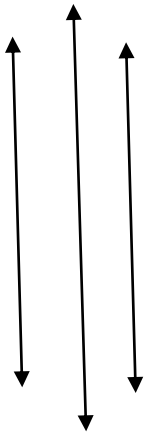
SUNWAY
INT'L BUSINESS SCHOOL



Program Name: (BCS) hons

Course Code: CSC 3030

Course Name: Computer Graphic

Individual Project

Date of Submission: August 14, 2022

Submitted By:

Student Name:Pradip Dhakal

IUKL ID: 042902900047

Semester: 6th

Intake: September 2019

Submitted To:

Faculty Name:Amar Subedi

Department: PO

Code

```
#include <windows.h>
#include <GL/glut.h>
#include <math.h>

void init ()
{
   glClearColor (1.0, 1.0, 1.0, 1.0);
   glMatrixMode(GL_PROJECTION);
   glLoadIdentity();
   gluOrtho2D (0.0, 1200.0, 0.0, 1600.0);
}
void display()
{
   glClear (GL_COLOR_BUFFER_BIT);
   glPointSize(5.0f);
         glBegin(GL_LINE_LOOP);
         glColor3f (0.0, 0.0, 0.0);
                  glVertex2i(250, 500);
                  glVertex2i(250, 575);
                  glVertex2i(300, 575);
                  glVertex2i(400, 625);
                  glVertex2i(600, 625);
                  glVertex2i(700, 575);
                  glVertex2i(700, 500);
         glLineWidth(4.5f);
         glEnd();
```

```
//      first inner layer
        glBegin(GL_LINE_LOOP);
        glColor3f (0.0, 0.0, 0.0);
                glVertex2i(300, 575);
                glVertex2i(400, 575);
                glVertex2i(400, 625);
        glEnd();

//      second inner layer
        glBegin(GL_LINE_LOOP);
        glColor3f (0.0, 0.0, 0.0);
                glVertex2i(700, 575);
                glVertex2i(600, 575);
                glVertex2i(600, 625);
        glEnd();

//      third inner layer
        glBegin(GL_LINE_LOOP);
        glColor3f (0.0, 0.0, 0.0);
                glVertex2i(500, 625);
                glVertex2i(500, 500);
        glEnd();

//      fourth inner layer
        glBegin(GL_LINE_LOOP);
        glColor3f (0.0, 0.0, 0.0);
                glVertex2i(300, 575);
                glVertex2i(700, 575);
        glEnd();
```

```
//      first wheel
        float x,y;
        float a=375.0, b=500.0;
        float r = 40, t;
        glBegin(GL_LINE_LOOP);
        glColor3f (0.0, 0.0, 0.0);
        for(t=0;t<1000;t++){
                x=a+(r*cos(t));
                y=b+(r*sin(t));
                glVertex2f(x,y);
        }
                glEnd();
//      lines in first wheel
        glBegin(GL_LINES);
        glColor3f(0.0, 0.0, 0.0);
                glVertex2i(375, 500);
                glVertex2i(375, 539);
                glVertex2i(375, 500);
                glVertex2i(353, 460);
                glVertex2i(375, 500);
                glVertex2i(408, 470);
        glEnd();
//      second wheel
        r=40;
        a=575.0, b=500.0;
        glBegin(GL_LINE_LOOP);
        glColor3f (0.0, 0.0, 0.0);
        for(t=0;t<1000;t++){
                x=a+(r*cos(t));
                y=b+(r*sin(t));
                glVertex2f(x,y);
        }
                glEnd();
```

