



ICT Skills Module Overview

Timetable + Schedule

Module Overview

Assignment Sequencing

WEDNESDAY

THURSDAY

FRIDAY

10:45

Webinar



ICT Skills
Webinar
12:15-2:00



12:15

Lab support
throughout
the week

13:45

15:15

Assessment Schedule

<i>reading-week</i>	8
<i>reading-week</i>	15
<i>13</i>	22
<i>14</i>	29
<i>june 15</i>	5
<i>16</i>	12
<i>17</i>	19
<i>18</i>	26

May

June

July/August

September

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13

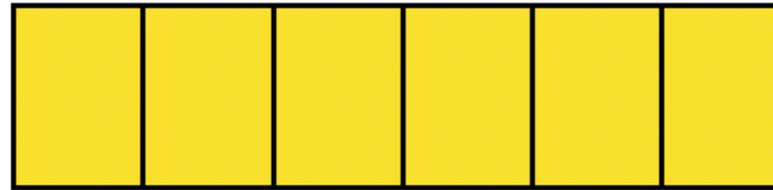
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15

16

17

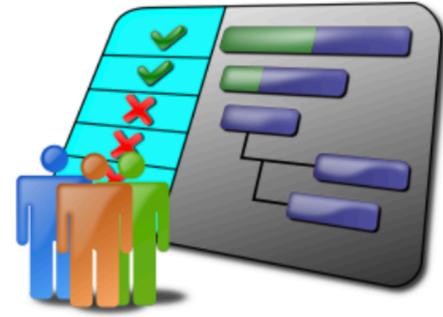
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11

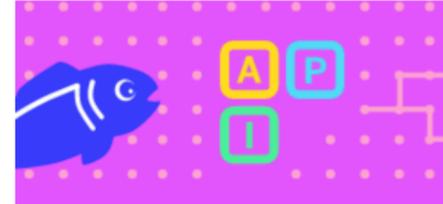
Module Topics

0: Overview & Assignment



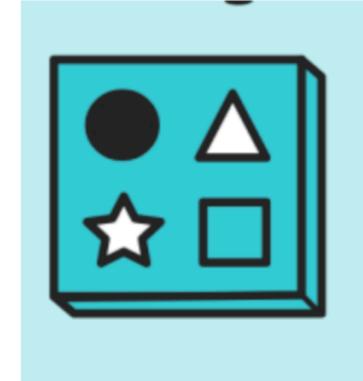
Module Overview + Assignment Specification

1: Introduction to Glitch



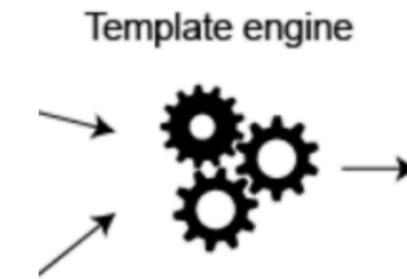
An introduction to the Glitch platform + the very basics of the Javascript Language

2: Controllers & Views



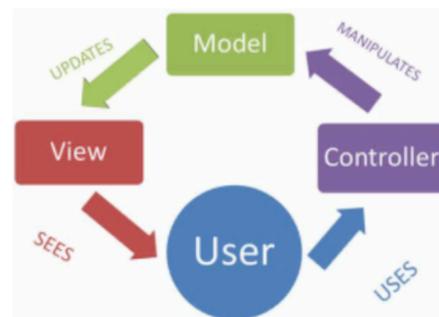
Build your first Glitch app, a simple static playlist web site.

3: Templates & Routes



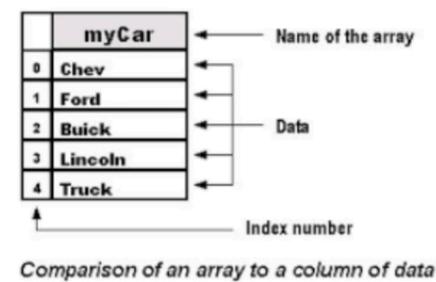
Explore templating in more detail. Enhanced the routing behaviour

4: Model View Controller



Explore MVC as implemented in Playlist

5: JS: Arrays



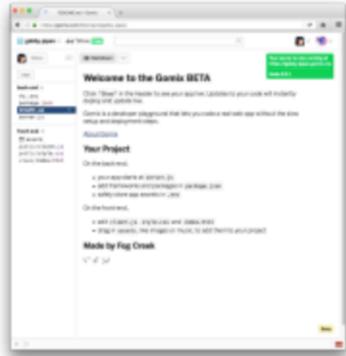
6: Sessions



In order to implement user account management, sessions provide a mechanism for identifying specific users

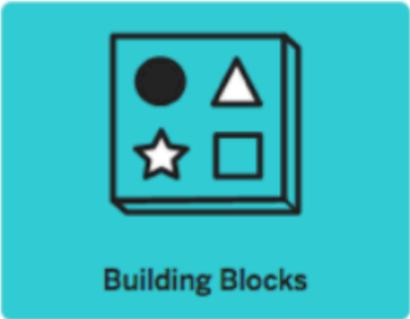
1: Introducing Glitch

Introducing Glitch



What is it, what role it plays, why was it built.

