

CPSC 453

Lab 2

19.9.2007

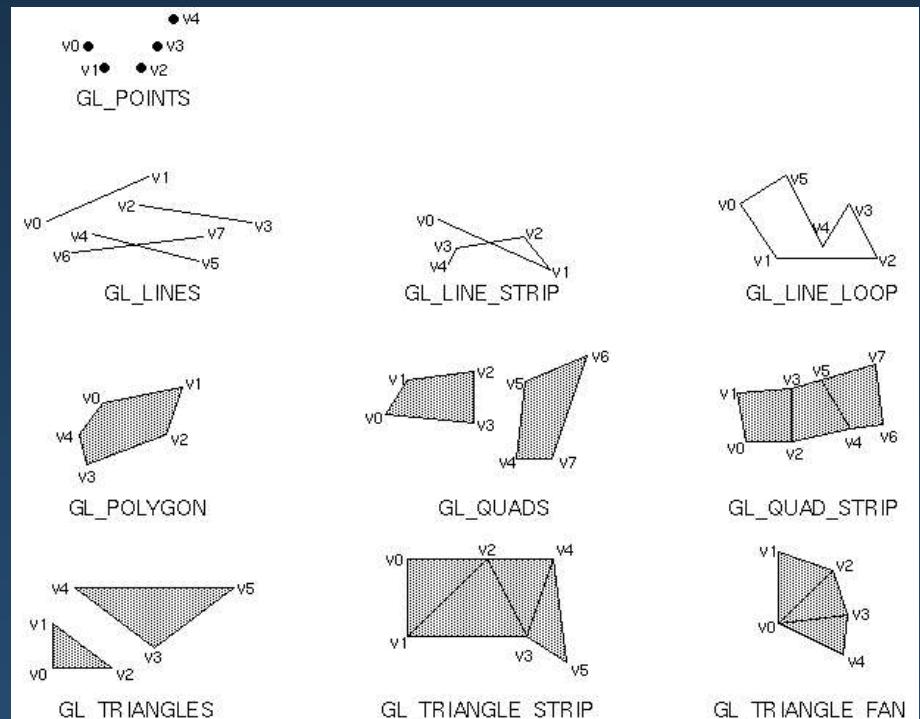
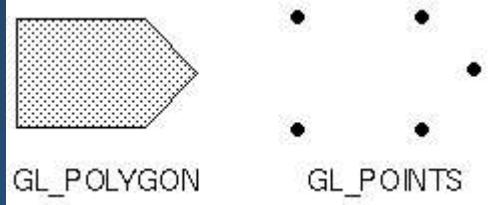
Petra Isenberg

Assignment

- Colours
- Selection of iterations -> Input
- Fractals -> Recursion
-
- Font rendering
- Selection of fractal -> Input
- Window resizing -> Perspective
- Zooming -> Camera

OpenGL geometric primitives

- `glBegin(GL_POLYGON);`
- `glVertex2f(0.0, 0.0);`
- `glVertex2f(0.0, 3.0);`
- `glVertex2f(3.0, 3.0);`
- `glVertex2f(4.0, 1.5);`
- `glVertex2f(3.0, 0.0);`
- `glEnd();`



Efficiency

- Combine glBegin calls if possible
- GL_TRIANGLES before GL_POLYGON
- GL_QUADS before GL_POLYGON

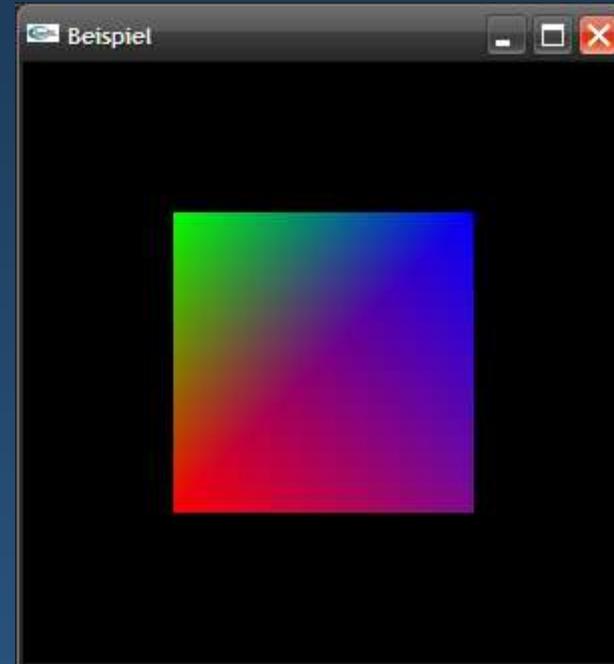
```
- glBegin(GL_LINES);  
- glVertex2f(0.0, 0.0);  
- glVertex2f(0.0, 3.0);  
- glEnd();  
- glBegin(GL_LINES);  
- glVertex2f(3.0, 3.0);  
- glVertex2f(4.0, 1.5);  
- glEnd();
```



```
- glBegin(GL_LINES);  
- glVertex2f(0.0, 0.0);  
- glVertex2f(0.0, 3.0);  
- glVertex2f(3.0, 3.0);  
- glVertex2f(4.0, 1.5);  
- glEnd();
```

