Lab Practice-7

Submission Guidelines-

- Rename the file to your id only. If your id is 18-XXXXX-1, then the file name must be 18-XXXXX-1.docx.

Question-
Create a simple day and night scenario that will automatically change from day to night

Code

```
#include <GL/freeglut.h>
#include <cmath>

int currentDisplay = 0;


void display1_view() {
   glClear(GL_COLOR_BUFFER_BIT);

   glBegin(GL_POLYGON);

   //Sky
   glColor3f(0.286, 0.718, 0.957);
   glVertex2f(-106.00, 116.00);
   glVertex2f(283.00, 116.00);
   glColor3f(0.792, 0.914, 0.945);
   glVertex2f(283.00, -55.00);
   glVertex2f(-106.00, -55.00);

   glEnd();

   glBegin(GL_QUADS);
   glColor3f(0.9804, 0.8745, 0.251);
   glVertex2f(-52.0, -55.0);
   glVertex2f(-52.0, 65.0);
   glVertex2f(115.0, 65.0);
   glVertex2f(115.0, -55.0);

   glBegin(GL_QUADS);
```

```
glColor3f(0.9804, 0.8745, 0.251);
glVertex2f(-52.0, 65.0);
glVertex2f(-52.0, 86.0);
glVertex2f(-25.0, 86.0);
glVertex2f(-25.0, 65.0);

glBegin(GL_QUADS);
glColor3f(0.9804, 0.8745, 0.251);
glVertex2f(88.0, 65.0);
glVertex2f(88.0, 86.0);
glVertex2f(115.0, 86.0);
glVertex2f(115.0, 65.0);

glBegin(GL_QUADS);
glColor3f(0.9804, 0.8745, 0.251);
glVertex2f(10.0, 65.0);
glVertex2f(10.0, 86.0);
glVertex2f(53.0, 86.0);
glVertex2f(53.0, 65.0);

glBegin(GL_TRIANGLES);
glColor3f(0.9804, 0.8745, 0.251);
glVertex2f(5.0, 86.0);
glVertex2f(32.0, 103.0);
glVertex2f(58.0, 86.0);
glVertex2f(5.0, 86.0);
glEnd();

glBegin(GL_QUADS);
glColor3f(0.8235, 0.1294, 0.1255);
glVertex2f(-45.0, -55.0);
glVertex2f(-45.0, 60.0);
glVertex2f(14.0, 60.0);
glVertex2f(14.0, -55.0);
glEnd();

glBegin(GL_QUADS);
glColor3f(0.8235, 0.1294, 0.1255);
glVertex2f(-45.0 + 94.0, -55.0);
glVertex2f(-45.0 + 94.0, 60.0);
glVertex2f(14.0 + 94.0, 60.0);
glVertex2f(14.0 + 94.0, -55.0);
glEnd();
```

```
glBegin(GL_QUADS);
// Window 1
glColor3f(0.0, 0.0, 0.0); // Black color
glVertex2i(-40, 54);
glVertex2i(-23, 54);
glVertex2i(-23, 40);
glVertex2i(-40, 40);

// Window 2
glVertex2i(-40, 37);
glVertex2i(-23, 37);
glVertex2i(-23, 23);
glVertex2i(-40, 23);

// Window 3
glVertex2i(-40, 20);
glVertex2i(-23, 20);
glVertex2i(-23, 6);
glVertex2i(-40, 6);

// Window 4
glVertex2i(-40, 3);
glVertex2i(-23, 3);
glVertex2i(-23, -11);
glVertex2i(-40, -11);

// window 5
glVertex2i(-40, -14);
glVertex2i(-23, -14);
glVertex2i(-23, -28);
glVertex2i(-40, -28);
//window 6
glColor3f(0.0, 0.0, 0.0); // Black color
glVertex2i(-40 + 32, 54);
glVertex2i(-23 + 32, 54);
glVertex2i(-23 + 32, 40);
glVertex2i(-40 + 32, 40);

// Window 7
glVertex2i(-40 + 32, 37);
glVertex2i(-23 + 32, 37);
glVertex2i(-23 + 32, 23);
glVertex2i(-40 + 32, 23);
```

```
// Window 8
glVertex2i(-40 + 32, 20);
glVertex2i(-23 + 32, 20);
glVertex2i(-23 + 32, 6);
glVertex2i(-40 + 32, 6);

// Window 9
glVertex2i(-40 + 32, 3);
glVertex2i(-23 + 32, 3);
glVertex2i(-23 + 32, -11);
glVertex2i(-40 + 32, -11);

// Window 10
glVertex2i(-40 + 32, -14);
glVertex2i(-23 + 32, -14);
glVertex2i(-23 + 32, -28);
glVertex2i(-40 + 32, -28);

// Window 11
glColor3f(0.0, 0.0, 0.0); // Black color
glVertex2i(-40 + 94, 54);
glVertex2i(-23 + 94, 54);
glVertex2i(-23 + 94, 40);
glVertex2i(-40 + 94, 40);

// Window 12
glVertex2i(-40 + 94, 37);
glVertex2i(-23 + 94, 37);
glVertex2i(-23 + 94, 23);
glVertex2i(-40 + 94, 23);

// Window 13
glVertex2i(-40 + 94, 20);
glVertex2i(-23 + 94, 20);
glVertex2i(-23 + 94, 6);
glVertex2i(-40 + 94, 6);

// Window 14
glVertex2i(-40 + 94, 3);
glVertex2i(-23 + 94, 3);
glVertex2i(-23 + 94, -11);
glVertex2i(-40 + 94, -11);

// Window 15
```

```
glVertex2i(-40 + 94, -14);
glVertex2i(-23 + 94, -14);
glVertex2i(-23 + 94, -28);
glVertex2i(-40 + 94, -28);

// Window 16
glColor3f(0.0, 0.0, 0.0); // Black color
glVertex2i(-40 + 126, 54);
glVertex2i(-23 + 126, 54);
glVertex2i(-23 + 126, 40);
glVertex2i(-40 + 126, 40);

// Window 17
glVertex2i(-40 + 126, 37);
glVertex2i(-23 + 126, 37);
glVertex2i(-23 + 126, 23);
glVertex2i(-40 + 126, 23);

// Window 18
glVertex2i(-40 + 126, 20);
glVertex2i(-23 + 126, 20);
glVertex2i(-23 + 126, 6);
glVertex2i(-40 + 126, 6);

// Window 19
glVertex2i(-40 + 126, 3);
glVertex2i(-23 + 126, 3);
glVertex2i(-23 + 126, -11);
glVertex2i(-40 + 126, -11);

// Window 20
glVertex2i(-40 + 126, -14);
glVertex2i(-23 + 126, -14);
glVertex2i(-23 + 126, -28);
glVertex2i(-40 + 126, -28);

//stairs room1

glVertex2i(18, -18);
glVertex2i(18, 57);
glVertex2i(29, 57);
glVertex2i(29, -18);

//stairs room2
```

```
glVertex2i(18 + 16, -18);
glVertex2i(18 + 16, 57);
glVertex2i(29 + 16, 57);
glVertex2i(29 + 16, -18);



//main door
glVertex2i(24, -55);
glVertex2i(24, -28);
glVertex2i(40, -28);
glVertex2i(40, -55);

//orange-yellow shade
glEnd();
glBegin(GL_POLYGON);
glColor3f(0.9882, 0.8, 0.3765);
glVertex2i(-106, -55);
glVertex2i(283, -55);
glVertex2i(283, -115);
glVertex2i(-106, -115);
glEnd();

//green shade left
glBegin(GL_POLYGON);
glColor3f(0.5961, 0.6588, 0.1490);
glVertex2i(-106, -58);
glVertex2i(13, -58);
glVertex2i(-3, -89);
glVertex2i(-106, -89);
glEnd();

//green shade right
glBegin(GL_POLYGON);
glColor3f(0.5961, 0.6588, 0.1490);
glVertex2i(50, -58);
glVertex2i(283, -58);
glVertex2i(283, -89);
glVertex2i(66, -89);
glEnd();


//tree left
```

```
glBegin(GL_QUADS);
glColor3f(0.4549, 0.2784, 0.2157);
glVertex2f(-95, -58.0);
glVertex2f(-95, -14.0);
glVertex2f(-89, -14.0);
glVertex2f(-89, -58.0);
glEnd();

glBegin(GL_TRIANGLES);
glColor3f(0.0, 0.5, 0.0);
glVertex2f(-126, -14);
glVertex2f(-91, 35);
glVertex2f(-57, -14);
glVertex2f(-130, -1);
glVertex2f(-91, 49);
glVertex2f(-53, -1);
glEnd();
//tree right

glBegin(GL_QUADS);
glColor3f(0.4549, 0.2784, 0.2157);
glVertex2i(169, -10);
glVertex2i(169, -80);
glVertex2i(179, -80);
glVertex2i(179, -10);
glVertex2i(176, -28);
glEnd();



glBegin(GL_TRIANGLES);
glColor3f(0.0, 0.5, 0.0);
glVertex2f(134, -18);
glVertex2f(173, 43);
glVertex2f(211, -18);
glVertex2f(129, -2);
glVertex2f(173, 61);
glVertex2f(216, -2);
glEnd();

//tree right 2

glBegin(GL_QUADS);
glColor3f(0.4549, 0.2784, 0.2157);
```

```
glVertex2i(169 + 90, -10);
glVertex2i(169 + 90, -80);
glVertex2i(179 + 90, -80);
glVertex2i(179 + 90, -10);
glVertex2i(176 + 90, -28);
glEnd();



glBegin(GL_TRIANGLES);
glColor3f(0.0, 0.5, 0.0);
glVertex2f(134 + 90, -18);
glVertex2f(173 + 90, 43);
glVertex2f(211 + 90, -18);
glVertex2f(129 + 90, -2);
glVertex2f(173 + 90, 61);
glVertex2f(216 + 90, -2);
glEnd();

//Road
glBegin(GL_POLYGON);
glColor3f(0.1843, 0.3059, 0.2196);
glVertex2i(-106, -102);
glVertex2i(283, -102);
glVertex2i(283, -130);
glVertex2i(-106, -130);
glEnd();

glBegin(GL_POLYGON);
glColor3f(0.59608f, 0.43529f, 0.21176f);
glVertex2i(-106, -106);
glVertex2i(-106, -102);
glVertex2i(283, -102);
glVertex2i(283, -106);
glEnd();

//Lamp Post 1

glBegin(GL_QUADS);
glColor3f(0.149, 0.271, 0.349);
glVertex2i(-32, -97);
glVertex2i(-32, -95);
