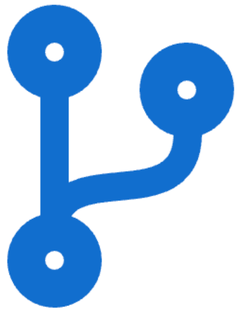
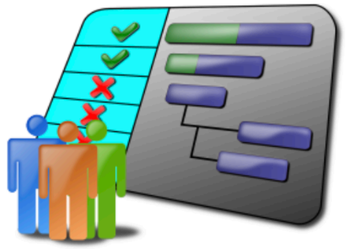


ICT Skills Module Overview

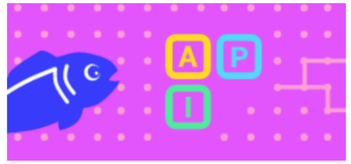
Module Topics

0: Overview & Assignment



Module Overview + Assignment Specification

1: Introduction to Glitch

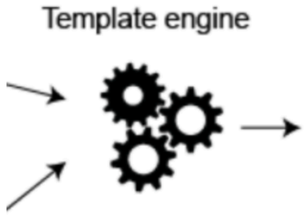


An introduction to the Glitch platform + the very basics of the Javascript Language

2: Controllers & Views

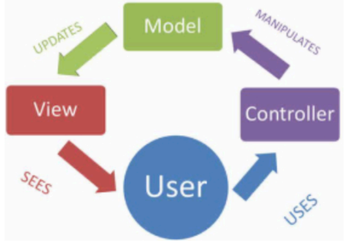
Build your first Glitch app, a simple static playlist web site.

3: Templates & Routes



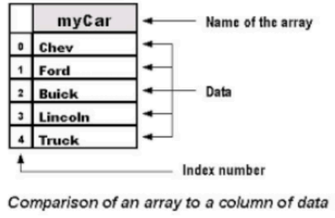
Explore templating in more detail. Enhanced the routing behaviour

4: Model View Controller



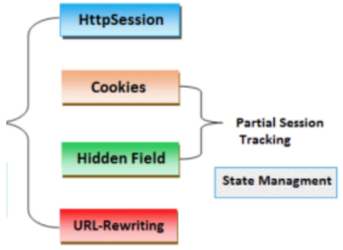
Explore MVC as implemented in Playlist

5: JS: Arrays



Comparison of an array to a column of data

6: Sessions



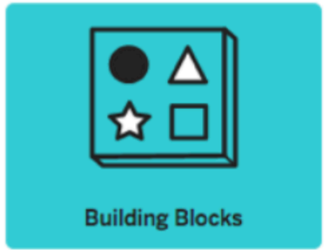
In order to implement user account management, sessions provide a mechanism for identifying specific users

1: Introducing Glitch

Introducing Glitch

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

Glitch Tour

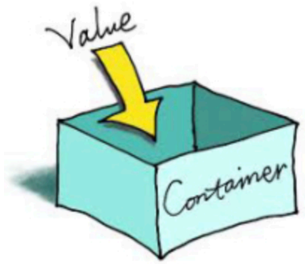


A look at at the components of a glitch project. Also types of project will we build?

JS Introduction

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

Variables

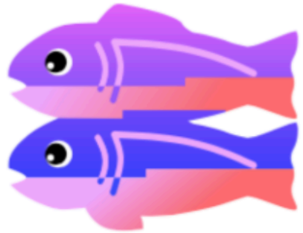


Explore the javascript variables, including the basic types, conversion and usage

Const, Let & Objects

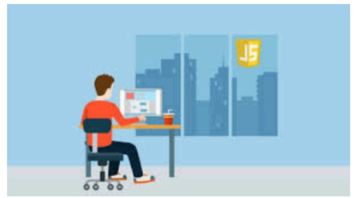
Using const & let. Declaring and using objects.

Lab-1 Glitch Intro



Create, modify and view your first Gomix project.