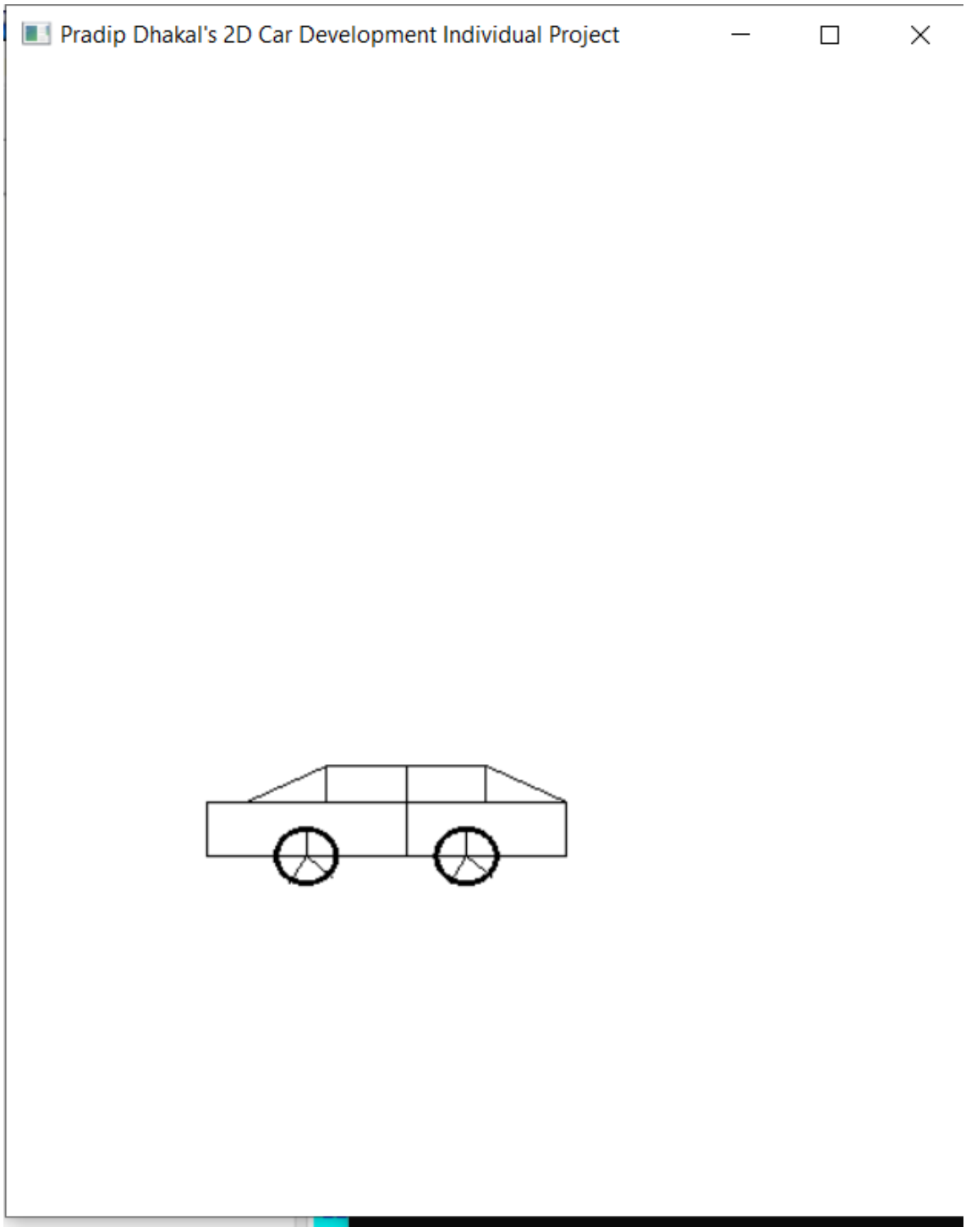
```
//          lines in second wheel
            glBegin(GL_LINES);
            glColor3f(0.0, 0.0, 0.0);
                        glVertex2i(575, 500);
                        glVertex2i(575, 539);
                        glVertex2i(575, 500);
                        glVertex2i(553, 460);
                        glVertex2i(575, 500);
                        glVertex2i(608, 470);
            glEnd();



    glFlush ();
}
int main(int argc, char** argv)
{
    glutInit(&argc, argv);
    glutInitDisplayMode (GLUT_SINGLE | GLUT_RGB | GLUT_DEPTH);

    glutInitWindowSize (500, 600);
    glutInitWindowPosition (0, 0);
    glutCreateWindow ("Pradip Dhakal's 2D Car Development Individual Project");
    init ();
    glutDisplayFunc(display);
    glutMainLoop();
}
```

Output



Thank You