glVertex2i(-24, -95);
glVertex2i(-24, -97);
```

```
glEnd();

glBegin(GL_QUADS);
glVertex2i(-30, -82);
glVertex2i(-26, -82);
glVertex2i(-26, -95);
glVertex2i(-30, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(-29, -82);
glVertex2i(-29, -41);
glVertex2i(-27, -41);
glVertex2i(-27, -82);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-29.50, -41);
glVertex2f(-29.50, -40.75);
glVertex2f(-26.50, -40.75);
glVertex2f(-26.50, -41);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-29.00, -40.75);
glVertex2f(-31.25, -33.00);
glVertex2f(-30.75, -33.00);
glVertex2f(-28.50, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-28.25, -40.75);
glVertex2f(-28.25, -33.00);
glVertex2f(-27.75, -33.00);
glVertex2f(-27.75, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-27.50, -40.75);
glVertex2f(-25.25, -33.00);
glVertex2f(-24.75, -33.00);
glVertex2f(-27.00, -40.75);
glEnd();
```

```
glBegin(GL_QUADS);
glVertex2f(-31.75, -33.00);
glVertex2f(-31.75, -32.50);
glVertex2f(-24.25, -32.50);
glVertex2f(-24.25, -33.00);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-29.00, -32.50);
glVertex2f(-29.00, -32.00);
glVertex2f(-27.00, -32.00);
glVertex2f(-27.00, -32.50);
glEnd();

glBegin(GL_QUADS);
glColor3f(1.0, 0.8, 0.6);
glVertex2f(-28.50, -40.75);
glVertex2f(-30.70, -33.00);
glVertex2f(-28.25, -33.00);
glVertex2f(-28.25, -40.75);
glEnd();

glBegin(GL_QUADS);
glColor3f(1.0, 0.8, 0.6);
glVertex2f(-27.75, -40.75);
glVertex2f(-27.75, -33.00);
glVertex2f(-25.25, -33.00);
glVertex2f(-27.25, -40.75);
glEnd();


//lamppost2
glBegin(GL_QUADS);
glColor3f(0.149, 0.271, 0.349);
glVertex2i(-32 + 119, -97);
glVertex2i(-32 + 119, -95);
glVertex2i(-24 + 119, -95);
glVertex2i(-24 + 119, -97);
glEnd();

glBegin(GL_QUADS);
glVertex2i(-30 + 119, -82);
glVertex2i(-26 + 119, -82);
glVertex2i(-26 + 119, -95);
```

```
glVertex2i(-30 + 119, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(-29 + 119, -82);
glVertex2i(-29 + 119, -41);
glVertex2i(-27 + 119, -41);
glVertex2i(-27 + 119, -82);
glEnd();


glBegin(GL_QUADS);
glVertex2f(-29.50 + 119, -41);
glVertex2f(-29.50 + 119, -40.75);
glVertex2f(-26.50 + 119, -40.75);
glVertex2f(-26.50 + 119, -41);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-29.00 + 119, -40.75);
glVertex2f(-31.25 + 119, -33.00);
glVertex2f(-30.75 + 119, -33.00);
glVertex2f(-28.50 + 119, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-28.25 + 119, -40.75);
glVertex2f(-28.25 + 119, -33.00);
glVertex2f(-27.75 + 119, -33.00);
glVertex2f(-27.75 + 119, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-27.50 + 119, -40.75);
glVertex2f(-25.25 + 119, -33.00);
glVertex2f(-24.75 + 119, -33.00);
glVertex2f(-27.00 + 119, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-31.75 + 119, -33.00);
glVertex2f(-31.75 + 119, -32.50);
glVertex2f(-24.25 + 119, -32.50);
glVertex2f(-24.25 + 119, -33.00);
```

```
glEnd();

glBegin(GL_QUADS);
glVertex2f(-29.00 + 119, -32.50);
glVertex2f(-29.00 + 119, -32.00);
glVertex2f(-27.00 + 119, -32.00);
glVertex2f(-27.00 + 119, -32.50);
glEnd();

glBegin(GL_QUADS);
glColor3f(1.0, 0.8, 0.6);
glVertex2f(-28.50 + 119, -40.75);
glVertex2f(-30.70 + 119, -33.00);
glVertex2f(-28.25 + 119, -33.00);
glVertex2f(-28.25 + 119, -40.75);
glEnd();

glBegin(GL_QUADS);
glColor3f(1.0, 0.8, 0.6);
glVertex2f(-27.75 + 119, -40.75);
glVertex2f(-27.75 + 119, -33.00);
glVertex2f(-25.25 + 119, -33.00);
glVertex2f(-27.25 + 119, -40.75);
glEnd();

//Bench 1

glBegin(GL_QUADS);
glColor3f(0.4f, 0.2f, 0.0f);
glVertex2i(128, -101);
glVertex2i(128, -92);
glVertex2i(130, -92);
glVertex2i(130, -101);
glEnd();

glBegin(GL_QUADS);
glVertex2i(128 + 49, -101);
glVertex2i(128 + 49, -92);
glVertex2i(130 + 49, -92);
glVertex2i(130 + 49, -101);
glEnd();

glBegin(GL_QUADS);
glVertex2i(133, -95);
```

```
glVertex2i(133, -92);
glVertex2i(135, -92);
glVertex2i(135, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(133 + 39, -95);
glVertex2i(133 + 39, -92);
glVertex2i(135 + 39, -92);
glVertex2i(135 + 39, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(135, -83);
glVertex2i(135, -72);
glVertex2i(137, -72);
glVertex2i(137, -83);
glEnd();

glBegin(GL_QUADS);
glVertex2i(135 + 35, -83);
glVertex2i(135 + 35, -72);
glVertex2i(137 + 35, -72);
glVertex2i(137 + 35, -83);
glEnd();

glBegin(GL_QUADS);
glColor3f(0.8f, 0.5f, 0.2f);
glVertex2i(128, -91);
glVertex2i(133, -83);
glVertex2i(174, -83);
glVertex2i(179, -91);
glEnd();

glBegin(GL_QUADS);
glColor3f(0.57255f, 0.46275f, 0.36078f);
glVertex2i(128, -92);
glVertex2i(128, -91);
glVertex2i(179, -91);
glVertex2i(179, -92);
glEnd();

glBegin(GL_QUADS);
glColor3f(1.0f, 0.5f, 0.0f);
```

```
glVertex2i(132, -81);
glVertex2i(132, -74);
glVertex2i(175, -74);
glVertex2i(175, -81);
glEnd();

//Bench 2

glBegin(GL_QUADS);
glColor3f(0.4f, 0.2f, 0.0f);
glVertex2i(128 + 91, -101);
glVertex2i(128 + 91, -92);
glVertex2i(130 + 91, -92);
glVertex2i(130 + 91, -101);
glEnd();

glBegin(GL_QUADS);
glVertex2i(128 + 49 + 91, -101);
glVertex2i(128 + 49 + 91, -92);
glVertex2i(130 + 49 + 91, -92);
glVertex2i(130 + 49 + 91, -101);
glEnd();

glBegin(GL_QUADS);
glVertex2i(133 + 91, -95);
glVertex2i(133 + 91, -92);
glVertex2i(135 + 91, -92);
glVertex2i(135 + 91, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(133 + 39 + 91, -95);
glVertex2i(133 + 39 + 91, -92);
glVertex2i(135 + 39 + 91, -92);
glVertex2i(135 + 39 + 91, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(135 + 91, -83);
glVertex2i(135 + 91, -72);
glVertex2i(137 + 91, -72);
glVertex2i(137 + 91, -83);
glEnd();
```

```
   glBegin(GL_QUADS);
   glVertex2i(135 + 35 + 91, -83);
   glVertex2i(135 + 35 + 91, -72);
   glVertex2i(137 + 35 + 91, -72);
   glVertex2i(137 + 35 + 91, -83);
   glEnd();

   glBegin(GL_QUADS);
   glColor3f(0.8f, 0.5f, 0.2f);
   glVertex2i(128 + 91, -91);
   glVertex2i(133 + 91, -83);
   glVertex2i(174 + 91, -83);
   glVertex2i(179 + 91, -91);
   glEnd();

   glBegin(GL_QUADS);
   glColor3f(0.25f, 0.25f, 0.25f);
   glVertex2i(128 + 91, -92);
   glVertex2i(128 + 91, -91);
   glVertex2i(179 + 91, -91);
   glVertex2i(179 + 91, -92);
   glEnd();

   glBegin(GL_QUADS);
   glColor3f(0.5f, 0.0f, 0.5f);
   glVertex2i(132 + 91, -81);
   glVertex2i(132 + 91, -74);
   glVertex2i(175 + 91, -74);
   glVertex2i(175 + 91, -81);
   glEnd();


   glFlush();

}

void display2_view() {
   glClear(GL_COLOR_BUFFER_BIT);

   glBegin(GL_POLYGON);

   //Sky
   glColor3f(0.141, 0.173, 0.345);
   glVertex2f(-106.00, 116.00);
```

```
glVertex2f(283.00, 116.00);
glColor3f(0.361, 0.329, 0.643);
glVertex2f(283.00, -55.00);
glVertex2f(-106.00, -55.00);

glEnd();

glBegin(GL_QUADS);
glColor3f(0.9804, 0.8745, 0.251);
glVertex2f(-52.0, -55.0);
glVertex2f(-52.0, 65.0);
glVertex2f(115.0, 65.0);
glVertex2f(115.0, -55.0);

glBegin(GL_QUADS);
glColor3f(0.9804, 0.8745, 0.251);
glVertex2f(-52.0, 65.0);
