l1;//lampbulb1

GLfloat m3=0.72f; GLfloat m4 =-0.17f; GLfloat radi2 =0.04f;

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(245, 240, 240);

glVertex2f(m3, m4);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

m3+ (radi2 \* cos(l1 \* twicePi1/ triangleAmount1)),

m4 + (radi2 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat m5=0.48f; GLfloat m6 =-0.17f;//lampbulb3

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(245, 240, 240);

glVertex2f(m5, m6);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

m5+ (radi2 \* cos(l1 \* twicePi1/ triangleAmount1)),

m6 + (radi2 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat m11=0.0f; GLfloat m12 =-0.1f; //lampmidbulb2

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(245, 240, 240);

glVertex2f(m11, m12);

for(l = 0; l <= triangleAmount1;l++) {

glVertex2f(

m11+ (radi1 \* cos(l \* twicePi1/ triangleAmount1)),

m12 + (radi1 \* sin(l \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat m31=-0.12f; GLfloat m41=-0.17f; //lampbulb1

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(245, 240, 240);

glVertex2f(m31, m41);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

m31+ (radi2 \* cos(l1 \* twicePi1/ triangleAmount1)),

m41 + (radi2 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat m32=0.12f; GLfloat m42=-0.17f; //lampbulb2

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(245, 240, 240);

glVertex2f(m32, m42);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

m32+ (radi2 \* cos(l1 \* twicePi1/ triangleAmount1)),

m42 + (radi2 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat mm=-0.6f; GLfloat mm2 =-0.1f; //lampleftbulb2

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(245, 240, 240);

glVertex2f(mm, mm2);

for(l = 0; l <= triangleAmount1;l++) {

glVertex2f(

mm+ (radi1 \* cos(l \* twicePi1/ triangleAmount1)),

mm2 + (radi1 \* sin(l \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat mm3=-0.72f; GLfloat mm4 =-0.17f;//lampleftbulb1

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(245, 240, 240);

glVertex2f(mm3, mm4);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

mm3+ (radi2 \* cos(l1 \* twicePi1/ triangleAmount1)),

mm4 + (radi2 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat mm5=-0.48f; GLfloat mm6 =-0.17f;//lampleftbulb3

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(245, 240, 240);

glVertex2f(mm5, mm6);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

mm5+ (radi2 \* cos(l1 \* twicePi1/ triangleAmount1)),

mm6 + (radi2 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat s1=-0.05f; GLfloat s2 =0.7f;GLfloat radi3 =0.08f;//sun

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 226, 5);

glVertex2f(s1, s2);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

s1+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

s2 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

//glLoadIdentity();

glPushMatrix();

glTranslatef(position3,0.0f, 0.0f);

GLfloat c1=-0.8f; GLfloat c2 =0.8f; //cloud

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 255, 255);

glVertex2f(c1, c2);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c1+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c2 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat c12=-0.7f; GLfloat c22 =0.85f;//cloud

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 255, 255);

glVertex2f(c12, c22);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c12+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c22 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat c13=-0.72f; GLfloat c23 =0.7f;//cloud

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 255, 255);

glVertex2f(c13, c23);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c13+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c23 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat c14=-0.62f; GLfloat c24 =0.8f;//cloud

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 255, 255);

glVertex2f(c14, c24);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c14+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c24 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

GLfloat c15=-0.85f; GLfloat c25 =0.7f;//cloud

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(255, 255, 255);

glVertex2f(c15, c25);

for(l1 = 0; l1 <= triangleAmount1;l1++) {

glVertex2f(

c15+ (radi3 \* cos(l1 \* twicePi1/ triangleAmount1)),

c25 + (radi3 \* sin(l1 \* twicePi1 / triangleAmount1))

);

}

glEnd();

glPopMatrix();

glLoadIdentity();

glPushMatrix();

glTranslatef(position,0.0f, 0.0f);

glBegin(GL\_POLYGON);//Private Car

glColor3ub(18, 54, 128);

glVertex2f(-0.95,-0.45);

glVertex2f(-0.95,-0.58);

glVertex2f(-0.46,-0.58);

glVertex2f(-0.46,-0.49);

glVertex2f(-0.52,-0.45);

glEnd();

glBegin(GL\_QUADS);

glColor3ub(232, 23, 93);

glVertex2f(-0.86,-0.45);

glVertex2f(-0.79,-0.37);

glVertex2f(-0.67,-0.37);

glVertex2f(-0.59,-0.45);

glEnd();

//glLoadIdentity();

int j;

GLfloat a=-0.84f; GLfloat b =-0.58f;GLfloat radi =0.05f;

int triangleAmount = 20;

GLfloat twicePi = 2.0f \* PI;

