```
#include <windows.h>
#ifdef __APPLE__
#include <GLUT/glut.h>
#else
#include <GL/glut.h>
#endif
#include <math.h>
#include <stdlib.h>

void init(void)
{

   glClearColor(1.0, 1.0,1, 1.0);
   glOrtho(-100,100,-100,100,-100,100);
}
// create circle for Wheel
void c(GLfloat rx,GLfloat ry,GLfloat x,GLfloat y)
{
   int i=0;
   float angle;
   GLfloat PI = 3.1416;
   glBegin(GL_POLYGON);
   glVertex2f(x,y);
   for(i=0;i<=360;i++)
   {
      angle = i*PI /180;
      glVertex2f(x+(cos(angle)*rx),y+(sin(angle)*ry));
   }
   glEnd();
```

```
}

void c1(GLfloat rx,GLfloat ry,GLfloat x,GLfloat y)
{
   int i=0;
   float angle;
   GLfloat PI = 3.1416;
   glBegin(GL_POLYGON);
   glVertex2f(x,y);
   for(i=90;i<=270;i++)
   {
      angle = i*PI /180;
      glVertex2f(x+(cos(angle)*rx),y+(sin(angle)*ry));
   }
   glEnd();
}
void Display()
{

glClear(GL_COLOR_BUFFER_BIT);

   glBegin(GL_QUADS);
     glColor3f(0, 0,1);
   glVertex2f(-50,20);
   glVertex2f(10,20.0);
   glVertex2f(10,0);
   glVertex2f(-50,0);
   glEnd();
```

```
        glBegin(GL_QUADS);
       glColor3f(1, 0,0);
    glVertex2f(-60,0);
    glVertex2f(40,0.0);
    glVertex2f(40,-15);
    glVertex2f(-60,-15);
    glEnd();


        glBegin(GL_QUADS);
       glColor3f(0,1,0);
    glVertex2f(10,30);
    glVertex2f(40,30);
    glVertex2f(40,0);
    glVertex2f(10,0);
    glEnd();

//door
        glBegin(GL_QUADS);
       glColor3f(1,1,0);
    glVertex2f(13,27);
    glVertex2f(18,27);
    glVertex2f(18,3);
    glVertex2f(13,3);
    glEnd();

// Window
        glBegin(GL_QUADS);
```

```
    glColor3f(1,1,0);
   glVertex2f(23,27);
   glVertex2f(33,27);
   glVertex2f(33,17);
   glVertex2f(23,17);
   glEnd();

//rooftop
        glBegin(GL_QUADS);
    glColor3f(1,1,0);
   glVertex2f(8,32);
   glVertex2f(42,32);
   glVertex2f(42,30);
   glVertex2f(8,30);
   glEnd();

     glBegin(GL_QUADS);
    glColor3f(1, 1,0);
   glVertex2f(-48,22);
   glVertex2f(-35,22);
   glVertex2f(-35,20);
   glVertex2f(-48,20);
   glEnd();

     glBegin(GL_QUADS);
    glColor3f(1, 1,0);
   glVertex2f(-48,34);
   glVertex2f(-35,34);
   glVertex2f(-35,32);
```

```
  glVertex2f(-48,32);
  glEnd();

     glBegin(GL_QUADS);
    glColor3f(0, 0,1);
  glVertex2f(-46,32);
  glVertex2f(-37,32);
  glVertex2f(-38,22);
  glVertex2f(-45,22);
  glEnd();



//front
  glColor3f(1, 1, 0);
  c1(10,10,-50,10);

     glBegin(GL_TRIANGLES);
    glColor3f(1, 1,0);
  glVertex2f(-60,0);
  glVertex2f(-60,-20);
  glVertex2f(-80,-20);
  glEnd();


//WHEEL
  glColor3f(0, 0, 0);
  c(8,8,-45,-15);
```

```
   glColor3f(0, 0, 0);
   c(8,8,-20,-15);


   glColor3f(0, 0, 0);
   c(10,10,25,-12);


//smoke
   glColor3f(0, 0, 0);
      c(3,3,-40,40);

   c(5,3,-40,45);
   c(5,3,-37,47);
   c(5,3,-37,43);
   c(5,3,-33,45);


glutPostRedisplay();
   glFlush();
}




int main()
{
   glutInitDisplayMode(GLUT_RGB | GLUT_SINGLE);
   glutInitWindowPosition(200,200);
```

```
    glutInitWindowSize(600,600);
    glutCreateWindow("TRAIN");
    init();
    glutDisplayFunc(Display);
    glutMainLoop();
    return 0;

}
```