

Web App Development Review + Roadmap

2017

Assignments



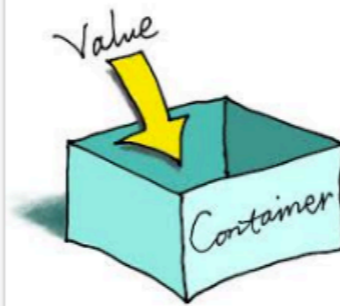
Specifications for Assignments 1 & 2

Gomix: Introduction to Gomix



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

JS: Variables, Boolean Logic & Objects



Primitive JS types. Making decisions using selection statements. Simple objects.

Gomix: Controllers + Views



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

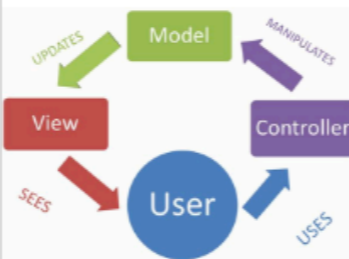
Gomix: Templates + Routes

Template engine



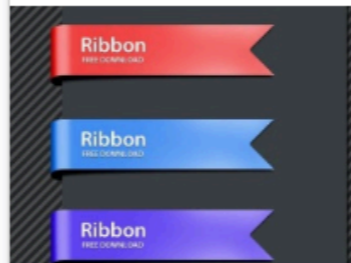
Explore templating in more detail. Enhanced the routing behaviour

Gomix: Model View Controller



Explore MVC as implemented in Playlist

Gomix: Gomark Solution



The Assignment one - Gomark - application

JS: Arrays

	myCar	Name of the array
0	Chev	Data
1	Ford	
2	Buick	
3	Lincoln	
4	Truck	

↑ Index number

Comparison of an array to a column of data

Gomix: Sessions



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

JS: Objects



Review structure of javascript objects - and re-examine the Playlist 4 application in detail.

Gomix: Images



How to build an application that enables a user to upload and display images.

JS: Functions & Nested Objects



Assignments

Assignment 1 



Assignment 1 specification.

The card for Assignment 1 features a white background with a light gray diagonal line pattern. On the left, there is a blue icon of a book with a white bookmark. To the right of the book is a tilted white document with a black border and the words "Home-work" written in blue cursive script.

Assignment 2 



Assignment 2 specification.

The card for Assignment 2 has a dark teal background. It displays a network diagram with several circular nodes containing icons of people's faces. These nodes are interconnected by thin white lines. Various other icons, including a house, a car, a key, a lightbulb, and a smartphone, are scattered throughout the network.

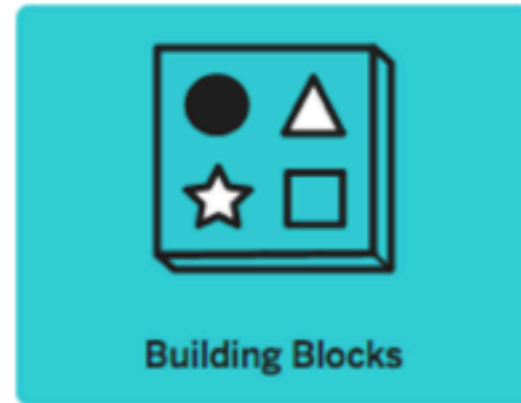
Introduction to ~~Gomix~~ Glitch

Introducing Gomix



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

Gomix Tour



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

Gomix Features



The options available in a Gomix project + a an overview of the community projects

JS Introduction



JavaScript

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

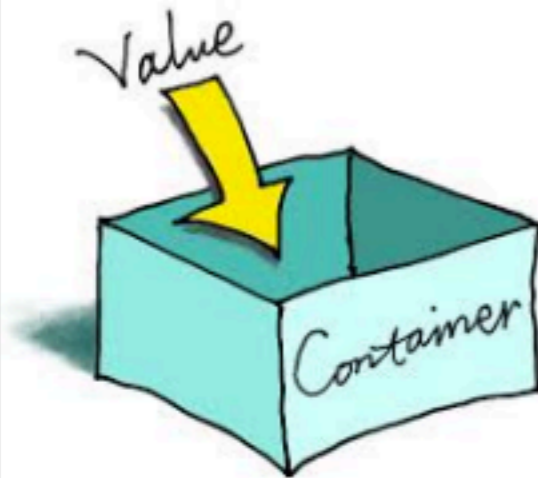
Lab-1 Gomix Intro



Create, modify and view your first Gomix project.

Variables, Boolean Logic & Objects

Variables



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

Boolean Logic



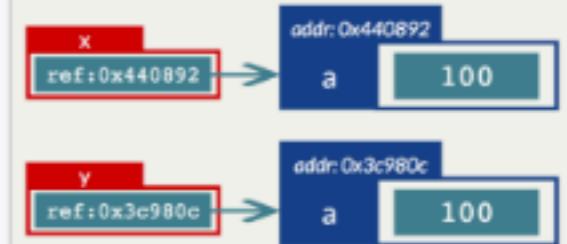
Boolean expressions, operators and selection statements

Const, Let & Objects



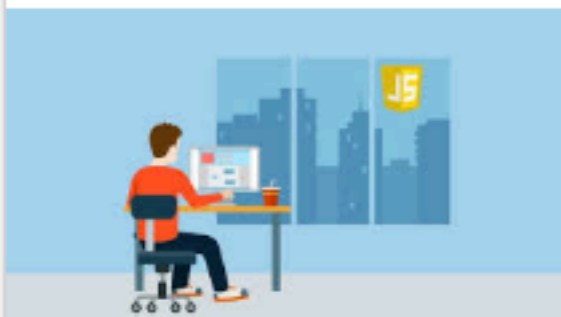
Using const & let. Declaring and using objects.