glVertex2f(-52.0, 86.0);
glVertex2f(-25.0, 86.0);
glVertex2f(-25.0, 65.0);

glBegin(GL_QUADS);
glColor3f(0.9804, 0.8745, 0.251);
glVertex2f(88.0, 65.0);
glVertex2f(88.0, 86.0);
glVertex2f(115.0, 86.0);
glVertex2f(115.0, 65.0);

glBegin(GL_QUADS);
glColor3f(0.9804, 0.8745, 0.251);
glVertex2f(10.0, 65.0);
glVertex2f(10.0, 86.0);
glVertex2f(53.0, 86.0);
glVertex2f(53.0, 65.0);

glBegin(GL_TRIANGLES);
glColor3f(0.9804, 0.8745, 0.251);
glVertex2f(5.0, 86.0);
glVertex2f(32.0, 103.0);
glVertex2f(58.0, 86.0);
glVertex2f(5.0, 86.0);
glEnd();

glBegin(GL_QUADS);
```

```
glColor3f(0.8235, 0.1294, 0.1255);
glVertex2f(-45.0, -55.0);
glVertex2f(-45.0, 60.0);
glVertex2f(14.0, 60.0);
glVertex2f(14.0, -55.0);
glEnd();

glBegin(GL_QUADS);
glColor3f(0.8235, 0.1294, 0.1255);
glVertex2f(-45.0 + 94.0, -55.0);
glVertex2f(-45.0 + 94.0, 60.0);
glVertex2f(14.0 + 94.0, 60.0);
glVertex2f(14.0 + 94.0, -55.0);
glEnd();

glBegin(GL_QUADS);
// Window 1
glColor3f(0.0, 0.0, 0.0); // Black color
glVertex2i(-40, 54);
glVertex2i(-23, 54);
glVertex2i(-23, 40);
glVertex2i(-40, 40);

// Window 2
glVertex2i(-40, 37);
glVertex2i(-23, 37);
glVertex2i(-23, 23);
glVertex2i(-40, 23);

// Window 3
glVertex2i(-40, 20);
glVertex2i(-23, 20);
glVertex2i(-23, 6);
glVertex2i(-40, 6);

// Window 4
glVertex2i(-40, 3);
glVertex2i(-23, 3);
glVertex2i(-23, -11);
glVertex2i(-40, -11);

// window 5
glVertex2i(-40, -14);
glVertex2i(-23, -14);
```

```
glVertex2i(-23, -28);
glVertex2i(-40, -28);
//window 6
glColor3f(0.0, 0.0, 0.0); // Black color
glVertex2i(-40 + 32, 54);
glVertex2i(-23 + 32, 54);
glVertex2i(-23 + 32, 40);
glVertex2i(-40 + 32, 40);

// Window 7
glVertex2i(-40 + 32, 37);
glVertex2i(-23 + 32, 37);
glVertex2i(-23 + 32, 23);
glVertex2i(-40 + 32, 23);

// Window 8
glVertex2i(-40 + 32, 20);
glVertex2i(-23 + 32, 20);
glVertex2i(-23 + 32, 6);
glVertex2i(-40 + 32, 6);

// Window 9
glVertex2i(-40 + 32, 3);
glVertex2i(-23 + 32, 3);
glVertex2i(-23 + 32, -11);
glVertex2i(-40 + 32, -11);

// Window 10
glVertex2i(-40 + 32, -14);
glVertex2i(-23 + 32, -14);
glVertex2i(-23 + 32, -28);
glVertex2i(-40 + 32, -28);

// Window 11
glColor3f(0.0, 0.0, 0.0); // Black color
glVertex2i(-40 + 94, 54);
glVertex2i(-23 + 94, 54);
glVertex2i(-23 + 94, 40);
glVertex2i(-40 + 94, 40);

// Window 12
glVertex2i(-40 + 94, 37);
glVertex2i(-23 + 94, 37);
glVertex2i(-23 + 94, 23);
```

```
glVertex2i(-40 + 94, 23);

// Window 13
glVertex2i(-40 + 94, 20);
glVertex2i(-23 + 94, 20);
glVertex2i(-23 + 94, 6);
glVertex2i(-40 + 94, 6);

// Window 14
glVertex2i(-40 + 94, 3);
glVertex2i(-23 + 94, 3);
glVertex2i(-23 + 94, -11);
glVertex2i(-40 + 94, -11);

// Window 15
glVertex2i(-40 + 94, -14);
glVertex2i(-23 + 94, -14);
glVertex2i(-23 + 94, -28);
glVertex2i(-40 + 94, -28);

// Window 16
glColor3f(0.0, 0.0, 0.0); // Black color
glVertex2i(-40 + 126, 54);
glVertex2i(-23 + 126, 54);
glVertex2i(-23 + 126, 40);
glVertex2i(-40 + 126, 40);

// Window 17
glVertex2i(-40 + 126, 37);
glVertex2i(-23 + 126, 37);
glVertex2i(-23 + 126, 23);
glVertex2i(-40 + 126, 23);

// Window 18
glVertex2i(-40 + 126, 20);
glVertex2i(-23 + 126, 20);
glVertex2i(-23 + 126, 6);
glVertex2i(-40 + 126, 6);

// Window 19
glVertex2i(-40 + 126, 3);
glVertex2i(-23 + 126, 3);
glVertex2i(-23 + 126, -11);
glVertex2i(-40 + 126, -11);
```

```
// Window 20
glVertex2i(-40 + 126, -14);
glVertex2i(-23 + 126, -14);
glVertex2i(-23 + 126, -28);
glVertex2i(-40 + 126, -28);

//stairs room1

glVertex2i(18, -18);
glVertex2i(18, 57);
glVertex2i(29, 57);
glVertex2i(29, -18);

//stairs room2
glVertex2i(18 + 16, -18);
glVertex2i(18 + 16, 57);
glVertex2i(29 + 16, 57);
glVertex2i(29 + 16, -18);



//main door
glVertex2i(24, -55);
glVertex2i(24, -28);
glVertex2i(40, -28);
glVertex2i(40, -55);

//orange-yellow shade
glEnd();
glBegin(GL_POLYGON);
glColor3f(0.9882, 0.8, 0.3765);
glVertex2i(-106, -55);
glVertex2i(283, -55);
glVertex2i(283, -115);
glVertex2i(-106, -115);
glEnd();

//green shade left
glBegin(GL_POLYGON);
glColor3f(0.5961, 0.6588, 0.1490);
glVertex2i(-106, -58);
glVertex2i(13, -58);
glVertex2i(-3, -89);
```

```
glVertex2i(-106, -89);
glEnd();

//green shade right
glBegin(GL_POLYGON);
glColor3f(0.5961, 0.6588, 0.1490);
glVertex2i(50, -58);
glVertex2i(283, -58);
glVertex2i(283, -89);
glVertex2i(66, -89);
glEnd();


//tree left

glBegin(GL_QUADS);
glColor3f(0.4549, 0.2784, 0.2157);
glVertex2f(-95, -58.0);
glVertex2f(-95, -14.0);
glVertex2f(-89, -14.0);
glVertex2f(-89, -58.0);
glEnd();

glBegin(GL_TRIANGLES);
glColor3f(0.0, 0.5, 0.0);
glVertex2f(-126, -14);
glVertex2f(-91, 35);
glVertex2f(-57, -14);
glVertex2f(-130, -1);
glVertex2f(-91, 49);
glVertex2f(-53, -1);
glEnd();
//tree right

glBegin(GL_QUADS);
glColor3f(0.4549, 0.2784, 0.2157);
glVertex2i(169, -10);
glVertex2i(169, -80);
glVertex2i(179, -80);
glVertex2i(179, -10);
glVertex2i(176, -28);
glEnd();
```

```
glBegin(GL_TRIANGLES);
glColor3f(0.0, 0.5, 0.0);
glVertex2f(134, -18);
glVertex2f(173, 43);
glVertex2f(211, -18);
glVertex2f(129, -2);
glVertex2f(173, 61);
glVertex2f(216, -2);
glEnd();

//tree right 2

glBegin(GL_QUADS);
glColor3f(0.4549, 0.2784, 0.2157);
glVertex2i(169 + 90, -10);
glVertex2i(169 + 90, -80);
glVertex2i(179 + 90, -80);
glVertex2i(179 + 90, -10);
glVertex2i(176 + 90, -28);
glEnd();



glBegin(GL_TRIANGLES);
glColor3f(0.0, 0.5, 0.0);
glVertex2f(134 + 90, -18);
glVertex2f(173 + 90, 43);
glVertex2f(211 + 90, -18);
glVertex2f(129 + 90, -2);
glVertex2f(173 + 90, 61);
glVertex2f(216 + 90, -2);
glEnd();

//Road
glBegin(GL_POLYGON);
glColor3f(0.1843, 0.3059, 0.2196);
glVertex2i(-106, -102);
glVertex2i(283, -102);
glVertex2i(283, -130);
glVertex2i(-106, -130);
glEnd();

glBegin(GL_POLYGON);
```

```
glColor3f(0.59608f, 0.43529f, 0.21176f);
glVertex2i(-106, -106);
glVertex2i(-106, -102);
glVertex2i(283, -102);
glVertex2i(283, -106);
glEnd();

//Lamp Post 1

glBegin(GL_QUADS);
glColor3f(0.149, 0.271, 0.349);
glVertex2i(-32, -97);
glVertex2i(-32, -95);
glVertex2i(-24, -95);
glVertex2i(-24, -97);
glEnd();

glBegin(GL_QUADS);
glVertex2i(-30, -82);
glVertex2i(-26, -82);
glVertex2i(-26, -95);
glVertex2i(-30, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(-29, -82);
glVertex2i(-29, -41);
glVertex2i(-27, -41);
glVertex2i(-27, -82);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-29.50, -41);
glVertex2f(-29.50, -40.75);
glVertex2f(-26.50, -40.75);
glVertex2f(-26.50, -41);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-29.00, -40.75);
glVertex2f(-31.25, -33.00);
glVertex2f(-30.75, -33.00);
glVertex2f(-28.50, -40.75);
glEnd();
```

```
glBegin(GL_QUADS);
glVertex2f(-28.25, -40.75);
glVertex2f(-28.25, -33.00);
glVertex2f(-27.75, -33.00);
glVertex2f(-27.75, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-27.50, -40.75);
glVertex2f(-25.25, -33.00);
glVertex2f(-24.75, -33.00);
