

Display lists

- OpenGL-managed data structure that stores commands for later execution
 - Can include commands to set state as well as commands to draw geometry
 - Stored on the server side and can be processed later with *glCallList* or *glCallLists*
 - Definition through *glNewList* and *glEndList*
 - All the commands issued between those two calls become part of the display list
 - Certain OpenGL commands are not allowed within display lists

Display lists

- Object creation:

```
GLuint glGenLists( GLsizei s );
```

- Creates a sequence of *s* unused display list identifiers and marks them as used
- It returns the first identifier in the sequence

Display lists

- Object deletion:

```
void glDeleteLists(GLuint list,  
                  GLsizei range );
```

– deletes the sequence of range identifiers starting at list

- Query:

```
GLboolean glIsList( GLuint list );
```

– returns GL_TRUE if list is an existing display list

Display lists

- Example. List Creation:

```
// Obtain identifier
listID = glGenLists( 1 );

// Build list
glNewList( listID, GL_COMPILE );
glBegin( GL_TRIANGLES );
glVertex3fv( &data[0] );
glVertex3fv( &data[3] );
glVertex3fv( &data[6] );
glEnd();
glEndList();
```

Display lists

- Example. Rendering:

```
// Render
glClear( GL_COLOR_BUFFER_BIT );

// Modeling transform

glLoadIdentity();
glTranslatef( 0.f, 0.f, -4.f );

// Draw the geometry
glCallList( listID );
```

Display lists

- Example. Deleting:

```
// Clear
```

```
glDeleteLists( listID, 1 );
```