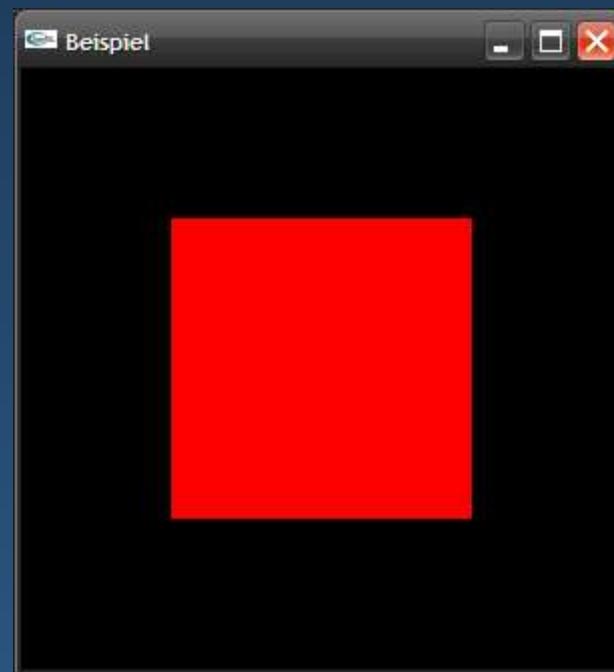
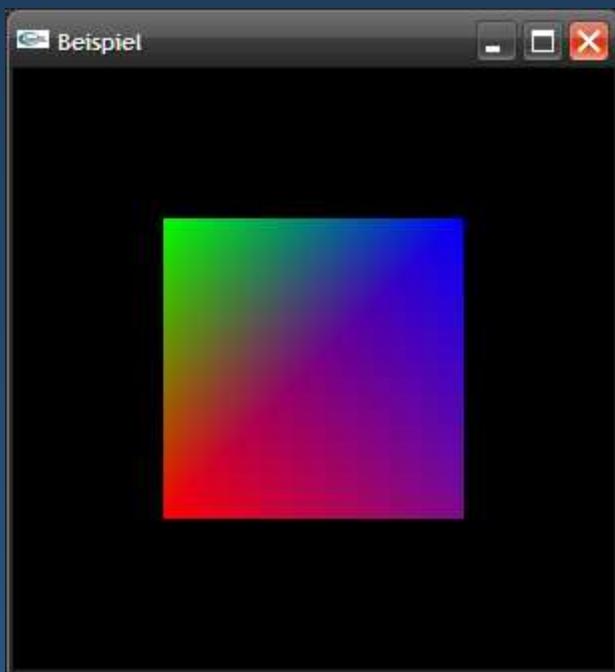
- `glColor3f (1.0, 0.0, 0.0);`
- `glBegin (GL_POINTS);`
- `glVertex2f (1.0,0.0);`
- `glEnd ();`
-
- `glBegin(GL_QUADS);`
- `glColor3f(1,0,0);`
- `glVertex2f(-0.5, -0.5);`
- `glColor3f(0,1,0);`
- `glVertex2f(-0.5, 0.5);`
- `glColor3f(0,0,1);`
- `glVertex2f(0.5, 0.5);`
- `glColor3f(0.5,0.04,0.57);`
- `glVertex2f(0.5, -0.5);`
- `glEnd();`

Colour



Shading Model

- glShadeModel (GL_SMOOTH); -> default
- glShadeModel (GL_FLAT);
- --> usually specify only once (init function)



Review

- Some linear algebra

Review

- An example fractal
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