Variables & Objects Review



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

Lab-2 JS Intro



Background & Tools, Variables & Boolean Logic

Controllers + Views

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



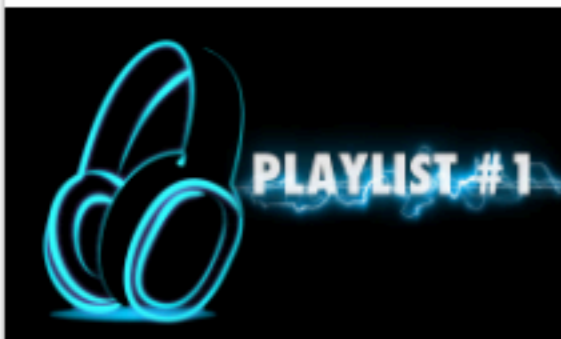
The backend will use a
modular approach, relying
on specific mechanism to
import/export shared
objects

Back-end



Server, routes + controllers

Lab-3 Gomix Playlist 1



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

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. 3	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

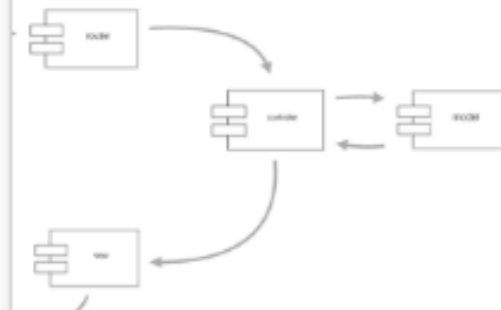


Beethoven Sonatas

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

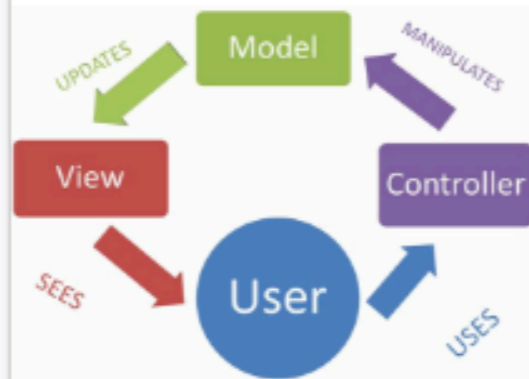
Lab-4 Gomix Playlist 2



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

Model View Controller

Module View Controller



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

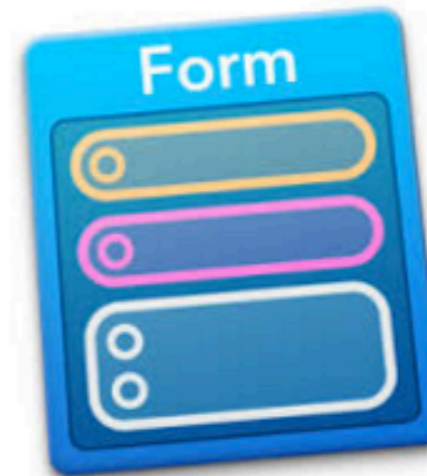
Delete Song



Artist	
Beethoven	Delete Song
Beethoven	Delete Song
Beethoven	Delete Song

How to remove a song from the playlist

Forms Design



How a form UI is laid out in HTML using Semantic 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 Gomix Playlist 3



Enable Songs and Playlists to be added via simple forms.

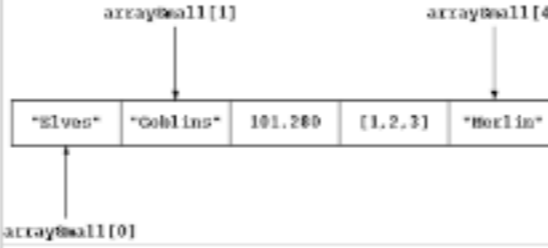
Gomark Solution

Gomark V1




A worked solution to gomark V1

Arrays: Basics



Creating, accessing, adding to and removing from arrays.

Lab-gomark-1



Implement version 1 of the Gomark assignment.

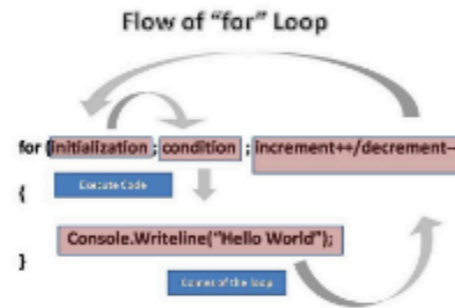
Arrays

Array Methods



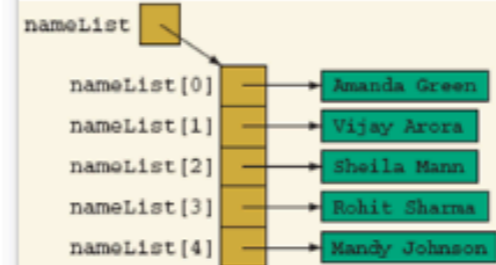
Exploring length, slice, concat, join, indexOf, lastIndexOf

Array Iteration



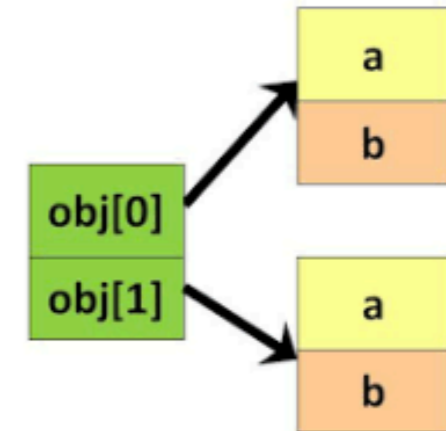
Using for, while and do-while to iterate over an array

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



	myCar	Name of the array
0	Chev	Data
1	Ford	
2	Buick	
3	Lincoln	
4	Truck	

↑ Index number

Comparison of an array to a column of data

Array Basics, Array Methods & Iteration

Lab-gomark-2



Github Repo

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



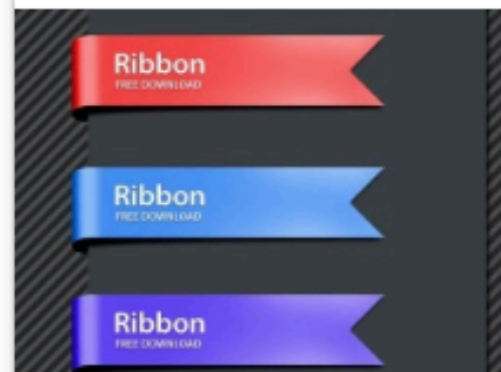
New forms needed to enable the user to signup / login

Creating Sessions



The API to create, access and destroy sessions.