glVertex2f(-27.00, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-31.75, -33.00);
glVertex2f(-31.75, -32.50);
glVertex2f(-24.25, -32.50);
glVertex2f(-24.25, -33.00);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-29.00, -32.50);
glVertex2f(-29.00, -32.00);
glVertex2f(-27.00, -32.00);
glVertex2f(-27.00, -32.50);
glEnd();

glBegin(GL_QUADS);
glColor3f(1.0, 0.8, 0.6);
glVertex2f(-28.50, -40.75);
glVertex2f(-30.70, -33.00);
glVertex2f(-28.25, -33.00);
glVertex2f(-28.25, -40.75);
glEnd();

glBegin(GL_QUADS);
glColor3f(1.0, 0.8, 0.6);
glVertex2f(-27.75, -40.75);
glVertex2f(-27.75, -33.00);
glVertex2f(-25.25, -33.00);
glVertex2f(-27.25, -40.75);
glEnd();
```

```
//lamppost2
glBegin(GL_QUADS);
glColor3f(0.149, 0.271, 0.349);
glVertex2i(-32 + 119, -97);
glVertex2i(-32 + 119, -95);
glVertex2i(-24 + 119, -95);
glVertex2i(-24 + 119, -97);
glEnd();

glBegin(GL_QUADS);
glVertex2i(-30 + 119, -82);
glVertex2i(-26 + 119, -82);
glVertex2i(-26 + 119, -95);
glVertex2i(-30 + 119, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(-29 + 119, -82);
glVertex2i(-29 + 119, -41);
glVertex2i(-27 + 119, -41);
glVertex2i(-27 + 119, -82);
glEnd();


glBegin(GL_QUADS);
glVertex2f(-29.50 + 119, -41);
glVertex2f(-29.50 + 119, -40.75);
glVertex2f(-26.50 + 119, -40.75);
glVertex2f(-26.50 + 119, -41);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-29.00 + 119, -40.75);
glVertex2f(-31.25 + 119, -33.00);
glVertex2f(-30.75 + 119, -33.00);
glVertex2f(-28.50 + 119, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-28.25 + 119, -40.75);
glVertex2f(-28.25 + 119, -33.00);
glVertex2f(-27.75 + 119, -33.00);
```

```
glVertex2f(-27.75 + 119, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-27.50 + 119, -40.75);
glVertex2f(-25.25 + 119, -33.00);
glVertex2f(-24.75 + 119, -33.00);
glVertex2f(-27.00 + 119, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-31.75 + 119, -33.00);
glVertex2f(-31.75 + 119, -32.50);
glVertex2f(-24.25 + 119, -32.50);
glVertex2f(-24.25 + 119, -33.00);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-29.00 + 119, -32.50);
glVertex2f(-29.00 + 119, -32.00);
glVertex2f(-27.00 + 119, -32.00);
glVertex2f(-27.00 + 119, -32.50);
glEnd();

glBegin(GL_QUADS);
glColor3f(1.0, 0.8, 0.6);
glVertex2f(-28.50 + 119, -40.75);
glVertex2f(-30.70 + 119, -33.00);
glVertex2f(-28.25 + 119, -33.00);
glVertex2f(-28.25 + 119, -40.75);
glEnd();

glBegin(GL_QUADS);
glColor3f(1.0, 0.8, 0.6);
glVertex2f(-27.75 + 119, -40.75);
glVertex2f(-27.75 + 119, -33.00);
glVertex2f(-25.25 + 119, -33.00);
glVertex2f(-27.25 + 119, -40.75);
glEnd();

//Bench 1

glBegin(GL_QUADS);
glColor3f(0.4f, 0.2f, 0.0f);
```

```
glVertex2i(128, -101);
glVertex2i(128, -92);
glVertex2i(130, -92);
glVertex2i(130, -101);
glEnd();

glBegin(GL_QUADS);
glVertex2i(128 + 49, -101);
glVertex2i(128 + 49, -92);
glVertex2i(130 + 49, -92);
glVertex2i(130 + 49, -101);
glEnd();

glBegin(GL_QUADS);
glVertex2i(133, -95);
glVertex2i(133, -92);
glVertex2i(135, -92);
glVertex2i(135, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(133 + 39, -95);
glVertex2i(133 + 39, -92);
glVertex2i(135 + 39, -92);
glVertex2i(135 + 39, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(135, -83);
glVertex2i(135, -72);
glVertex2i(137, -72);
glVertex2i(137, -83);
glEnd();

glBegin(GL_QUADS);
glVertex2i(135 + 35, -83);
glVertex2i(135 + 35, -72);
glVertex2i(137 + 35, -72);
glVertex2i(137 + 35, -83);
glEnd();

glBegin(GL_QUADS);
glColor3f(0.8f, 0.5f, 0.2f);
glVertex2i(128, -91);
```

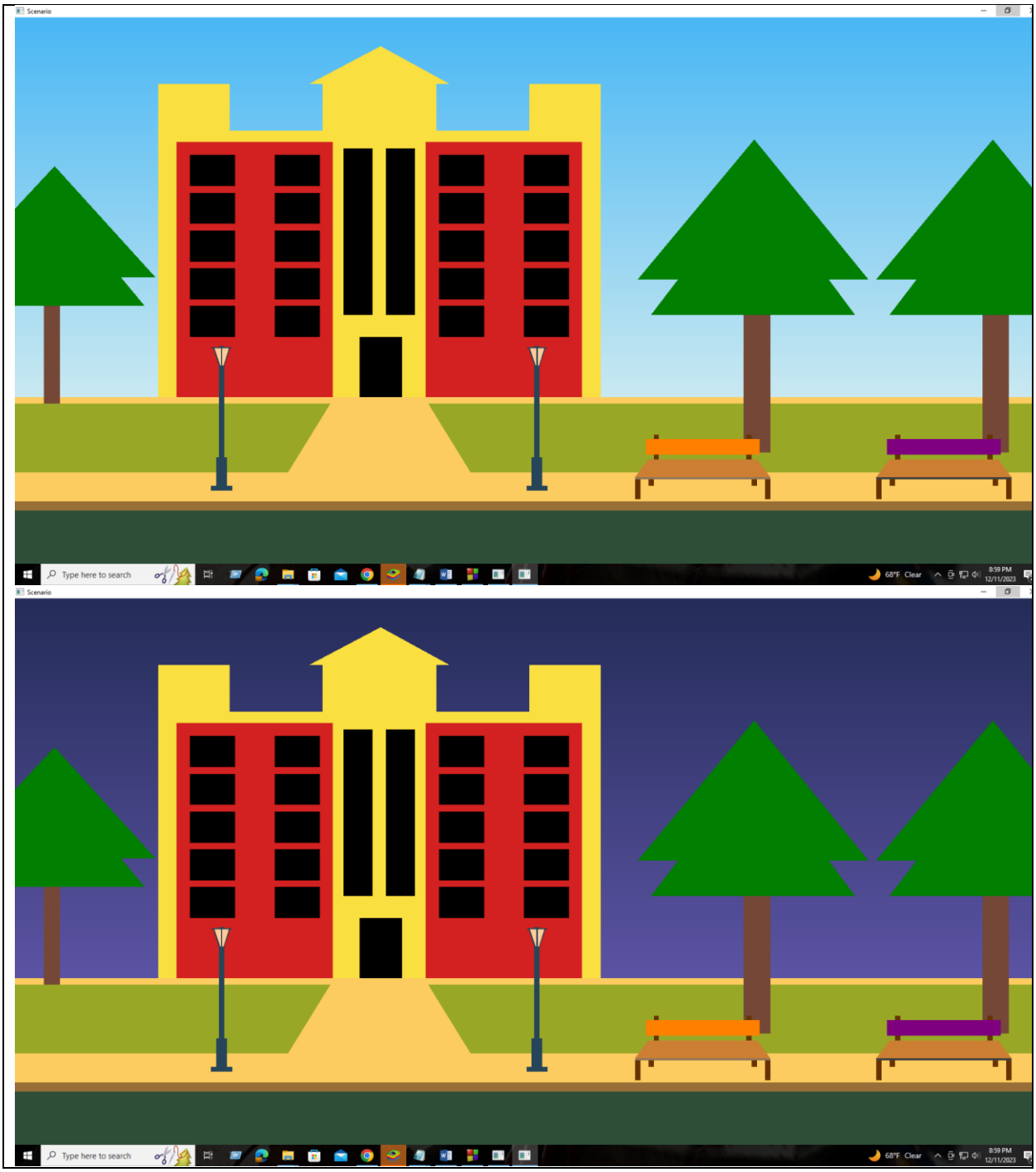
```
glVertex2i(133, -83);
glVertex2i(174, -83);
glVertex2i(179, -91);
glEnd();

glBegin(GL_QUADS);
glColor3f(0.57255f, 0.46275f, 0.36078f);
glVertex2i(128, -92);
glVertex2i(128, -91);
glVertex2i(179, -91);
glVertex2i(179, -92);
glEnd();

glBegin(GL_QUADS);
glColor3f(1.0f, 0.5f, 0.0f);
glVertex2i(132, -81);
glVertex2i(132, -74);
glVertex2i(175, -74);
glVertex2i(175, -81);
glEnd();

//Bench 2

glBegin(GL_QUADS);
glColor3f(0.4f, 0.2f, 0.0f);
glVertex2i(128 + 91, -101);
glVertex2i(128 + 91, -92);
glVertex2i(130 + 91, -92);
glVertex2i(130 + 91, -101);
glEnd();

glBegin(GL_QUADS);
glVertex2i(128 + 49 + 91, -101);
glVertex2i(128 + 49 + 91, -92);
glVertex2i(130 + 49 + 91, -92);
glVertex2i(130 + 49 + 91, -101);
glEnd();

glBegin(GL_QUADS);
glVertex2i(133 + 91, -95);
glVertex2i(133 + 91, -92);
glVertex2i(135 + 91, -92);
glVertex2i(135 + 91, -95);
glEnd();
```

```
glBegin(GL_QUADS);
glVertex2i(133 + 39 + 91, -95);
glVertex2i(133 + 39 + 91, -92);
glVertex2i(135 + 39 + 91, -92);
glVertex2i(135 + 39 + 91, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(135 + 91, -83);
glVertex2i(135 + 91, -72);
glVertex2i(137 + 91, -72);
glVertex2i(137 + 91, -83);
glEnd();

glBegin(GL_QUADS);
glVertex2i(135 + 35 + 91, -83);
glVertex2i(135 + 35 + 91, -72);
glVertex2i(137 + 35 + 91, -72);
glVertex2i(137 + 35 + 91, -83);
glEnd();

glBegin(GL_QUADS);
glColor3f(0.8f, 0.5f, 0.2f);
glVertex2i(128 + 91, -91);
glVertex2i(133 + 91, -83);
glVertex2i(174 + 91, -83);
glVertex2i(179 + 91, -91);
glEnd();

glBegin(GL_QUADS);
glColor3f(0.25f, 0.25f, 0.25f);
glVertex2i(128 + 91, -92);
glVertex2i(128 + 91, -91);
glVertex2i(179 + 91, -91);
glVertex2i(179 + 91, -92);
glEnd();

glBegin(GL_QUADS);
glColor3f(0.5f, 0.0f, 0.5f);
glVertex2i(132 + 91, -81);
glVertex2i(132 + 91, -74);
glVertex2i(175 + 91, -74);
glVertex2i(175 + 91, -81);
```

```
   glEnd();


   glFlush();

}



void switchDisplayFunc(int value) {
   currentDisplay = (currentDisplay + 1) % 2;
   glutPostRedisplay();
   glutTimerFunc(5000, switchDisplayFunc, 0);
}

void display() {
   glMatrixMode(GL_MODELVIEW);
   glLoadIdentity();

   glClearColor(0.0f, 0.0f, 0.0f, 1.0f);
   glClear(GL_COLOR_BUFFER_BIT);

   if (currentDisplay == 0) {
      display1_view();
   }
   else if (currentDisplay == 1) {
      display2_view();
   }

   glutPostRedisplay();
   glFlush();
}

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

   case '1':
      currentDisplay = 0;
      break;
   case '2':
      currentDisplay = 1;
      break;
   }
   glutPostRedisplay();
```

```
}*/

void myInit(void)
{
   glClearColor(250.0, 250.0, 250.0, 0.0);
   glMatrixMode(GL_PROJECTION);
   glLoadIdentity();
   gluOrtho2D(-106.0, 283.0, -130.0, 116.0);
}

int main(int argc, char** argv) {
   glutInit(&argc, argv);
   glutInitDisplayMode(GLUT_SINGLE | GLUT_RGB);
   glutInitWindowSize(1700, 820);
   glutCreateWindow("Scenario");
   glClearColor(1.0, 1.0, 1.0, 1.0);
   myInit();
   glutDisplayFunc(display);
   glutTimerFunc(5000, switchDisplayFunc, 0);
   //glutKeyboardFunc(handleKeypress);


   glutMainLoop();


   return 0;
}
```

Output Screenshot (Full Screen)-



Question-

Create a simple day and night scenario using keyboard interaction. The key ‘D’ or ‘d’ will initiate the day mode and the key ‘N’ or ‘n’ will initiate the night mode.

