

# Introduction to Computer Graphics with WebGL

Ed Angel

## HTML and Browsers

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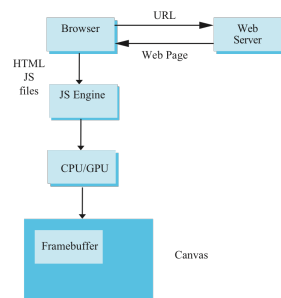
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## Execution in Browser



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## HTML5

- Hypertext Markup Language
- Describes page
  - Consists of tags and attributes
  - Can read in files
- Example

```
<html>  
<script type="text/javascript" src="cube.js"></script>  
</html>
```

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## HTML tags

- `<HTML></HTML>`
- `<HEAD></HEAD>`
- `<BODY></BODY>`
- `<SCRIPT></SCRIPT>`
  - `<script id="vertex-shader" type="x-shader/x-vertex">`
  - `<script type="text/javascript" src="cube.js"></script>`
- `<canvas id="gl-canvas" width="512" height="512">`Oops ... your browser doesn't support the HTML5 canvas element`</canvas>`

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## more HTML tags

- `<P>text</P>`
- `<H1>text</H1>` also `<H2>` `<H3>`.....
- text outside tags copied to page
- `<A HREF = "file"> text </A>`
- `<IMAGE>`
- `<BUTTON>` and other widgets

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## HTML Issues

- Execution model is different
- HTML Canvas element
- Packages and interaction
- Security issues

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## Our Approach

- Only HTML5 and JS
- Separate HTML and JS files
  - HTML file describes page and brings in necessary resources
  - JS file contains graphics part of code including all WebGL function calls
- Embed shader programs in HTML file
  - can also load as separate files

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