Gomark V3



Gomark V3 Review

Lab-gomark-3



Final version of the Assignment 1 Gomark application

Lab-8 Gomix Sessions



Playlist 4

Log-in

Email

homer@simpson.com

Password

Login

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

Objects

JS Objects



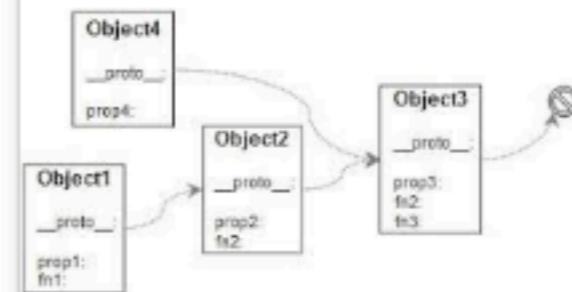
Review the structure, syntax and access rules for Javascript Objects

Playlist 4 Review



Walk through the Playlist 4 application in detail

Lab-9 JS Objects



Object basics and Object iteration.

Images

Clouinary API



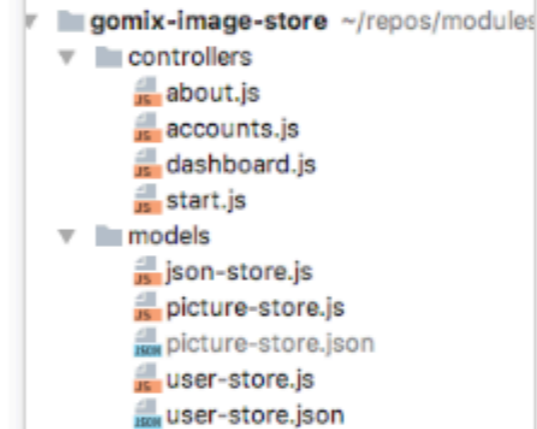
The fundamentals of the clouinary service + API

Picture-store App



A review of the UX of the picture-store app

Picture-store Implementation



The gomix app implementation.

Lab-10a Clouinary Setup



Sign up and configure a Clouinary Account.

Lab-10b gomix-picture-store



back-end +

```
⌘ .env
.gitignore
.jscsrc
controllers/about.js
controllers/accounts.js
controllers/dashboard.js
controllers/start.js
models/json-store.js
models/picture-store.js
models/user-store.js
models/user-store.json
package.json
README.md
routes.js
server.js
utils/logger.js
```

Build an application the can facilitate upload and display of images in Gomix.

Functions & Nested Objects

Functions



Function return values, scope and structure

Nested Objects



How more complex data structures can be constructed.

Review + Roadmap



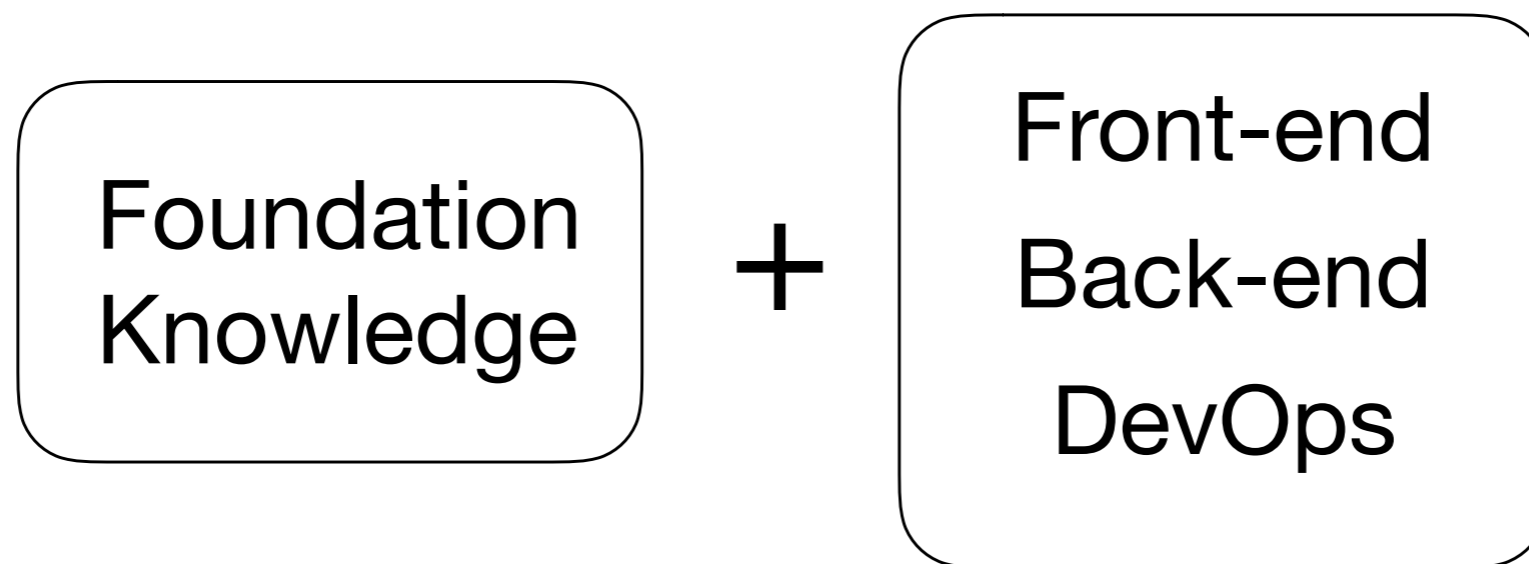
A review of the course and a peek into the future of your learning