Lab-2 JS Intro



Background & Tools, Variables & Boolean Logic

2: Javascript Introduction

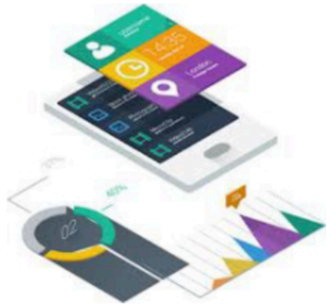
Variables & Objects Review

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

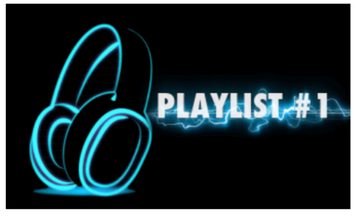
Modules

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

Back-end

Server, routes + controllers

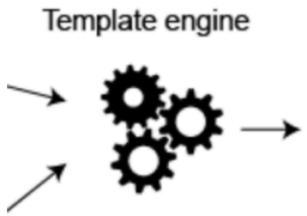
Lab-3 Playlist 1



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

3: Templates & Routes

Templates



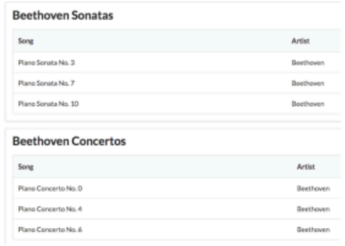
Templates enable dynamic composition of views from layouts, partials and expressions.

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"
      }
    ]
  },
```

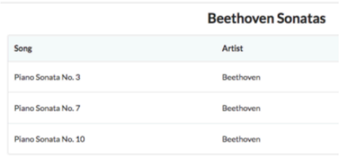
JSON is notatino for representing javascript objects in a simple literal format.

Dashboard



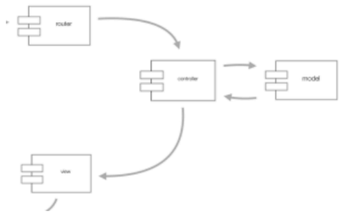
Review thee dashboard controller in detail.

Playlist



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

MVC



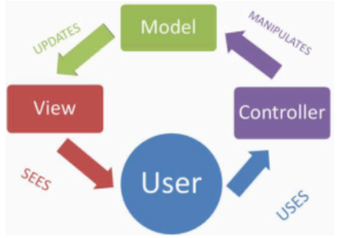
Explore the MVC Pattern in action in Playlist 2

Lab-4 Playlist 2

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

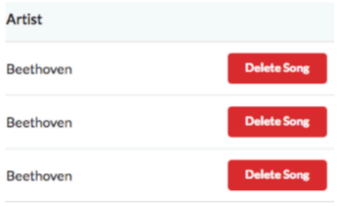
4: Model View Controller

Module View Controller



MVC is the guiding principle for the structure of our application.

Delete Song



How to remove a song from the playlist

Forms Design

How a form UI is laid out in HTML using Semntic UI

Form Programming

How to accept user input from a form and process it in a controller

The Store

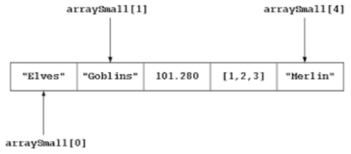
The Playlist are ultimately stored in a JSON file. This file is managed by database modules.

Lab-5 Playlist 3

Enable Songs and Playlists to be added via simple forms.

5: Javascript Arrays

Arrays: Basics

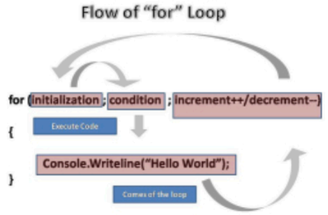


Creating, accessing, adding to and removing from arrays.

Array Methods

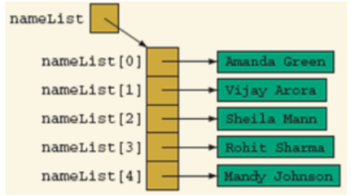
Exploring length, slice, concat, join, indexOf, lastIndexOf

Array Iteration



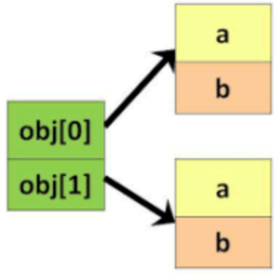
Using for, while and do-while to iterate over an array

Arrays of Strings



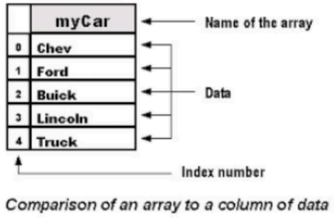
A review of the structure of arrays of Strings

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

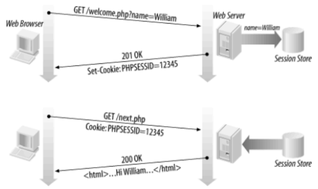
Array Basics, Array Methods & Iteration

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

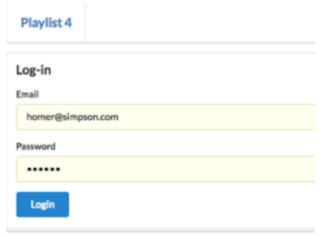
Sessions UX

New forms needed to enable the user to signup / login

Creating Sessions

The API to create, access and destroy sessions.

Lab-7 Playlist 4



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