Code

```
#include <GL/freeglut.h>
#include <cmath>

int currentDisplay = 0;


void display1_view() {
   glClear(GL_COLOR_BUFFER_BIT);

   glBegin(GL_POLYGON);

   //Sky
   glColor3f(0.286, 0.718, 0.957);
   glVertex2f(-106.00, 116.00);
   glVertex2f(283.00, 116.00);
   glColor3f(0.792, 0.914, 0.945);
   glVertex2f(283.00, -55.00);
   glVertex2f(-106.00, -55.00);

   glEnd();

   glBegin(GL_QUADS);
   glColor3f(0.9804, 0.8745, 0.251);
   glVertex2f(-52.0, -55.0);
   glVertex2f(-52.0, 65.0);
   glVertex2f(115.0, 65.0);
   glVertex2f(115.0, -55.0);

   glBegin(GL_QUADS);
   glColor3f(0.9804, 0.8745, 0.251);
   glVertex2f(-52.0, 65.0);
   glVertex2f(-52.0, 86.0);
   glVertex2f(-25.0, 86.0);
   glVertex2f(-25.0, 65.0);

   glBegin(GL_QUADS);
   glColor3f(0.9804, 0.8745, 0.251);
   glVertex2f(88.0, 65.0);
   glVertex2f(88.0, 86.0);
   glVertex2f(115.0, 86.0);
   glVertex2f(115.0, 65.0);

   glBegin(GL_QUADS);
   glColor3f(0.9804, 0.8745, 0.251);
```

```
glVertex2f(10.0, 65.0);
glVertex2f(10.0, 86.0);
glVertex2f(53.0, 86.0);
glVertex2f(53.0, 65.0);

glBegin(GL_TRIANGLES);
glColor3f(0.9804, 0.8745, 0.251);
glVertex2f(5.0, 86.0);
glVertex2f(32.0, 103.0);
glVertex2f(58.0, 86.0);
glVertex2f(5.0, 86.0);
glEnd();

glBegin(GL_QUADS);
glColor3f(0.8235, 0.1294, 0.1255);
glVertex2f(-45.0, -55.0);
glVertex2f(-45.0, 60.0);
glVertex2f(14.0, 60.0);
glVertex2f(14.0, -55.0);
glEnd();

glBegin(GL_QUADS);
glColor3f(0.8235, 0.1294, 0.1255);
glVertex2f(-45.0 + 94.0, -55.0);
glVertex2f(-45.0 + 94.0, 60.0);
glVertex2f(14.0 + 94.0, 60.0);
glVertex2f(14.0 + 94.0, -55.0);
glEnd();

glBegin(GL_QUADS);
// Window 1
glColor3f(0.0, 0.0, 0.0); // Black color
glVertex2i(-40, 54);
glVertex2i(-23, 54);
glVertex2i(-23, 40);
glVertex2i(-40, 40);

// Window 2
glVertex2i(-40, 37);
glVertex2i(-23, 37);
glVertex2i(-23, 23);
glVertex2i(-40, 23);

// Window 3
```

```
glVertex2i(-40, 20);
glVertex2i(-23, 20);
glVertex2i(-23, 6);
glVertex2i(-40, 6);

// Window 4
glVertex2i(-40, 3);
glVertex2i(-23, 3);
glVertex2i(-23, -11);
glVertex2i(-40, -11);

// window 5
glVertex2i(-40, -14);
glVertex2i(-23, -14);
glVertex2i(-23, -28);
glVertex2i(-40, -28);
//window 6
glColor3f(0.0, 0.0, 0.0); // Black color
glVertex2i(-40 + 32, 54);
glVertex2i(-23 + 32, 54);
glVertex2i(-23 + 32, 40);
glVertex2i(-40 + 32, 40);

// Window 7
glVertex2i(-40 + 32, 37);
glVertex2i(-23 + 32, 37);
glVertex2i(-23 + 32, 23);
glVertex2i(-40 + 32, 23);

// Window 8
glVertex2i(-40 + 32, 20);
glVertex2i(-23 + 32, 20);
glVertex2i(-23 + 32, 6);
glVertex2i(-40 + 32, 6);

// Window 9
glVertex2i(-40 + 32, 3);
glVertex2i(-23 + 32, 3);
glVertex2i(-23 + 32, -11);
glVertex2i(-40 + 32, -11);

// Window 10
glVertex2i(-40 + 32, -14);
glVertex2i(-23 + 32, -14);
```

```
glVertex2i(-23 + 32, -28);
glVertex2i(-40 + 32, -28);

// Window 11
glColor3f(0.0, 0.0, 0.0); // Black color
glVertex2i(-40 + 94, 54);
glVertex2i(-23 + 94, 54);
glVertex2i(-23 + 94, 40);
glVertex2i(-40 + 94, 40);

// Window 12
glVertex2i(-40 + 94, 37);
glVertex2i(-23 + 94, 37);
glVertex2i(-23 + 94, 23);
glVertex2i(-40 + 94, 23);

// Window 13
glVertex2i(-40 + 94, 20);
glVertex2i(-23 + 94, 20);
glVertex2i(-23 + 94, 6);
glVertex2i(-40 + 94, 6);

// Window 14
glVertex2i(-40 + 94, 3);
glVertex2i(-23 + 94, 3);
glVertex2i(-23 + 94, -11);
glVertex2i(-40 + 94, -11);

// Window 15
glVertex2i(-40 + 94, -14);
glVertex2i(-23 + 94, -14);
glVertex2i(-23 + 94, -28);
glVertex2i(-40 + 94, -28);

// Window 16
glColor3f(0.0, 0.0, 0.0); // Black color
glVertex2i(-40 + 126, 54);
glVertex2i(-23 + 126, 54);
glVertex2i(-23 + 126, 40);
glVertex2i(-40 + 126, 40);

// Window 17
glVertex2i(-40 + 126, 37);
glVertex2i(-23 + 126, 37);
```

```
glVertex2i(-23 + 126, 23);
glVertex2i(-40 + 126, 23);

// Window 18
glVertex2i(-40 + 126, 20);
glVertex2i(-23 + 126, 20);
glVertex2i(-23 + 126, 6);
glVertex2i(-40 + 126, 6);

// Window 19
glVertex2i(-40 + 126, 3);
glVertex2i(-23 + 126, 3);
glVertex2i(-23 + 126, -11);
glVertex2i(-40 + 126, -11);

// Window 20
glVertex2i(-40 + 126, -14);
glVertex2i(-23 + 126, -14);
glVertex2i(-23 + 126, -28);
glVertex2i(-40 + 126, -28);

//stairs room1

glVertex2i(18, -18);
glVertex2i(18, 57);
glVertex2i(29, 57);
glVertex2i(29, -18);

//stairs room2
glVertex2i(18 + 16, -18);
glVertex2i(18 + 16, 57);
glVertex2i(29 + 16, 57);
glVertex2i(29 + 16, -18);



//main door
glVertex2i(24, -55);
glVertex2i(24, -28);
glVertex2i(40, -28);
glVertex2i(40, -55);

//orange-yellow shade
glEnd();
```

```
glBegin(GL_POLYGON);
glColor3f(0.9882, 0.8, 0.3765);
glVertex2i(-106, -55);
glVertex2i(283, -55);
glVertex2i(283, -115);
glVertex2i(-106, -115);
glEnd();

//green shade left
glBegin(GL_POLYGON);
glColor3f(0.5961, 0.6588, 0.1490);
glVertex2i(-106, -58);
glVertex2i(13, -58);
glVertex2i(-3, -89);
glVertex2i(-106, -89);
glEnd();

//green shade right
glBegin(GL_POLYGON);
glColor3f(0.5961, 0.6588, 0.1490);
glVertex2i(50, -58);
glVertex2i(283, -58);
glVertex2i(283, -89);
glVertex2i(66, -89);
glEnd();


//tree left

glBegin(GL_QUADS);
glColor3f(0.4549, 0.2784, 0.2157);
glVertex2f(-95, -58.0);
glVertex2f(-95, -14.0);
glVertex2f(-89, -14.0);
glVertex2f(-89, -58.0);
glEnd();

glBegin(GL_TRIANGLES);
glColor3f(0.0, 0.5, 0.0);
glVertex2f(-126, -14);
glVertex2f(-91, 35);
glVertex2f(-57, -14);
glVertex2f(-130, -1);
glVertex2f(-91, 49);
```

```
glVertex2f(-53, -1);
glEnd();
//tree right

glBegin(GL_QUADS);
glColor3f(0.4549, 0.2784, 0.2157);
glVertex2i(169, -10);
glVertex2i(169, -80);
glVertex2i(179, -80);
glVertex2i(179, -10);
glVertex2i(176, -28);
glEnd();



glBegin(GL_TRIANGLES);
glColor3f(0.0, 0.5, 0.0);
glVertex2f(134, -18);
glVertex2f(173, 43);
glVertex2f(211, -18);
glVertex2f(129, -2);
glVertex2f(173, 61);
glVertex2f(216, -2);
glEnd();

//tree right 2

glBegin(GL_QUADS);
glColor3f(0.4549, 0.2784, 0.2157);
glVertex2i(169 + 90, -10);
glVertex2i(169 + 90, -80);
glVertex2i(179 + 90, -80);
glVertex2i(179 + 90, -10);
glVertex2i(176 + 90, -28);
glEnd();



glBegin(GL_TRIANGLES);
glColor3f(0.0, 0.5, 0.0);
glVertex2f(134 + 90, -18);
glVertex2f(173 + 90, 43);
glVertex2f(211 + 90, -18);
glVertex2f(129 + 90, -2);
```

```
glVertex2f(173 + 90, 61);
glVertex2f(216 + 90, -2);
glEnd();

//Road
glBegin(GL_POLYGON);
glColor3f(0.1843, 0.3059, 0.2196);
glVertex2i(-106, -102);
glVertex2i(283, -102);
glVertex2i(283, -130);
glVertex2i(-106, -130);
glEnd();

glBegin(GL_POLYGON);
glColor3f(0.59608f, 0.43529f, 0.21176f);
glVertex2i(-106, -106);
glVertex2i(-106, -102);
glVertex2i(283, -102);
glVertex2i(283, -106);
glEnd();

//Lamp Post 1

glBegin(GL_QUADS);
glColor3f(0.149, 0.271, 0.349);
glVertex2i(-32, -97);
glVertex2i(-32, -95);
glVertex2i(-24, -95);
glVertex2i(-24, -97);
glEnd();

glBegin(GL_QUADS);
glVertex2i(-30, -82);
glVertex2i(-26, -82);
glVertex2i(-26, -95);