Lab-11 Functions



Functions basics, function parameters & scope

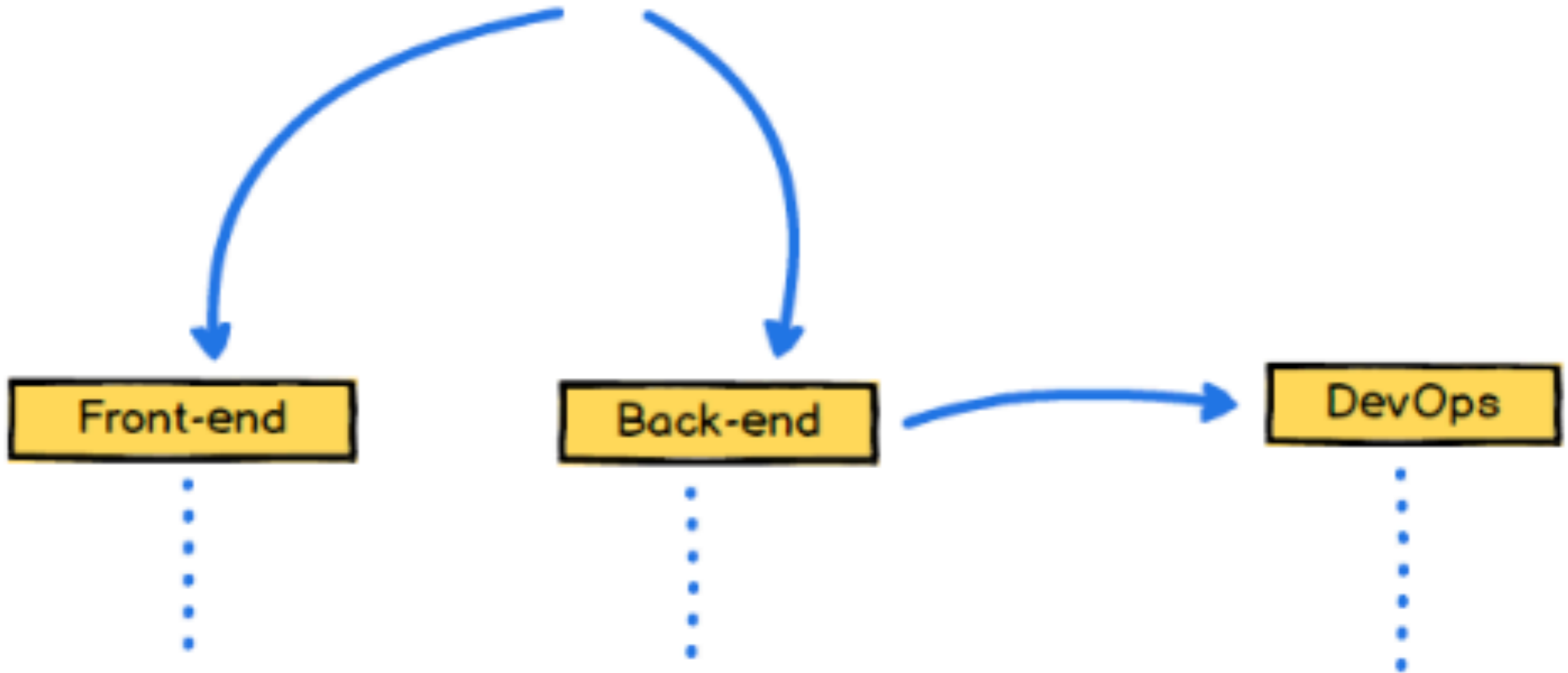
A roadmap to becoming a web developer in 2017



Foundation Knowledge

Git - Version Control
SSH
HTTP/HTTPS and APIs
Basic Terminal Usage
Learn to Research
Datastructures & Algorithms
Character Encodings
Github
Create your profile. Explore the relevant opensource projects. Make your habit to look under the hood for the projects you like. Create and contribute to opensource projects.

