

[illegible]

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}

void front() {
    //front surface of the car
    glColor3f(1, 1, 1);
    glPushMatrix();
    glTranslatef(-1.62, -1, 0);
    glScaled(0.01, 0.2, 0.65);
    glutWireCube(3);
    glPopMatrix();

    // the line between the wheels
    glColor3f(1, 1, 1);
    glPushMatrix();
    glTranslatef(-1.62, -1.30, -0.50);
    glRotatef(90, 1, 0, 0);
    glScaled(0.01, 0.7, -0.01);
    glBegin(GL_LINES);
    glVertex2f(3, 3);
    glVertex2f(-1.62, -1.62);
    glEnd();
    glPopMatrix();

    //the line connecting the steering wheel to the car
    glColor3f(1, 1, 1);
    glPushMatrix();
    glTranslatef(1.50, -0.5, 0);
    glRotatef(15, 0, 0, 1);
    glScaled(0.01, 0.5, -0.01);
    glBegin(GL_LINES);
    glVertex2f(3, 3);
    glVertex2f(-1.62, -1.62);
    glEnd();
    glPopMatrix();
}

void back() {
    //back surface of the car
    glColor3f(1, 1, 1);
    glPushMatrix();
    glTranslatef(1.62, -1, 0);
    glScalef(0.01, 0.2, 0.65);
    glutWireCube(3);
    glPopMatrix();

    // the line between the wheels
    glColor3f(1, 1, 1);
    glPushMatrix();
    glTranslatef(1.62, -1.30, -0.50);
    glRotatef(90, 1, 0, 0);
    glScalef(0.01, 0.7, -0.01);
    glBegin(GL_LINES);
    glVertex2f(3, 3);
    glVertex2f(-1.62, -1.62);
    glEnd();
    glPopMatrix();
}

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void left() {
    //left surface of the car
    glColor3f(1, 1, 1);
    glPushMatrix();
    glTranslatef(0, -1, 1);
    glScalef(1.1, 0.2, 0.01);
    glutWireCube(3);
    glPopMatrix();
}

void right()
{
    //right surface of the car
    glColor3f(1, 1, 1);
    glPushMatrix();
    glTranslatef(0, -1, -1);
    glScaled(1.1, 0.2, 0.01);
    glutWireCube(3);
    glPopMatrix();
}

void wheel1()
{
    //shape of the wheel
    glBegin(GL_LINE_LOOP);
    glColor3f(1, 1, 1);
    for (int i = 0; i<360; i++)
    {
        float degInRad = i * (PI/180);
        glVertex3f((cos(degInRad)*0.5)-1.62, (sin(degInRad)*0.5)-1.3,-1.6);
    }
    glEnd();

    //the line in the wheel
    glPushMatrix();
    glTranslatef(1.62, -1.30, -1.60);
    glRotatef(180, 1, 0, 1);
    glScalef(0.5, 0.5, 0.5);
    glColor3f(1, 1, 1);
    glBegin(GL_LINES);
    glVertex3dv(A);
    glVertex3dv(B);
    glEnd();
    glPopMatrix();
}

void wheel2()
{
    //shape of the wheel
    glBegin(GL_LINE_LOOP);
    glColor3f(1, 1, 1);

    for (int i = 0; i < 360; i++)
    {
        float degInRad = i * (PI / 180);
        glVertex3f((cos(degInRad)*0.5) + 1.62, (sin(degInRad)*0.5) - 1.3, -1.6);
    }
    glEnd();
}

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        //the line in the wheel
        glPushMatrix();
        glTranslatef(-1.62, -1.30, -1.60);
        glRotatef(180, 1, 0, 1);
        glScalef(0.5, 0.5, 0.5);
        glColor3f(1, 1, 1);
        glBegin(GL_LINES);
        glVertex3dv(A);
        glVertex3dv(B);
        glEnd();
        glPopMatrix();
    }

void wheel3()
{
    //shape of the wheel
    glBegin(GL_LINE_LOOP);
    glColor3f(1, 1, 1);

    for (int i = 0; i < 360; i++)
    {
        float degInRad = i * (PI / 180);
        glVertex3f((cos(degInRad)*0.5) - 1.62, (sin(degInRad)*0.5) - 1.3, 1.6);
    }
    glEnd();
    //the line in the wheel
    glPushMatrix();
    glTranslatef(1.62, -1.30, 1.60);
    glRotatef(180, 1, 0, 1);
    glScalef(0.5, 0.5, 0.5);
    glColor3f(1, 1, 1);
    glBegin(GL_LINES);
    glVertex3dv(A);
    glVertex3dv(B);
    glEnd();
    glPopMatrix();
}

void wheel4()
{
    //shape of the wheel
    glBegin(GL_LINE_LOOP);
    glColor3f(1, 1, 1);

    for (int i = 0; i < 360; i++)
    {
        float degInRad = i * (PI / 180);
        glVertex3f((cos(degInRad)*0.5) + 1.62, (sin(degInRad)*0.5) - 1.3, 1.6);
    }
    glEnd();

    //the line in the wheel
    glPushMatrix();
    glTranslatef(-1.62, -1.30, 1.60);
    glRotatef(180, 1, 0, 1);
    glScalef(0.5, 0.5, 0.5);
    glColor3f(1, 1, 1);
    glBegin(GL_LINES);
    glVertex3dv(A);

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        glVertex3dv(B);
        glEnd();
        glPopMatrix();
    }

    void steering()
    {
        glPushMatrix();
        glRotatef(-rotAngle, 1, 0.0, 0);
        glBegin(GL_LINE_LOOP | GL_LINES);

        glColor3f(1, 1, 1);

        //the shape and position of the steering wheel
        for (int i = 0; i < 360; i++)
        {
            float degInRad = i * (PI / 180);
            glVertex3f( (cos(degInRad)*0.7) + 1.15, (sin(degInRad)*0.7)+0, 0.90);
        }
        glEnd();
        glPopMatrix();

        glColor3f(1, 1, 1);
        glPushMatrix();
        glTranslatef(1.15, 0.92, 0);
        glScalef(0.7, 0.7, 0.7);
        glRotatef(rotAngle, 0, 0, 1);
        glBegin(GL_LINES);
        glVertex3dv(X);
        glVertex3dv(Y);
        glEnd();
        glPopMatrix();

        //the lines of the steering wheel
        glColor3f(1, 1, 1);
        glPushMatrix();
        glTranslatef(1.15, 0.92, 0);
        glScalef(0.7, 0.7, 0.7);
        glRotatef(-rotAngle, 0, 0, 1);
        glBegin(GL_LINES);
        glVertex3dv(C);
        glVertex3dv(D);
        glEnd();

        glPopMatrix();
    }

    void car()
    {
        front();
        back();
        left();
        right();
        wheel1();
        wheel2();
        wheel3();
        wheel4();
        steering();
    }
}

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