glVertex2i(-30, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(-29, -82);
glVertex2i(-29, -41);
glVertex2i(-27, -41);
glVertex2i(-27, -82);
glEnd();
```

```
glBegin(GL_QUADS);
glVertex2f(-29.50, -41);
glVertex2f(-29.50, -40.75);
glVertex2f(-26.50, -40.75);
glVertex2f(-26.50, -41);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-29.00, -40.75);
glVertex2f(-31.25, -33.00);
glVertex2f(-30.75, -33.00);
glVertex2f(-28.50, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-28.25, -40.75);
glVertex2f(-28.25, -33.00);
glVertex2f(-27.75, -33.00);
glVertex2f(-27.75, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-27.50, -40.75);
glVertex2f(-25.25, -33.00);
glVertex2f(-24.75, -33.00);
glVertex2f(-27.00, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-31.75, -33.00);
glVertex2f(-31.75, -32.50);
glVertex2f(-24.25, -32.50);
glVertex2f(-24.25, -33.00);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-29.00, -32.50);
glVertex2f(-29.00, -32.00);
glVertex2f(-27.00, -32.00);
glVertex2f(-27.00, -32.50);
glEnd();

glBegin(GL_QUADS);
```

```
glColor3f(1.0, 0.8, 0.6);
glVertex2f(-28.50, -40.75);
glVertex2f(-30.70, -33.00);
glVertex2f(-28.25, -33.00);
glVertex2f(-28.25, -40.75);
glEnd();

glBegin(GL_QUADS);
glColor3f(1.0, 0.8, 0.6);
glVertex2f(-27.75, -40.75);
glVertex2f(-27.75, -33.00);
glVertex2f(-25.25, -33.00);
glVertex2f(-27.25, -40.75);
glEnd();


//lamppost2
glBegin(GL_QUADS);
glColor3f(0.149, 0.271, 0.349);
glVertex2i(-32 + 119, -97);
glVertex2i(-32 + 119, -95);
glVertex2i(-24 + 119, -95);
glVertex2i(-24 + 119, -97);
glEnd();

glBegin(GL_QUADS);
glVertex2i(-30 + 119, -82);
glVertex2i(-26 + 119, -82);
glVertex2i(-26 + 119, -95);
glVertex2i(-30 + 119, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(-29 + 119, -82);
glVertex2i(-29 + 119, -41);
glVertex2i(-27 + 119, -41);
glVertex2i(-27 + 119, -82);
glEnd();


glBegin(GL_QUADS);
glVertex2f(-29.50 + 119, -41);
glVertex2f(-29.50 + 119, -40.75);
glVertex2f(-26.50 + 119, -40.75);
```

```
glVertex2f(-26.50 + 119, -41);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-29.00 + 119, -40.75);
glVertex2f(-31.25 + 119, -33.00);
glVertex2f(-30.75 + 119, -33.00);
glVertex2f(-28.50 + 119, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-28.25 + 119, -40.75);
glVertex2f(-28.25 + 119, -33.00);
glVertex2f(-27.75 + 119, -33.00);
glVertex2f(-27.75 + 119, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-27.50 + 119, -40.75);
glVertex2f(-25.25 + 119, -33.00);
glVertex2f(-24.75 + 119, -33.00);
glVertex2f(-27.00 + 119, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-31.75 + 119, -33.00);
glVertex2f(-31.75 + 119, -32.50);
glVertex2f(-24.25 + 119, -32.50);
glVertex2f(-24.25 + 119, -33.00);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-29.00 + 119, -32.50);
glVertex2f(-29.00 + 119, -32.00);
glVertex2f(-27.00 + 119, -32.00);
glVertex2f(-27.00 + 119, -32.50);
glEnd();

glBegin(GL_QUADS);
glColor3f(1.0, 0.8, 0.6);
glVertex2f(-28.50 + 119, -40.75);
glVertex2f(-30.70 + 119, -33.00);
glVertex2f(-28.25 + 119, -33.00);
glVertex2f(-28.25 + 119, -40.75);
```

```
glEnd();

glBegin(GL_QUADS);
glColor3f(1.0, 0.8, 0.6);
glVertex2f(-27.75 + 119, -40.75);
glVertex2f(-27.75 + 119, -33.00);
glVertex2f(-25.25 + 119, -33.00);
glVertex2f(-27.25 + 119, -40.75);
glEnd();

//Bench 1

glBegin(GL_QUADS);
glColor3f(0.4f, 0.2f, 0.0f);
glVertex2i(128, -101);
glVertex2i(128, -92);
glVertex2i(130, -92);
glVertex2i(130, -101);
glEnd();

glBegin(GL_QUADS);
glVertex2i(128 + 49, -101);
glVertex2i(128 + 49, -92);
glVertex2i(130 + 49, -92);
glVertex2i(130 + 49, -101);
glEnd();

glBegin(GL_QUADS);
glVertex2i(133, -95);
glVertex2i(133, -92);
glVertex2i(135, -92);
glVertex2i(135, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(133 + 39, -95);
glVertex2i(133 + 39, -92);
glVertex2i(135 + 39, -92);
glVertex2i(135 + 39, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(135, -83);
glVertex2i(135, -72);
```

```
glVertex2i(137, -72);
glVertex2i(137, -83);
glEnd();

glBegin(GL_QUADS);
glVertex2i(135 + 35, -83);
glVertex2i(135 + 35, -72);
glVertex2i(137 + 35, -72);
glVertex2i(137 + 35, -83);
glEnd();

glBegin(GL_QUADS);
glColor3f(0.8f, 0.5f, 0.2f);
glVertex2i(128, -91);
glVertex2i(133, -83);
glVertex2i(174, -83);
glVertex2i(179, -91);
glEnd();

glBegin(GL_QUADS);
glColor3f(0.57255f, 0.46275f, 0.36078f);
glVertex2i(128, -92);
glVertex2i(128, -91);
glVertex2i(179, -91);
glVertex2i(179, -92);
glEnd();

glBegin(GL_QUADS);
glColor3f(1.0f, 0.5f, 0.0f);
glVertex2i(132, -81);
glVertex2i(132, -74);
glVertex2i(175, -74);
glVertex2i(175, -81);
glEnd();

//Bench 2

glBegin(GL_QUADS);
glColor3f(0.4f, 0.2f, 0.0f);
glVertex2i(128 + 91, -101);
glVertex2i(128 + 91, -92);
glVertex2i(130 + 91, -92);
glVertex2i(130 + 91, -101);
glEnd();
```

```
glBegin(GL_QUADS);
glVertex2i(128 + 49 + 91, -101);
glVertex2i(128 + 49 + 91, -92);
glVertex2i(130 + 49 + 91, -92);
glVertex2i(130 + 49 + 91, -101);
glEnd();

glBegin(GL_QUADS);
glVertex2i(133 + 91, -95);
glVertex2i(133 + 91, -92);
glVertex2i(135 + 91, -92);
glVertex2i(135 + 91, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(133 + 39 + 91, -95);
glVertex2i(133 + 39 + 91, -92);
glVertex2i(135 + 39 + 91, -92);
glVertex2i(135 + 39 + 91, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(135 + 91, -83);
glVertex2i(135 + 91, -72);
glVertex2i(137 + 91, -72);
glVertex2i(137 + 91, -83);
glEnd();

glBegin(GL_QUADS);
glVertex2i(135 + 35 + 91, -83);
glVertex2i(135 + 35 + 91, -72);
glVertex2i(137 + 35 + 91, -72);
glVertex2i(137 + 35 + 91, -83);
glEnd();

glBegin(GL_QUADS);
glColor3f(0.8f, 0.5f, 0.2f);
glVertex2i(128 + 91, -91);
glVertex2i(133 + 91, -83);
glVertex2i(174 + 91, -83);
glVertex2i(179 + 91, -91);
glEnd();
```

```
   glBegin(GL_QUADS);
   glColor3f(0.25f, 0.25f, 0.25f);
   glVertex2i(128 + 91, -92);
   glVertex2i(128 + 91, -91);
   glVertex2i(179 + 91, -91);
   glVertex2i(179 + 91, -92);
   glEnd();

   glBegin(GL_QUADS);
   glColor3f(0.5f, 0.0f, 0.5f);
   glVertex2i(132 + 91, -81);
   glVertex2i(132 + 91, -74);
   glVertex2i(175 + 91, -74);
   glVertex2i(175 + 91, -81);
   glEnd();


   glFlush();

}

void display2_view() {
   glClear(GL_COLOR_BUFFER_BIT);

   glBegin(GL_POLYGON);

   //Sky
   glColor3f(0.141, 0.173, 0.345);
   glVertex2f(-106.00, 116.00);
   glVertex2f(283.00, 116.00);
   glColor3f(0.361, 0.329, 0.643);
   glVertex2f(283.00, -55.00);
   glVertex2f(-106.00, -55.00);

   glEnd();

   glBegin(GL_QUADS);
   glColor3f(0.9804, 0.8745, 0.251);
   glVertex2f(-52.0, -55.0);
   glVertex2f(-52.0, 65.0);
   glVertex2f(115.0, 65.0);
   glVertex2f(115.0, -55.0);

   glBegin(GL_QUADS);
```

```
glColor3f(0.9804, 0.8745, 0.251);
glVertex2f(-52.0, 65.0);
glVertex2f(-52.0, 86.0);
glVertex2f(-25.0, 86.0);
glVertex2f(-25.0, 65.0);

glBegin(GL_QUADS);