Choose your path



Front-end + Back-end + DevOps == Full Stack

Front-end

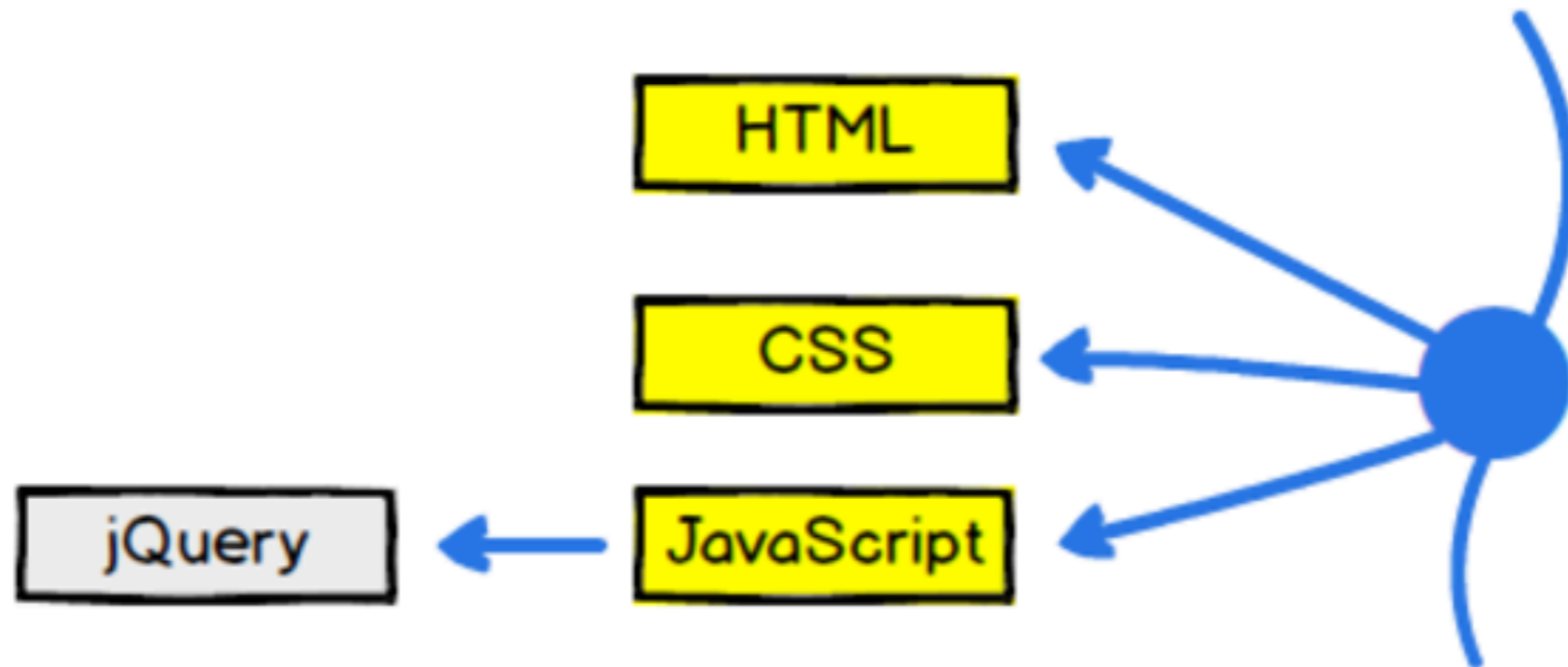
Basics

CSS Frameworks & Processors

JS Client Frameworks + Tools