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(31, 31, 28);

glVertex2f(a, b);

for(j = 0; j <= triangleAmount;j++) {

glVertex2f(

a+ (radi \* cos(j \* twicePi/ triangleAmount)),

b + (radi \* sin(j \* twicePi / triangleAmount))

);

}

glEnd();

GLfloat c=-0.57f; GLfloat d =-0.58f;

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(31, 31, 28);

glVertex2f(c, d);

for(j = 0; j <= triangleAmount;j++) {

glVertex2f(

c+ (radi \* cos(j \* twicePi/ triangleAmount)),

d + (radi \* sin(j \* twicePi / triangleAmount))

);

}

glEnd();

glPointSize(7);

glBegin(GL\_POINTS);//private car light

glColor3ub(237, 229, 185);

glVertex2f(-0.46,-0.56);

glEnd();

glPointSize(28);

glBegin(GL\_POINTS);//private car window

glColor3ub(225, 225, 230);

glVertex2f(-0.77,-0.41);

glVertex2f(-0.69,-0.41);

glEnd();//Private Car end

glPopMatrix();

glLoadIdentity();

glPushMatrix();

glTranslatef(position2,0.0f, 0.0f);

glBegin(GL\_QUADS); //Micro Car

glColor3ub(97, 34, 110);

glVertex2f(0.3,-0.7);

glVertex2f(0.3,-0.85);

glVertex2f(0.7,-0.85);

glVertex2f(0.7,-0.7);

glVertex2f(0.4,-0.64);

glVertex2f(0.4,-0.7);

glVertex2f(0.7,-0.7);

glVertex2f(0.7,-0.64);

glEnd();

glBegin(GL\_QUADS);

glColor3ub(148, 16, 146);

glVertex2f(0.4,-0.6);

glVertex2f(0.4,-0.7);

glVertex2f(0.7,-0.7);

glVertex2f(0.7,-0.6);

glEnd();

glBegin(GL\_TRIANGLES);

glColor3ub(163, 193, 227);

glVertex2f(0.4,-0.6);

glVertex2f(0.3,-0.7);

glVertex2f(0.4,-0.7);

glEnd();

glPointSize(7);

glBegin(GL\_POINTS);

glColor3ub(247, 246, 218);

glVertex2f(0.295,-0.82);

glEnd();

GLfloat r=0.4f; GLfloat s =-0.85f;

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(31, 31, 28);

glVertex2f(r, s);

for(j = 0; j <= triangleAmount;j++) {

glVertex2f(

r+ (radi \* cos(j \* twicePi/ triangleAmount)),

s + (radi \* sin(j \* twicePi / triangleAmount))

);

}

glEnd();

GLfloat x=0.6f; GLfloat y =-0.85f;

glBegin(GL\_TRIANGLE\_FAN);

glColor3ub(31, 31, 28);

glVertex2f(x, y);

for(j = 0; j <= triangleAmount;j++) {

glVertex2f(

x+ (radi \* cos(j \* twicePi/ triangleAmount)),

y + (radi \* sin(j \* twicePi / triangleAmount))

);

}

glEnd();

glPointSize(30);

glBegin(GL\_POINTS);//Micro window

glColor3ub(227, 212, 129);

glVertex2f(0.45,-0.65);

glVertex2f(0.55,-0.65);

glVertex2f(0.65,-0.65);

glEnd();//End Micro

glPopMatrix();

glutTimerFunc(5000, Demonight, 0);

glFlush();

}

void DemoDay(int a)

{

glutDisplayFunc(day);

}

void handlekeypress(unsigned char key,int x,int y)

{

switch (key)

{

case 'r':

glutDisplayFunc(rain);

break;

case 's':

glutDisplayFunc(morning);

break;

glutPostRedisplay();

}

}

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

glutInit(&argc, argv);

glutCreateWindow("City View Scenario");

glutInitWindowSize(320, 320);

glutDisplayFunc(morning);

init();

glutTimerFunc(100, update, 0);

glutTimerFunc(100, update2, 0);

glutTimerFunc(100, update3, 0);

glutTimerFunc(100, update4, 0);

glutTimerFunc(100, update5, 0);

glutTimerFunc(100, update6, 0);

glutTimerFunc(100, update7, 0);

glutTimerFunc(100, update8, 0);

glutTimerFunc(100, update9, 0);

glutTimerFunc(100, update10, 0);

glutKeyboardFunc(handlekeypress);

glutMainLoop();

return 0;

}

**Function List:**

**Conclusion**:

We have put in the place a “city view scenario” which is a colorful and simple mini project and this project includes a lot of options in it. We give the idea to implement the simple objects as we have used in this project. We will try to add another feature to make it more beautiful. For the future implementation we will try to create couple of people on the road, couple of trees and etc.