glColor3f(0.9804, 0.8745, 0.251);
glVertex2f(88.0, 65.0);
glVertex2f(88.0, 86.0);
glVertex2f(115.0, 86.0);
glVertex2f(115.0, 65.0);

glBegin(GL_QUADS);
glColor3f(0.9804, 0.8745, 0.251);
glVertex2f(10.0, 65.0);
glVertex2f(10.0, 86.0);
glVertex2f(53.0, 86.0);
glVertex2f(53.0, 65.0);

glBegin(GL_TRIANGLES);
glColor3f(0.9804, 0.8745, 0.251);
glVertex2f(5.0, 86.0);
glVertex2f(32.0, 103.0);
glVertex2f(58.0, 86.0);
glVertex2f(5.0, 86.0);
glEnd();

glBegin(GL_QUADS);
glColor3f(0.8235, 0.1294, 0.1255);
glVertex2f(-45.0, -55.0);
glVertex2f(-45.0, 60.0);
glVertex2f(14.0, 60.0);
glVertex2f(14.0, -55.0);
glEnd();

glBegin(GL_QUADS);
glColor3f(0.8235, 0.1294, 0.1255);
glVertex2f(-45.0 + 94.0, -55.0);
glVertex2f(-45.0 + 94.0, 60.0);
glVertex2f(14.0 + 94.0, 60.0);
glVertex2f(14.0 + 94.0, -55.0);
glEnd();
```

```
glBegin(GL_QUADS);
// Window 1
glColor3f(0.0, 0.0, 0.0); // Black color
glVertex2i(-40, 54);
glVertex2i(-23, 54);
glVertex2i(-23, 40);
glVertex2i(-40, 40);

// Window 2
glVertex2i(-40, 37);
glVertex2i(-23, 37);
glVertex2i(-23, 23);
glVertex2i(-40, 23);

// Window 3
glVertex2i(-40, 20);
glVertex2i(-23, 20);
glVertex2i(-23, 6);
glVertex2i(-40, 6);

// Window 4
glVertex2i(-40, 3);
glVertex2i(-23, 3);
glVertex2i(-23, -11);
glVertex2i(-40, -11);

// window 5
glVertex2i(-40, -14);
glVertex2i(-23, -14);
glVertex2i(-23, -28);
glVertex2i(-40, -28);
//window 6
glColor3f(0.0, 0.0, 0.0); // Black color
glVertex2i(-40 + 32, 54);
glVertex2i(-23 + 32, 54);
glVertex2i(-23 + 32, 40);
glVertex2i(-40 + 32, 40);

// Window 7
glVertex2i(-40 + 32, 37);
glVertex2i(-23 + 32, 37);
glVertex2i(-23 + 32, 23);
glVertex2i(-40 + 32, 23);
```

```
// Window 8
glVertex2i(-40 + 32, 20);
glVertex2i(-23 + 32, 20);
glVertex2i(-23 + 32, 6);
glVertex2i(-40 + 32, 6);

// Window 9
glVertex2i(-40 + 32, 3);
glVertex2i(-23 + 32, 3);
glVertex2i(-23 + 32, -11);
glVertex2i(-40 + 32, -11);

// Window 10
glVertex2i(-40 + 32, -14);
glVertex2i(-23 + 32, -14);
glVertex2i(-23 + 32, -28);
glVertex2i(-40 + 32, -28);

// Window 11
glColor3f(0.0, 0.0, 0.0); // Black color
glVertex2i(-40 + 94, 54);
glVertex2i(-23 + 94, 54);
glVertex2i(-23 + 94, 40);
glVertex2i(-40 + 94, 40);

// Window 12
glVertex2i(-40 + 94, 37);
glVertex2i(-23 + 94, 37);
glVertex2i(-23 + 94, 23);
glVertex2i(-40 + 94, 23);

// Window 13
glVertex2i(-40 + 94, 20);
glVertex2i(-23 + 94, 20);
glVertex2i(-23 + 94, 6);
glVertex2i(-40 + 94, 6);

// Window 14
glVertex2i(-40 + 94, 3);
glVertex2i(-23 + 94, 3);
glVertex2i(-23 + 94, -11);
glVertex2i(-40 + 94, -11);

// Window 15
```

```
glVertex2i(-40 + 94, -14);
glVertex2i(-23 + 94, -14);
glVertex2i(-23 + 94, -28);
glVertex2i(-40 + 94, -28);

// Window 16
glColor3f(0.0, 0.0, 0.0); // Black color
glVertex2i(-40 + 126, 54);
glVertex2i(-23 + 126, 54);
glVertex2i(-23 + 126, 40);
glVertex2i(-40 + 126, 40);

// Window 17
glVertex2i(-40 + 126, 37);
glVertex2i(-23 + 126, 37);
glVertex2i(-23 + 126, 23);
glVertex2i(-40 + 126, 23);

// Window 18
glVertex2i(-40 + 126, 20);
glVertex2i(-23 + 126, 20);
glVertex2i(-23 + 126, 6);
glVertex2i(-40 + 126, 6);

// Window 19
glVertex2i(-40 + 126, 3);
glVertex2i(-23 + 126, 3);
glVertex2i(-23 + 126, -11);
glVertex2i(-40 + 126, -11);

// Window 20
glVertex2i(-40 + 126, -14);
glVertex2i(-23 + 126, -14);
glVertex2i(-23 + 126, -28);
glVertex2i(-40 + 126, -28);

//stairs room1

glVertex2i(18, -18);
glVertex2i(18, 57);
glVertex2i(29, 57);
glVertex2i(29, -18);

//stairs room2
```

```
glVertex2i(18 + 16, -18);
glVertex2i(18 + 16, 57);
glVertex2i(29 + 16, 57);
glVertex2i(29 + 16, -18);



//main door
glVertex2i(24, -55);
glVertex2i(24, -28);
glVertex2i(40, -28);
glVertex2i(40, -55);

//orange-yellow shade
glEnd();
glBegin(GL_POLYGON);
glColor3f(0.9882, 0.8, 0.3765);
glVertex2i(-106, -55);
glVertex2i(283, -55);
glVertex2i(283, -115);
glVertex2i(-106, -115);
glEnd();

//green shade left
glBegin(GL_POLYGON);
glColor3f(0.5961, 0.6588, 0.1490);
glVertex2i(-106, -58);
glVertex2i(13, -58);
glVertex2i(-3, -89);
glVertex2i(-106, -89);
glEnd();

//green shade right
glBegin(GL_POLYGON);
glColor3f(0.5961, 0.6588, 0.1490);
glVertex2i(50, -58);
glVertex2i(283, -58);
glVertex2i(283, -89);
glVertex2i(66, -89);
glEnd();


//tree left
```

```
glBegin(GL_QUADS);
glColor3f(0.4549, 0.2784, 0.2157);
glVertex2f(-95, -58.0);
glVertex2f(-95, -14.0);
glVertex2f(-89, -14.0);
glVertex2f(-89, -58.0);
glEnd();

glBegin(GL_TRIANGLES);
glColor3f(0.0, 0.5, 0.0);
glVertex2f(-126, -14);
glVertex2f(-91, 35);
glVertex2f(-57, -14);
glVertex2f(-130, -1);
glVertex2f(-91, 49);
glVertex2f(-53, -1);
glEnd();
//tree right

glBegin(GL_QUADS);
glColor3f(0.4549, 0.2784, 0.2157);
glVertex2i(169, -10);
glVertex2i(169, -80);
glVertex2i(179, -80);
glVertex2i(179, -10);
glVertex2i(176, -28);
glEnd();



glBegin(GL_TRIANGLES);
glColor3f(0.0, 0.5, 0.0);
glVertex2f(134, -18);
glVertex2f(173, 43);
glVertex2f(211, -18);
glVertex2f(129, -2);
glVertex2f(173, 61);
glVertex2f(216, -2);
glEnd();

//tree right 2

glBegin(GL_QUADS);
glColor3f(0.4549, 0.2784, 0.2157);
```

```
glVertex2i(169 + 90, -10);
glVertex2i(169 + 90, -80);
glVertex2i(179 + 90, -80);
glVertex2i(179 + 90, -10);
glVertex2i(176 + 90, -28);
glEnd();



glBegin(GL_TRIANGLES);
glColor3f(0.0, 0.5, 0.0);
glVertex2f(134 + 90, -18);
glVertex2f(173 + 90, 43);
glVertex2f(211 + 90, -18);
glVertex2f(129 + 90, -2);
glVertex2f(173 + 90, 61);
glVertex2f(216 + 90, -2);
glEnd();

//Road
glBegin(GL_POLYGON);
glColor3f(0.1843, 0.3059, 0.2196);
glVertex2i(-106, -102);
glVertex2i(283, -102);
glVertex2i(283, -130);
glVertex2i(-106, -130);
glEnd();

glBegin(GL_POLYGON);
glColor3f(0.59608f, 0.43529f, 0.21176f);
glVertex2i(-106, -106);
glVertex2i(-106, -102);
glVertex2i(283, -102);
glVertex2i(283, -106);
glEnd();

//Lamp Post 1

glBegin(GL_QUADS);
glColor3f(0.149, 0.271, 0.349);
glVertex2i(-32, -97);
glVertex2i(-32, -95);
glVertex2i(-24, -95);
glVertex2i(-24, -97);
```

```
glEnd();

glBegin(GL_QUADS);
glVertex2i(-30, -82);
glVertex2i(-26, -82);
glVertex2i(-26, -95);
glVertex2i(-30, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(-29, -82);
glVertex2i(-29, -41);
glVertex2i(-27, -41);
glVertex2i(-27, -82);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-29.50, -41);
glVertex2f(-29.50, -40.75);
glVertex2f(-26.50, -40.75);
glVertex2f(-26.50, -41);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-29.00, -40.75);
glVertex2f(-31.25, -33.00);
glVertex2f(-30.75, -33.00);
glVertex2f(-28.50, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-28.25, -40.75);
glVertex2f(-28.25, -33.00);
glVertex2f(-27.75, -33.00);
glVertex2f(-27.75, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-27.50, -40.75);
glVertex2f(-25.25, -33.00);
glVertex2f(-24.75, -33.00);
glVertex2f(-27.00, -40.75);
glEnd();
```

```
glBegin(GL_QUADS);
glVertex2f(-31.75, -33.00);