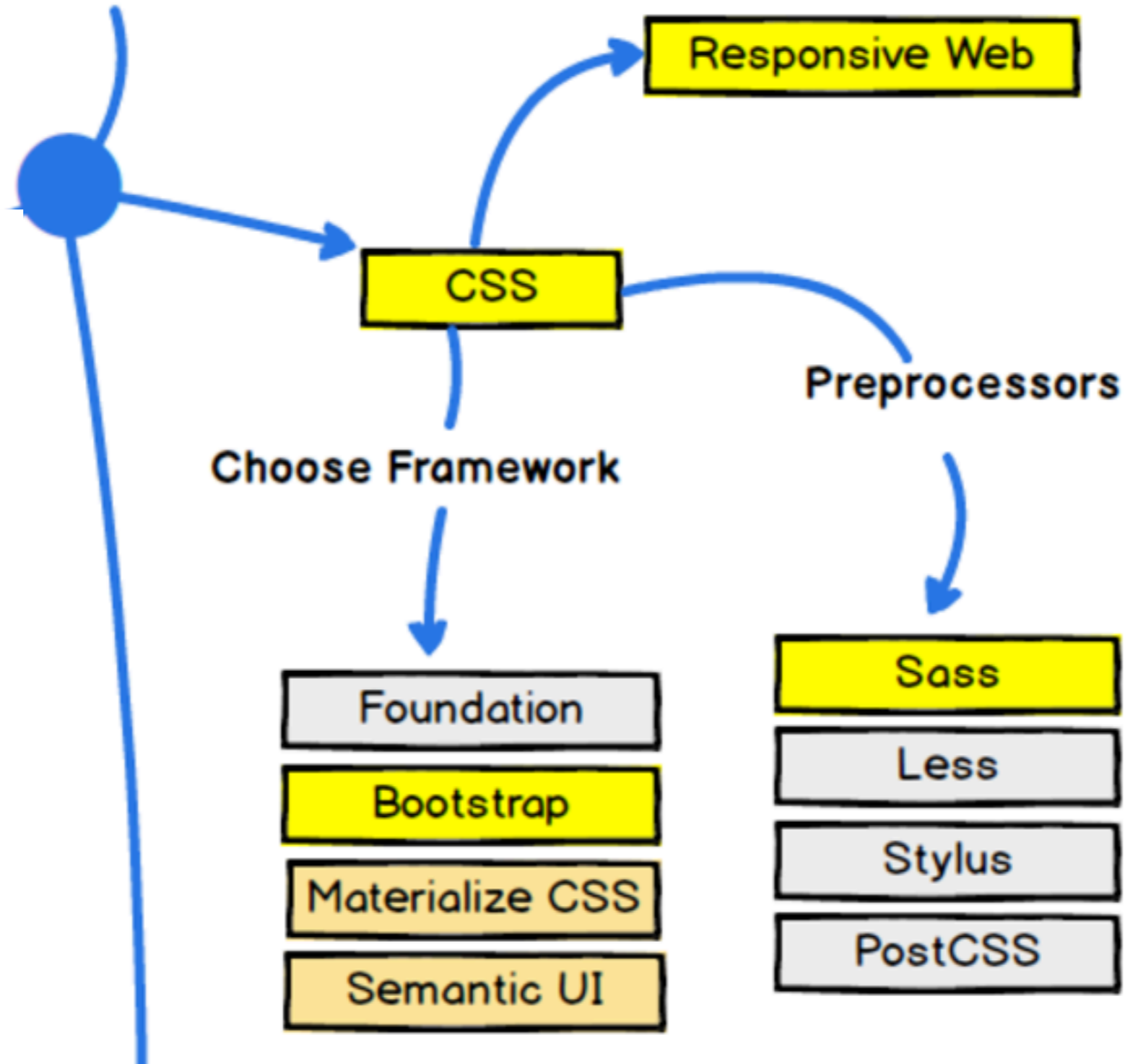
CSS Mastery, Graphics & Visualisation

Front-end: Basics

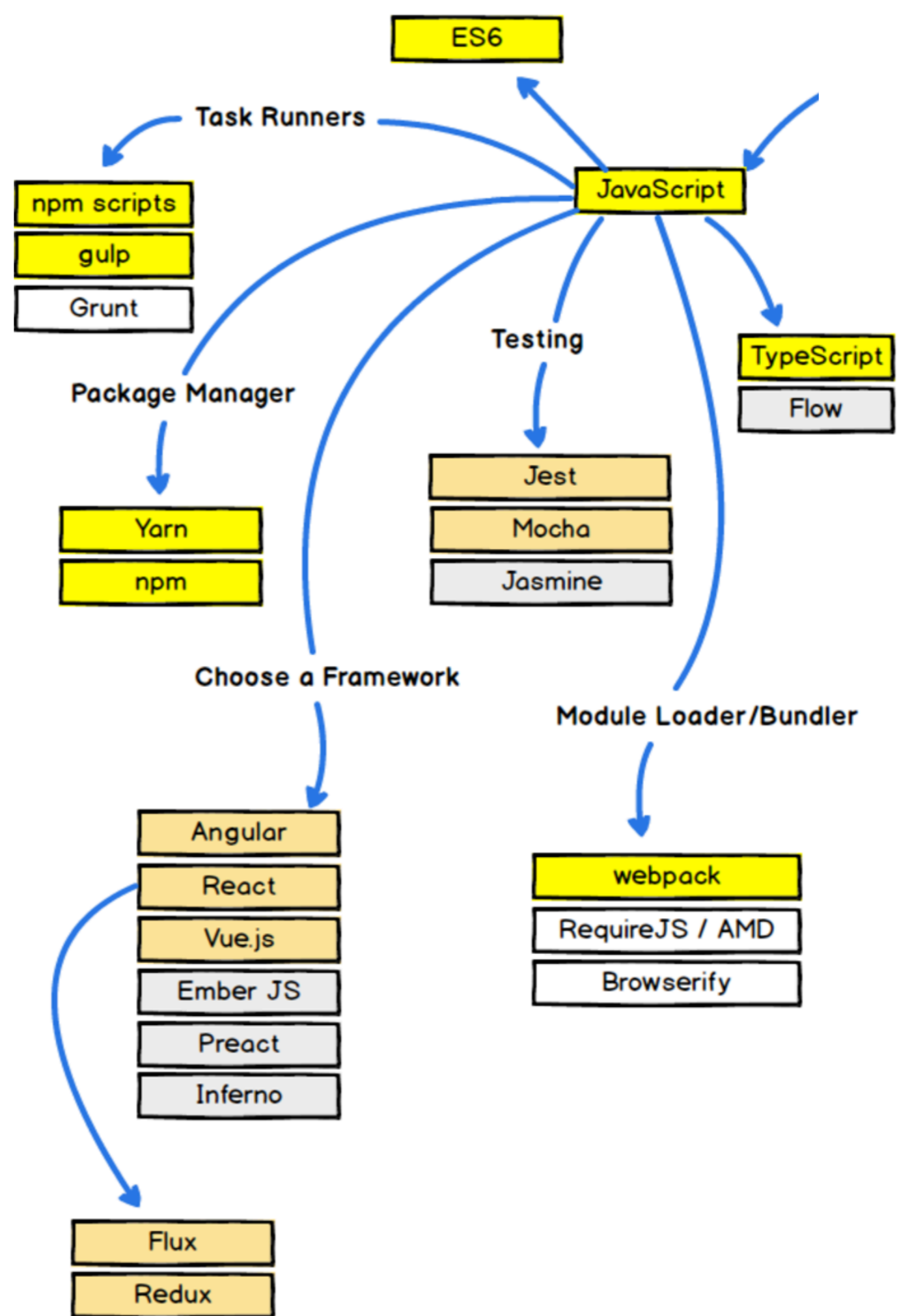


