

Homework 1 - Readings Ch1 & Ch2

1. Define OpenGL, OpenGL ES and WebGL. Describe their relationship.

OpenGL was the original Graphics library that has various features expansions, with each expansion there was a subset specific versions of OpenGL named OpenGL ES, but later versions OpenGL ES included Shader Programming and Function in order to create custom shaders. WebGL was also based of OpenGL ES 2.0 as the creators aimed for WebGL to be a graphic library tha can be used easily.

2. What is the difference in the software architecture of a webpage and a webpage using WebGL. Describe all components involved in the two cases.

Traditional Web-pages can be created with just HTML and JavaScript, while with the use of WebGL the Web-page will need to add the additional language of GLSL ES. Where though GLSL ES is comprised of JS, it will only need HTML files and JS to work. So while both will work very similarly, the key differences is the with WebGL the Software Architecture will be include WebGL and OpenGL ES Libraries and the GLSL ES language.

3. In HTML, what is the <canvas> tag?

The <canvas> tag is built in feature in HTML5 made to display computer graphics dynamically on a web browser.

4. In Javascript, what line of code one writes to retrieve a 2D rendering context?

```
var ctx = canvas.getContext('2d');
```