glVertex2f(-31.75, -32.50);
glVertex2f(-24.25, -32.50);
glVertex2f(-24.25, -33.00);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-29.00, -32.50);
glVertex2f(-29.00, -32.00);
glVertex2f(-27.00, -32.00);
glVertex2f(-27.00, -32.50);
glEnd();

glBegin(GL_QUADS);
glColor3f(1.0, 0.8, 0.6);
glVertex2f(-28.50, -40.75);
glVertex2f(-30.70, -33.00);
glVertex2f(-28.25, -33.00);
glVertex2f(-28.25, -40.75);
glEnd();

glBegin(GL_QUADS);
glColor3f(1.0, 0.8, 0.6);
glVertex2f(-27.75, -40.75);
glVertex2f(-27.75, -33.00);
glVertex2f(-25.25, -33.00);
glVertex2f(-27.25, -40.75);
glEnd();


//lamppost2
glBegin(GL_QUADS);
glColor3f(0.149, 0.271, 0.349);
glVertex2i(-32 + 119, -97);
glVertex2i(-32 + 119, -95);
glVertex2i(-24 + 119, -95);
glVertex2i(-24 + 119, -97);
glEnd();

glBegin(GL_QUADS);
glVertex2i(-30 + 119, -82);
glVertex2i(-26 + 119, -82);
glVertex2i(-26 + 119, -95);
```

```
glVertex2i(-30 + 119, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(-29 + 119, -82);
glVertex2i(-29 + 119, -41);
glVertex2i(-27 + 119, -41);
glVertex2i(-27 + 119, -82);
glEnd();


glBegin(GL_QUADS);
glVertex2f(-29.50 + 119, -41);
glVertex2f(-29.50 + 119, -40.75);
glVertex2f(-26.50 + 119, -40.75);
glVertex2f(-26.50 + 119, -41);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-29.00 + 119, -40.75);
glVertex2f(-31.25 + 119, -33.00);
glVertex2f(-30.75 + 119, -33.00);
glVertex2f(-28.50 + 119, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-28.25 + 119, -40.75);
glVertex2f(-28.25 + 119, -33.00);
glVertex2f(-27.75 + 119, -33.00);
glVertex2f(-27.75 + 119, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-27.50 + 119, -40.75);
glVertex2f(-25.25 + 119, -33.00);
glVertex2f(-24.75 + 119, -33.00);
glVertex2f(-27.00 + 119, -40.75);
glEnd();

glBegin(GL_QUADS);
glVertex2f(-31.75 + 119, -33.00);
glVertex2f(-31.75 + 119, -32.50);
glVertex2f(-24.25 + 119, -32.50);
glVertex2f(-24.25 + 119, -33.00);
```

```
glEnd();

glBegin(GL_QUADS);
glVertex2f(-29.00 + 119, -32.50);
glVertex2f(-29.00 + 119, -32.00);
glVertex2f(-27.00 + 119, -32.00);
glVertex2f(-27.00 + 119, -32.50);
glEnd();

glBegin(GL_QUADS);
glColor3f(1.0, 0.8, 0.6);
glVertex2f(-28.50 + 119, -40.75);
glVertex2f(-30.70 + 119, -33.00);
glVertex2f(-28.25 + 119, -33.00);
glVertex2f(-28.25 + 119, -40.75);
glEnd();

glBegin(GL_QUADS);
glColor3f(1.0, 0.8, 0.6);
glVertex2f(-27.75 + 119, -40.75);
glVertex2f(-27.75 + 119, -33.00);
glVertex2f(-25.25 + 119, -33.00);
glVertex2f(-27.25 + 119, -40.75);
glEnd();

//Bench 1

glBegin(GL_QUADS);
glColor3f(0.4f, 0.2f, 0.0f);
glVertex2i(128, -101);
glVertex2i(128, -92);
glVertex2i(130, -92);
glVertex2i(130, -101);
glEnd();

glBegin(GL_QUADS);
glVertex2i(128 + 49, -101);
glVertex2i(128 + 49, -92);
glVertex2i(130 + 49, -92);
glVertex2i(130 + 49, -101);
glEnd();

glBegin(GL_QUADS);
glVertex2i(133, -95);
```

```
glVertex2i(133, -92);
glVertex2i(135, -92);
glVertex2i(135, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(133 + 39, -95);
glVertex2i(133 + 39, -92);
glVertex2i(135 + 39, -92);
glVertex2i(135 + 39, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(135, -83);
glVertex2i(135, -72);
glVertex2i(137, -72);
glVertex2i(137, -83);
glEnd();

glBegin(GL_QUADS);
glVertex2i(135 + 35, -83);
glVertex2i(135 + 35, -72);
glVertex2i(137 + 35, -72);
glVertex2i(137 + 35, -83);
glEnd();

glBegin(GL_QUADS);
glColor3f(0.8f, 0.5f, 0.2f);
glVertex2i(128, -91);
glVertex2i(133, -83);
glVertex2i(174, -83);
glVertex2i(179, -91);
glEnd();

glBegin(GL_QUADS);
glColor3f(0.57255f, 0.46275f, 0.36078f);
glVertex2i(128, -92);
glVertex2i(128, -91);
glVertex2i(179, -91);
glVertex2i(179, -92);
glEnd();

glBegin(GL_QUADS);
glColor3f(1.0f, 0.5f, 0.0f);
```

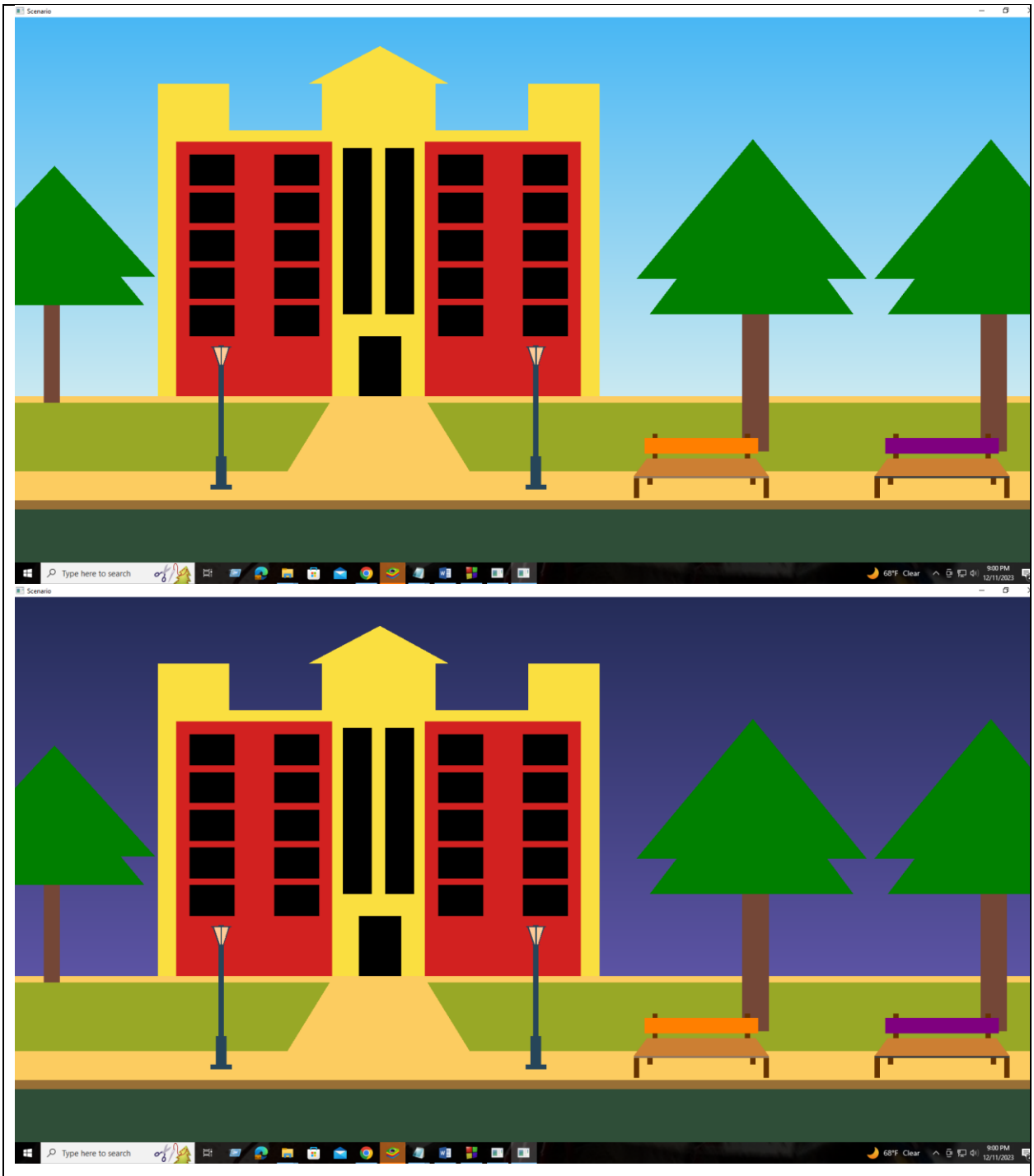
```
glVertex2i(132, -81);
glVertex2i(132, -74);
glVertex2i(175, -74);
glVertex2i(175, -81);
glEnd();

//Bench 2

glBegin(GL_QUADS);
glColor3f(0.4f, 0.2f, 0.0f);
glVertex2i(128 + 91, -101);
glVertex2i(128 + 91, -92);
glVertex2i(130 + 91, -92);
glVertex2i(130 + 91, -101);
glEnd();

glBegin(GL_QUADS);
glVertex2i(128 + 49 + 91, -101);
glVertex2i(128 + 49 + 91, -92);
glVertex2i(130 + 49 + 91, -92);
glVertex2i(130 + 49 + 91, -101);
glEnd();

glBegin(GL_QUADS);
glVertex2i(133 + 91, -95);
glVertex2i(133 + 91, -92);
glVertex2i(135 + 91, -92);
glVertex2i(135 + 91, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(133 + 39 + 91, -95);
glVertex2i(133 + 39 + 91, -92);
glVertex2i(135 + 39 + 91, -92);
glVertex2i(135 + 39 + 91, -95);
glEnd();

glBegin(GL_QUADS);
glVertex2i(135 + 91, -83);
glVertex2i(135 + 91, -72);
glVertex2i(137 + 91, -72);
glVertex2i(137 + 91, -83);
glEnd();
```

```
   glBegin(GL_QUADS);
   glVertex2i(135 + 35 + 91, -83);
   glVertex2i(135 + 35 + 91, -72);
   glVertex2i(137 + 35 + 91, -72);
   glVertex2i(137 + 35 + 91, -83);
   glEnd();

   glBegin(GL_QUADS);
   glColor3f(0.8f, 0.5f, 0.2f);
   glVertex2i(128 + 91, -91);
   glVertex2i(133 + 91, -83);
   glVertex2i(174 + 91, -83);
   glVertex2i(179 + 91, -91);
   glEnd();

   glBegin(GL_QUADS);
   glColor3f(0.25f, 0.25f, 0.25f);
   glVertex2i(128 + 91, -92);
   glVertex2i(128 + 91, -91);
   glVertex2i(179 + 91, -91);
   glVertex2i(179 + 91, -92);
   glEnd();

   glBegin(GL_QUADS);
   glColor3f(0.5f, 0.0f, 0.5f);
   glVertex2i(132 + 91, -81);
   glVertex2i(132 + 91, -74);
   glVertex2i(175 + 91, -74);
   glVertex2i(175 + 91, -81);
   glEnd();


   glFlush();

}



/*void switchDisplayFunc(int value) {
   currentDisplay = (currentDisplay + 1) % 2;
   glutPostRedisplay();
   glutTimerFunc(5000, switchDisplayFunc, 0);
}*/
```

```
void display() {
   glMatrixMode(GL_MODELVIEW);
   glLoadIdentity();

   glClearColor(0.0f, 0.0f, 0.0f, 1.0f);
   glClear(GL_COLOR_BUFFER_BIT);

   if (currentDisplay == 0) {
      display1_view();
   }
   else if (currentDisplay == 1) {
      display2_view();
   }

   glutPostRedisplay();
   glFlush();
}

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

   case 'd':
      currentDisplay = 0;
      break;
   case 'n':
      currentDisplay = 1;
      break;
   }
   glutPostRedisplay();
}

void myInit(void)
{
   glClearColor(250.0, 250.0, 250.0, 0.0);
   glMatrixMode(GL_PROJECTION);
   glLoadIdentity();
   gluOrtho2D(-106.0, 283.0, -130.0, 116.0);
}

int main(int argc, char** argv) {
   glutInit(&argc, argv);
   glutInitDisplayMode(GLUT_SINGLE | GLUT_RGB);
   glutInitWindowSize(1700, 820);
   glutCreateWindow("Scenario");
```

```
    glClearColor(1.0, 1.0, 1.0, 1.0);
    myInit();
    glutDisplayFunc(display);
    //glutTimerFunc(5000, switchDisplayFunc, 0);
    glutKeyboardFunc(handleKeypress);


    glutMainLoop();


    return 0;
}
```

Output Screenshot (Full Screen)-


Scenario
Type here to search
68°F Clear
9:00 PM
12/11/2023
Scenario
Type here to search
68°F Clear
9:00 PM
12/11/2023