Front-end: CSS Frameworks & Processors

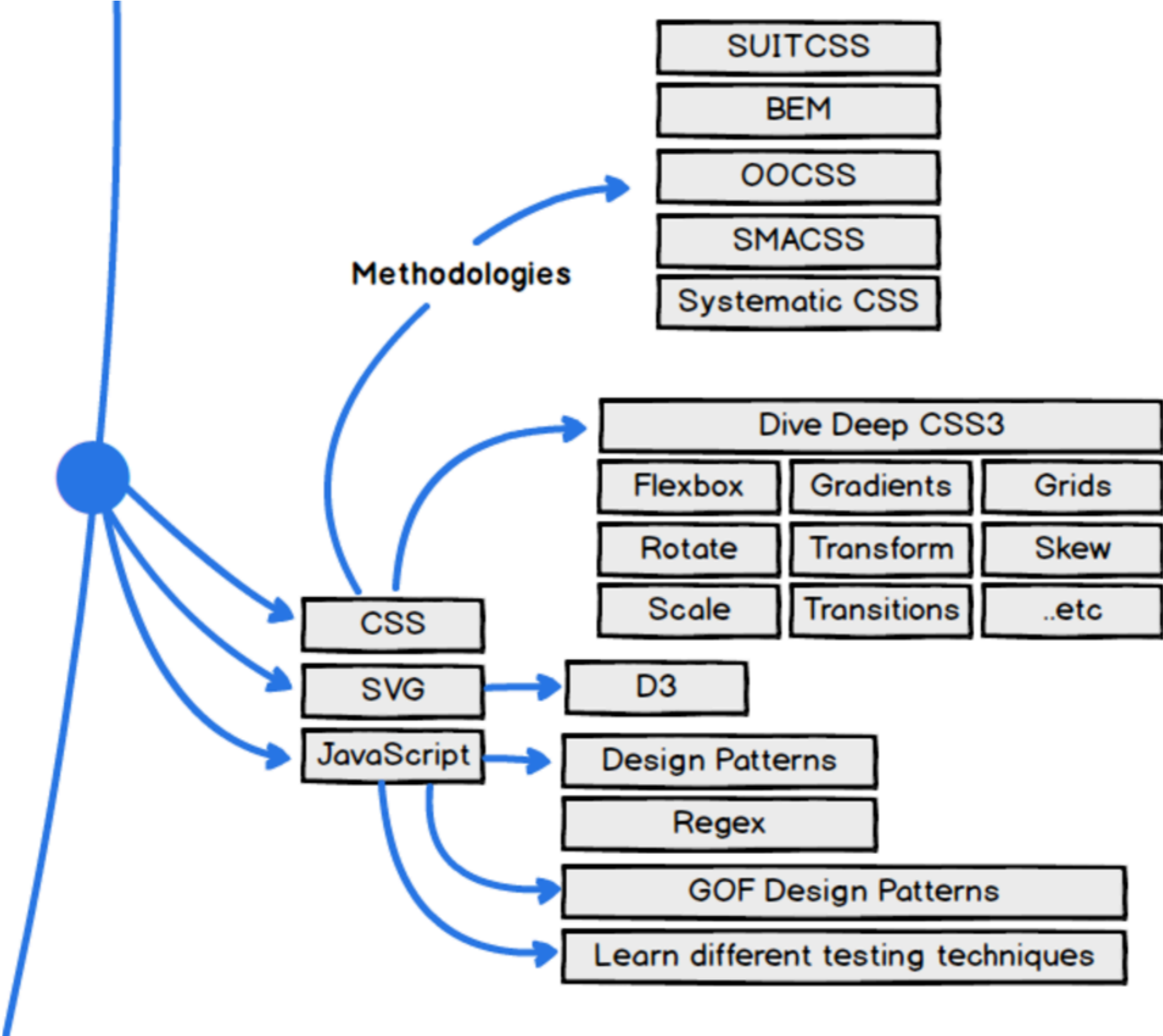
Getting Deeper



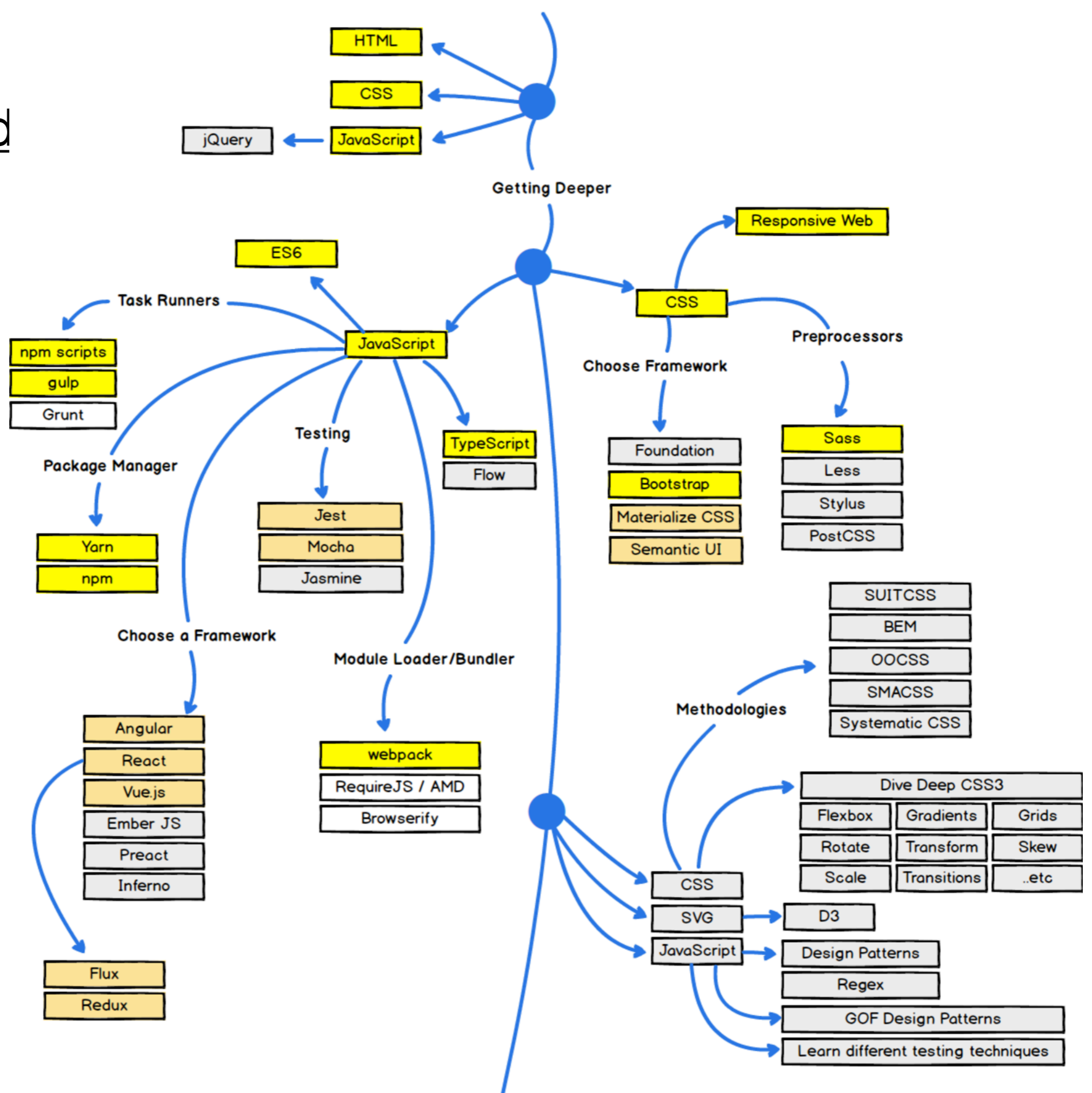
Front-end: JS Client Frameworks, & Tools