Glitch Tour



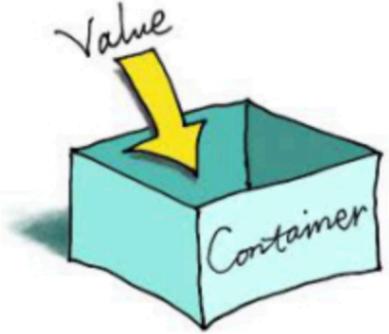
A look at at the components of a glitch project. Also types of project will we build?

JS Introduction



Place javascript in its proper context, and explore its relationship to the browser.

Variables



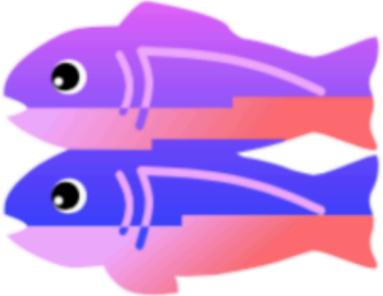
Explore the javascript variables, including the basic types, conversion and usage

Const, Let & Objects



Using const & let. Declaring and using objects.

Lab-1 Glitch Intro



Create, modify and view your first Gomit project.

Lab-2 JS Intro



Background & Tools, Variables & Boolean Logic

Variables & Objects Review



A concise tour of the structure of variables & objects in Javascript

Web App Introduction



Structure of a web app: Front-end Vs Backend. Routers, Models, Views, Controllers

Front-end



Views: Handlebars layouts, partials and templates

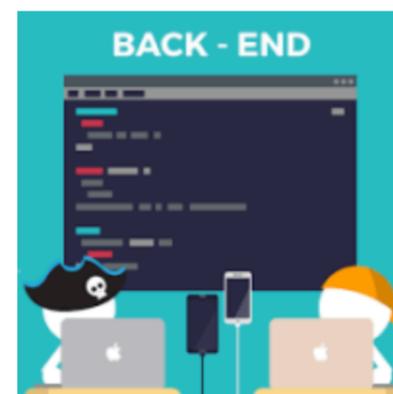
Modules



The backend will use a modular approach, relying on specific mechanism to import/export shared objects

2: Controllers & Views

Back-end



Server, routes + controllers

Lab-3 Playlist 1

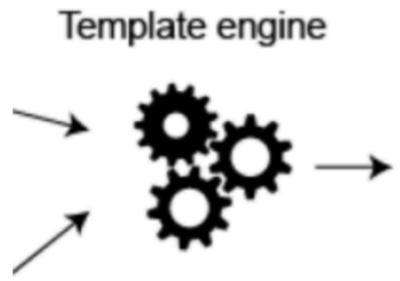


Import and run a new starter project. Extend this project to include multiple 'views'. Explore the handlebars templating library.

3: Templates & Routes

Templates

Template engine



Templates enable dynamic composition of views from layouts, partials and expressions.

Json

```
"playlistCollection": [  
  {  
    "title": "Beethoven Sonatas",  
    "songs": [  
      {  
        "title": "Piano Sonata No. 3",  
        "artist": "Beethoven"  
      },  
      {  
        "title": "Piano Sonata No. 7",  
        "artist": "Beethoven"  
      },  
      {  
        "title": "Piano Sonata No. 10",  
        "artist": "Beethoven"  
      }  
    ]  
  }  
],  
]
```

JSON is notation for representing javascript objects in a simple literal format.

Dashboard

Beethoven Sonatas	
Song	Artist
Piano Sonata No. 2	Beethoven
Piano Sonata No. 7	Beethoven
Piano Sonata No. 10	Beethoven

Beethoven Concertos	
Song	Artist
Piano Concerto No. 0	Beethoven
Piano Concerto No. 4	Beethoven
Piano Concerto No. 6	Beethoven

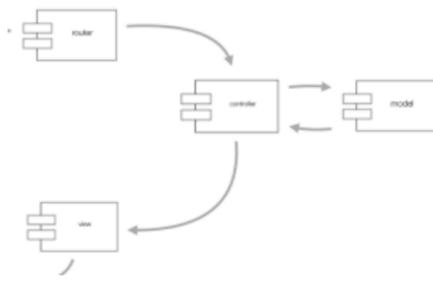
Review the dashboard controller in detail.

