

CS 5410

# Intro to Dynamic Loading

...of code and content...



# Dynamic Loading

- <http://www.cross-code.com>

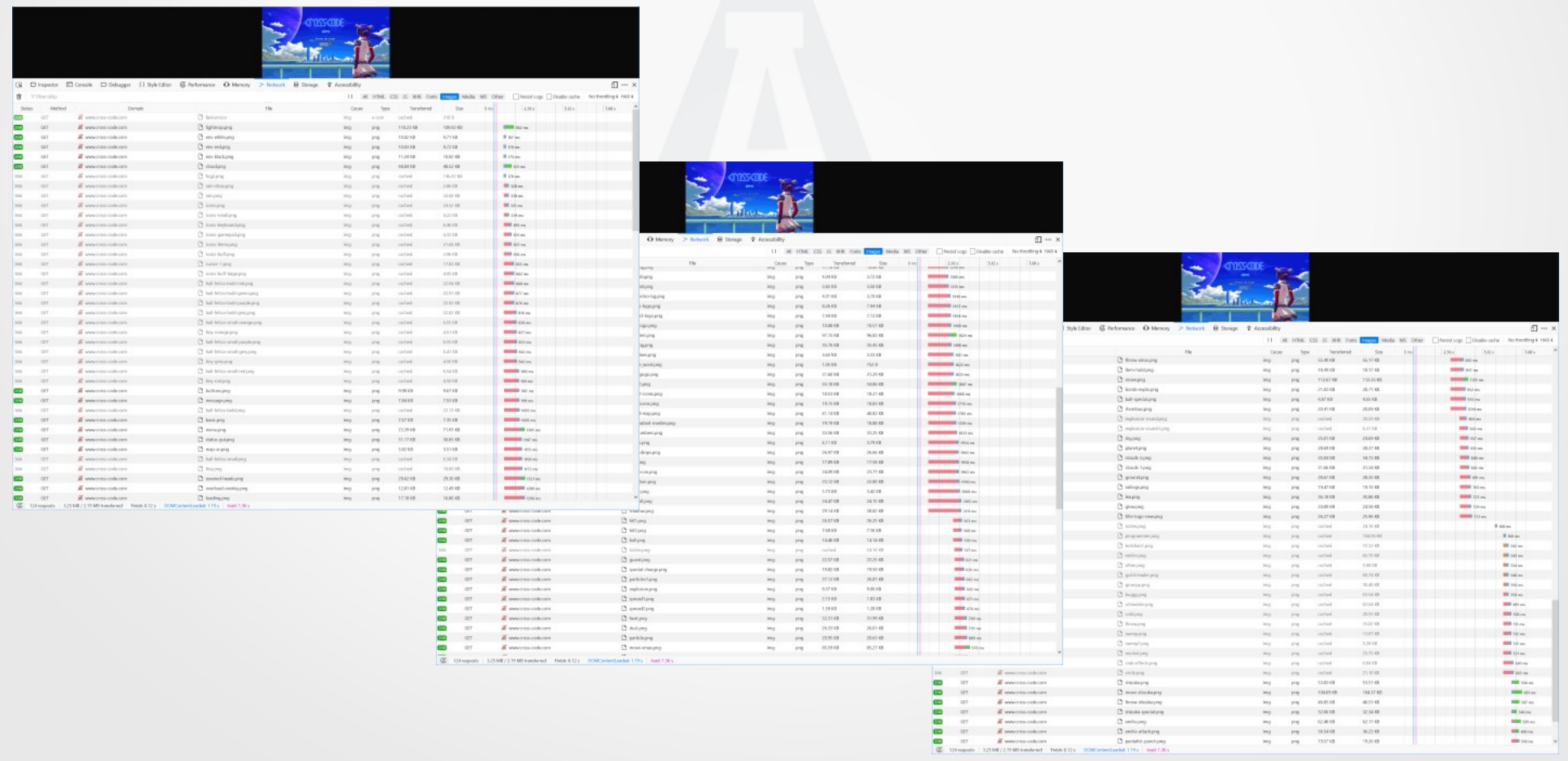


# Dynamic Loading – Fixed It For You

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# Components

- Simple Node.js Server
- RequireJS (<https://requirejs.org/>)
  - Loading of JS code
  - Utilizes HTML5 data-\* attribute
- Custom client code to request content
  - Use low-level XMLHttpRequest()
- Client JS code to request code and content
  - code : JavaScript
  - content : images, audio, text, json, other...

# index.html

```
<!DOCTYPE HTML>
<html lang = "en-US">
<head>
  <meta charset = "UTF-8">
  <title>Dynamic Loading - Simple</title>
</head>
<body>
  <canvas id = "id-canvas" width = "600" height = "600"></canvas>

  <script
    data-main = "scripts/loader"
    src = "scripts/require.js">
  </script>
</body>
</html>
```

# RequireJS – Loading Code

```
require(  
  ['random'],  
  function() {      // on success  
    console.log('random.js loaded');  
    console.log('random number test: ', Random.nextDouble());  
  },  
  function(error) {  // on failure  
    console.log('error: ', error);  
  }  
);
```

# Loading Assets - Custom

```
let xhr = new XMLHttpRequest();

xhr.open('GET', '/asset/image.png', true);
xhr.responseType = 'blob';

xhr.onload = function() {
    ...create appropriate object type, Image or Audio...
}

xhr.send();
```



# Loading Assets - Custom

```
let xhr = new XMLHttpRequest();

xhr.open('GET', '/asset/image.png', true);
xhr.responseType = 'blob';

xhr.onload = function() {
    ...create appropriate object type, Image or Audio...
}

xhr.send();
```

```
loadAsset(
    '/assets/fire.png',
    function(asset) {
        MyGame.assets['fire'] = asset;
    },
    function(error) {
        console.log('error: ', error);
    }
);
```