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Program9

Write a program to model a car like figure using display list and move a car from one end of the screen to other end. User is able to control the speed with mouse.

```
#include<GL/glut.h>
#include<math.h>
#include<stdio.h>
#define CAR 1
#define WHEEL 2
float s=1;
void carlist(){
    glNewList(CAR, GL_COMPILE);
    glColor3f(1,1,1);
    glBegin(GL_POLYGON);
    glVertex3f(0,25,0);
    glVertex3f(90,25,0);
    glVertex3f(90,55,0);
    glVertex3f(80,55,0);
    glVertex3f(20,75,0);
    glVertex3f(0,55,0);
    glEnd();
    glEndList();
}

void wheellist(){
    glNewList(WHEEL, GL_COMPILE_AND_EXECUTE);
    glColor3f(0,1,1);
```

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```
    glutSolidSphere(10,25,25);
    glEndList();
}
void myKeyboard(unsigned char key, int x, int y)
{
    switch(key){
        case 't': glutPostRedisplay();
                  break;
        case 'q': exit(0);
        default : break;
    }
}
void myInit(){
    glClearColor(0,0,0,0);
    glOrtho(0,600,0,600,0,600);
}
void drawWheel(){
    glColor3f(0,1,1);
    glutSolidSphere(10,25,21);
}
```

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```
void moveCar(float s){
    glTranslatef(s, 0.0, 0.0);
    glCallList(CAR);
    glPushMatrix();
    glTranslatef(2.5, 2.5, 0.0);

    glCallList(WHEEL);
    glPopMatrix();
    glPushMatrix();
     glTranslatef(7.25, 0.0);

    glCallList(WHEEL);
    glPopMatrix();
    glFlush();
}

void mouse(int btn, int state, int x, int y)
{
    if (btn == GLUT_LEFT_BUTTON && state == GLUT_DOWN){
                s += 5;
                myDisplay();
    }
    else if (btn == GLUT_RIGHT_BUTTON && state == GLUT_DOWN){
                s += 2;
                myDisplay();
        }
}
```

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```
int main(int argc, char* argv[])
{
    glutInit(&argc, argv);
    glutInitDisplayMode(GLUT_SINGLE|GLUT_RGB);
    glutInitWindowSize(600, 600);
    glutInitWindowPosition(100, 100);
    glutCreateWindow("car");
    myInit();
    glutDisplayFunc(myDisp);
    glutMainLoop();
}
```

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