We will program in C/C++, and use **MSVC++6.0** as the development environment.

Our programs will always be multifile, and every **.cpp** file will have a **.h** file with the same name.

We will always have file **main.cpp**.

```
// init.cpp

#include "main.h"

void initGLUT(int* argc,
              char** argv)
{
  glutInit(argc, argv);
  glutInitDisplayMode(GLUT_RGB);
  glutInitWindowSize(500,500);
  glutInitWindowPosition(0,0);
  glutCreateWindow("Hello");

  glutDisplayFunc(display);
}

void initOpenGL(void)
{
  glClearColor(1,1,1,1);
}

void initApp(void)
{
  curr_color = 0;
}
```

```
// main.h

#ifndef _MAIN_H
#define _MAIN_H

#include <glut.h>
#include <time.h>

#include <cstdio>
#include <cmath>
#include <iomanip>
#include <cstdlib>
#include <iostream>
using namespace std;

#include "init.h"
#include "render.h"

#endif
```

```
// render.cpp

#include "main.h"

float colors[8][3] =
{ {255., 255., 255.},
  {255.,   0.,   0.},
  {255., 255.,   0.},
  {  0., 255.,   0.},
  {  0., 255., 255.},
  {  0.,   0., 255.},
  {255.,   0., 255.},
  {  0.,   0.,   0.} };

int curr_color;

void display(void)
{
  set_bkgnd_color();
  glClear(GL_COLOR_BUFFER_BIT);
  glFlush();
  glutPostRedisplay();

  Sleep(1000);
}

void set_bkgnd_color(void)
{
  float r = colors[curr_color][0];
  float g = colors[curr_color][1];
  float b = colors[curr_color][2];
  glClearColor(r, g, b, 1.0);
  curr_color = (curr_color+1)%8;
}
```

```
// init.h

#ifndef _INIT_H
#define _INIT_H

void initGLUT(int *argc,
              char **argv);
void initOpenGL(void);
void initApp(void);

#endif
```

```
// main.cpp

#include "main.h"

int main(int argc, char **argv)
{
  initGLUT(&argc, argv);
  initOpenGL();
  initApp();
  glutMainLoop();
  return 0;
}
```

```
// render.h

#ifndef _RENDER_H
#define _RENDER_H

void set_bkgnd_color(void);
void display(void);

extern float colors[8][3];
extern int curr_color;

#endif
```