

Interaction

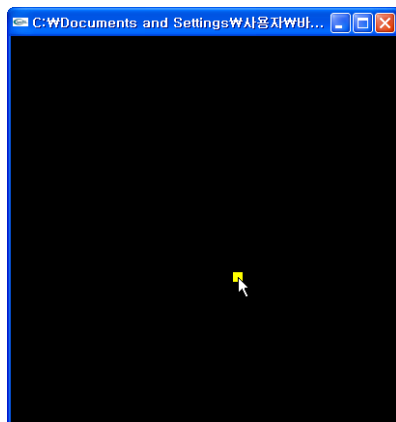
321190
2009년 봄학기
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박경신

Overview

- GLUT Devices & Event-driven programming
 - 마우스, 키보드, 메뉴, 조이스틱, 태블릿, ..
- 디스플레이 리스트 (Display lists)
 - 유지모드 그래픽스 (Retained mode graphics) 방식
- 지적 (Picking)
 - 화면상의 한 객체를 사용자가 식별 할 수 있도록 하는 입력연산

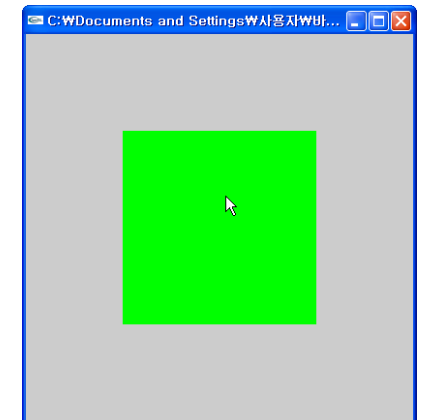
Mouse

- Draw a moving square by a mouse point



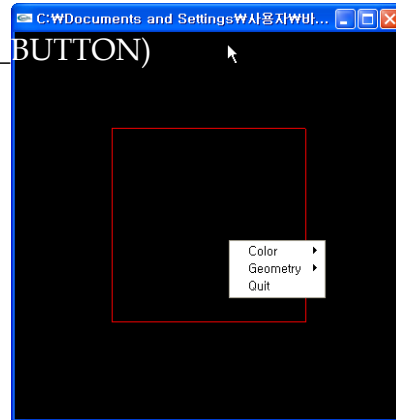
Keyboard

- Draw a solid colored square
 - Black, red, green, blue, magenta, cyan, yellow, white
- KeyboardFunc
 - Red by r-key
 - Green by g-key
 - Blue by b-key
- KeyboardUpFunc
 - Reset color

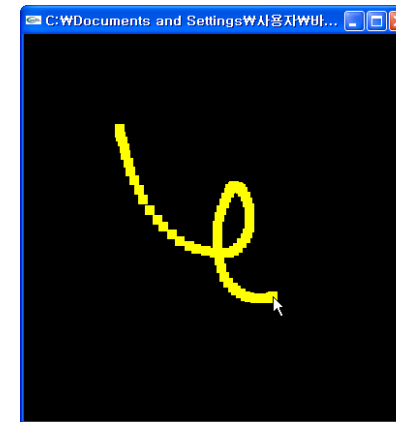


Menu

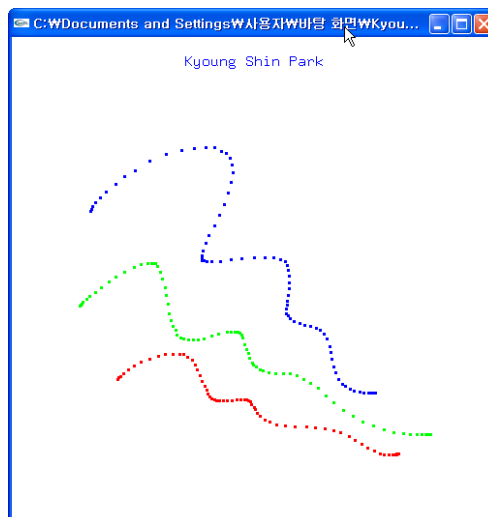
- Menu (LEFT_MOUSE_BUTTON)
 - Color - red, green, blue
 - Geometry - Points, Lines, Line loop, Quads
 - Quit
- Menu (RIGHT_MOUSE_BUTTON)
 - Exit



Paint

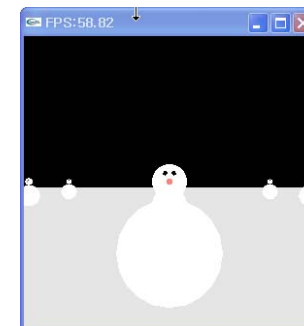
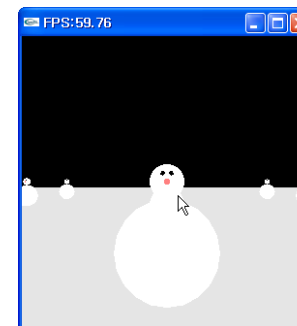


Scribble



Display Lists

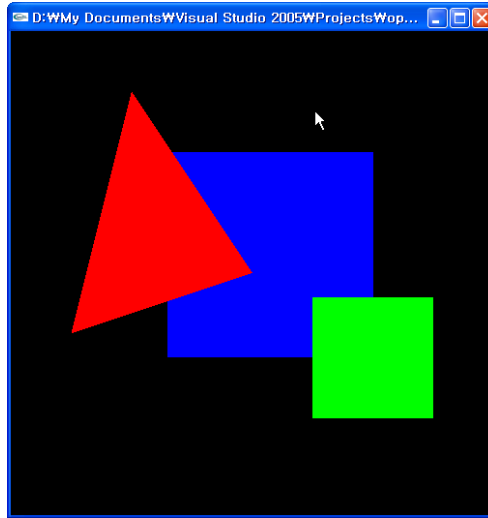
- Draw snowmen with DL
- Draw snowmen without DL



Picking

□ Picking an object

- Selection mode
- Bounding box
- Back buffer



Lab

□ 키보드입력에 따라 사각형이 움직이는 프로그램을 구현하라

- keyboard.cpp 예제에서 시작하도록 한다.

- `const float SCREEN_XMIN = -2.0;`
- `const float SCREEN_XMAX = 2.0;`
- `const float SCREEN_YMIN = -2.0;`
- `const float SCREEN_YMAX = 2.0;`
- `gluOrtho2D(SCREEN_XMIN, ...)`
- `float g_r=0.0, g_g=0.0, g_b=0.0;`
- `float g_x=0.0, g_y=0.0;`

- `void drawColorRectangle(float x, float y, float r, float g, float b)` 작성
- 키보드 'Left/Right/Up/Down-arrow-key'를 누르면, 프로그램의 사각형이 좌우상하로 움직이도록 한다.

- `glutSpecialFunc(specialkey);` 추가
- `void specialkey(int key, int x, int y)` 작성

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OpenGL Tutorials

□ OpenGL display lists tutorial

- <http://www.lighthouse3d.com/opengl/displaylists/>
- <http://nehe.gamedev.net/data/lessons/lesson.asp?lesson=12>

□ OPENGL picking tutorial

- <http://www.lighthouse3d.com/opengl/picking/>
- <http://nehe.gamedev.net/data/lessons/lesson.asp?lesson=32>