Playlist

Beethoven Sonatas	
Song	Artist
Piano Sonata No. 3	Beethoven
Piano Sonata No. 7	Beethoven
Piano Sonata No. 10	Beethoven

Revise the Dashboard to render playlist without their contents. Use a new playlist view renders individual playlists

MVC



Explore the MVC Pattern in action in Playlist 2

Lab-4 Playlist 2



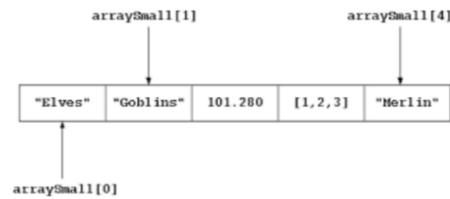
Refactor the dashboard controller to show summary on of the playlists + link to show playlist details.

4: Model View Controller

<h3>Module View Controller</h3> <p>MVC is the guiding principle for the structure of our application.</p>	<h3>Delete Song</h3> <table border="1"><thead><tr><th>Artist</th><th></th></tr></thead><tbody><tr><td>Beethoven</td><td>Delete Song</td></tr><tr><td>Beethoven</td><td>Delete Song</td></tr><tr><td>Beethoven</td><td>Delete Song</td></tr></tbody></table> <p>How to remove a song from the playlist</p>	Artist		Beethoven	Delete Song	Beethoven	Delete Song	Beethoven	Delete Song	<h3>Forms Design</h3> <p>How a form UI is laid out in HTML using Semantic UI</p>	<h3>Form Programming</h3> <p>How to accept user input from a form and process it in a controller</p>
Artist											
Beethoven	Delete Song										
Beethoven	Delete Song										
Beethoven	Delete Song										
	<h3>The Store</h3> <p>The Playlist are ultimately stored in a JSON file. This file is managed by database modules.</p>	<h3>Lab-5 Playlist 3</h3> <p>Enable Songs and Playlists to be added via simple forms.</p>									

5: Javascript Arrays

Arrays: Basics



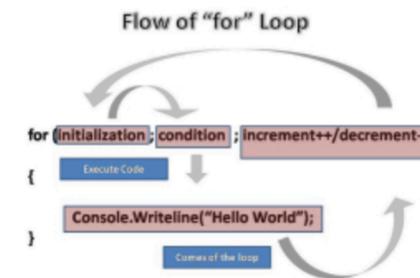
Creating, accessing, adding to and removing from arrays.

Array Methods



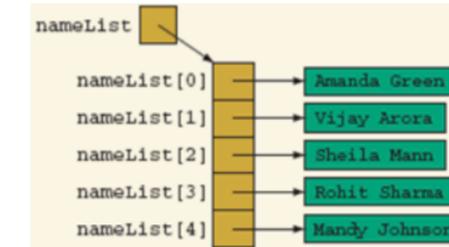
Exploring length, slice, concat, join, indexOf, lastIndexOf

Array Iteration



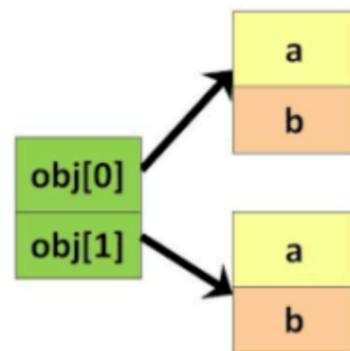
Using for, while and do-while to iterate over an array

Arrays of Strings



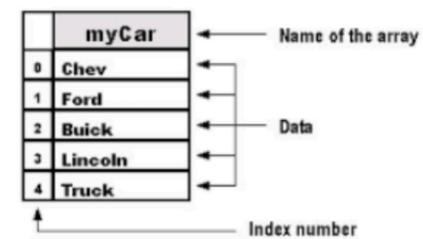
A review of the structure of arrays of Strings

Arrays of Objects



Arrays of more complex data structures, including nested objects.

Lab-6 JS Arrays



Comparison of an array to a column of data

Array Basics, Array Methods & Iteration

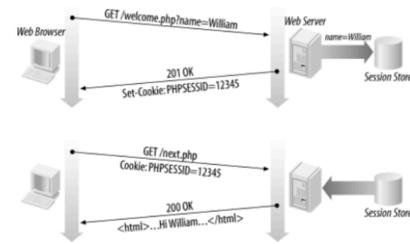
6: Sessions

Sessions Introduction



Keeping track of the currently logged in user is a challenge - as HTTP is, by definition 'stateless'. Hidden form fields, url rewriting and cookies are three common techniques for implementing sessions.

Using Sessions



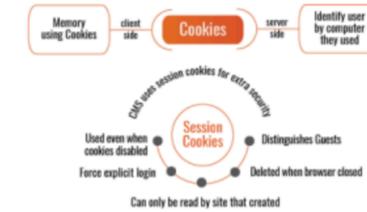
Explore how we need to refactor the application to support sessions

Sessions UX



New forms needed to enable the user to signup / login

Creating Sessions



The API to create, access and destroy sessions.

Lab-7 Playlist 4



Playlist 4

Log-in

Email

Password

Introduce Sessions onto the Playlist application, enabling user accounts and cookie-based authentication.