Front-end: CSS Mastery, Graphics & Visualisation



Front-end



Back-end

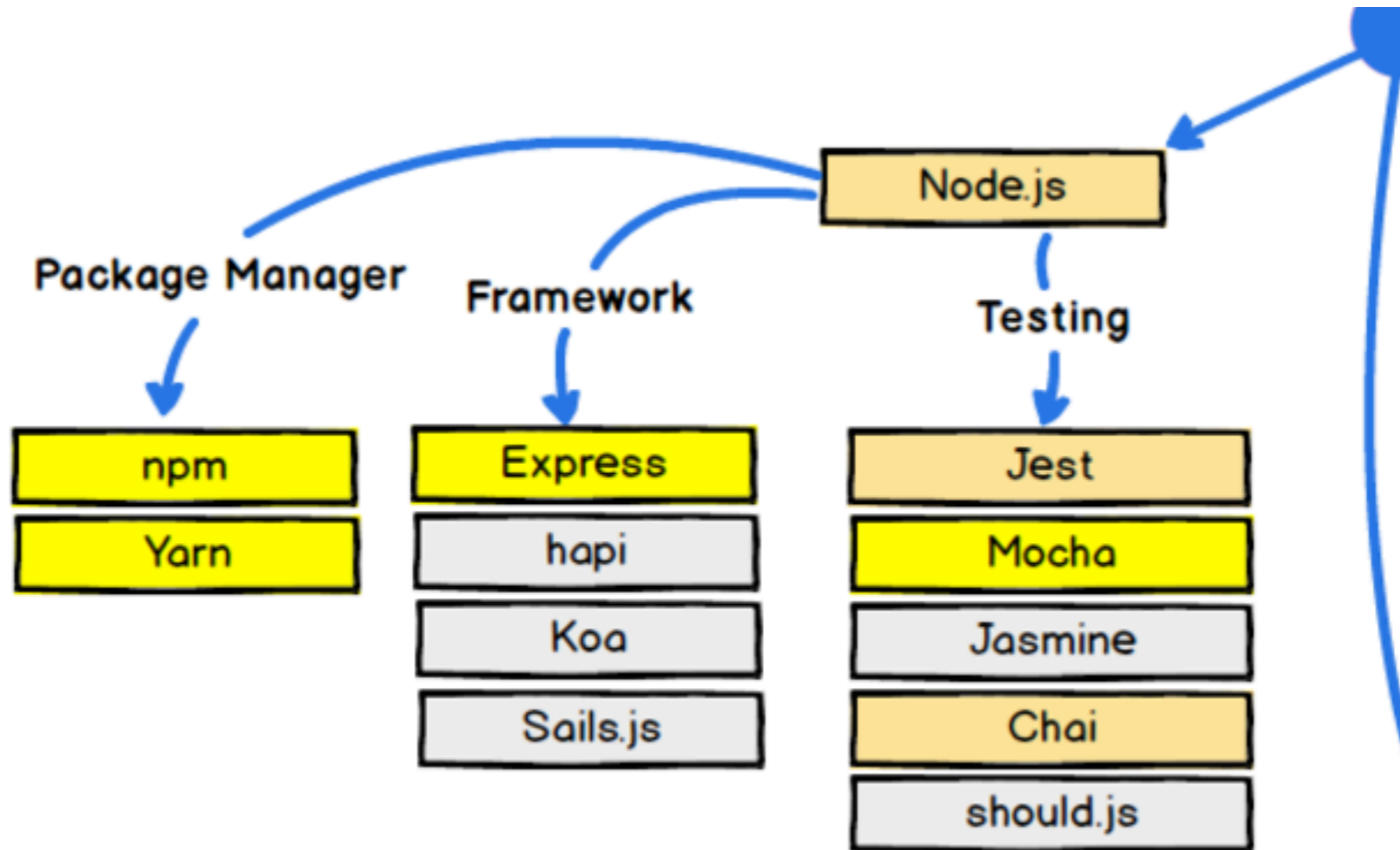
Node.js

Infrastructure + Key Techniques

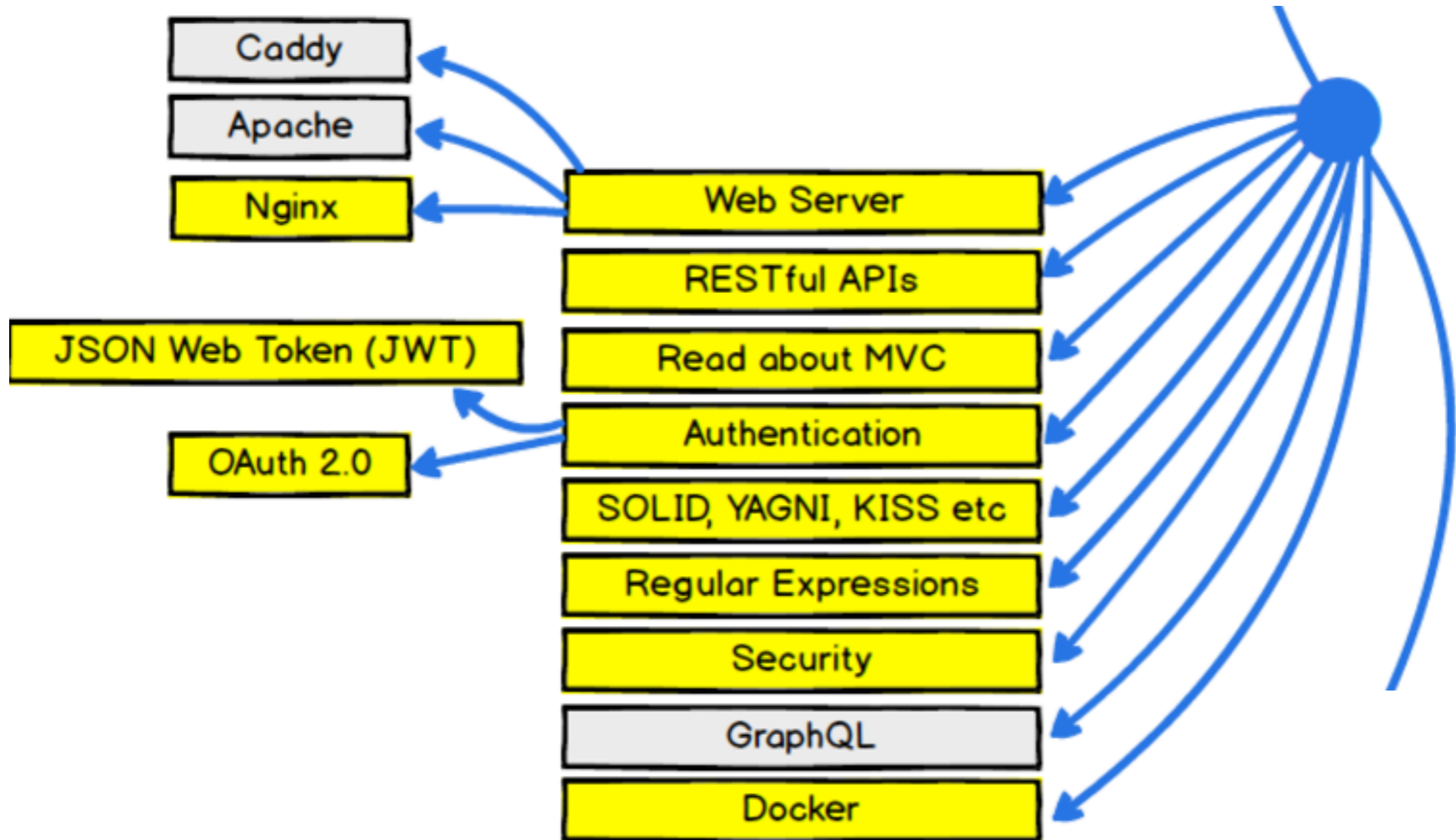
Database

Patterns

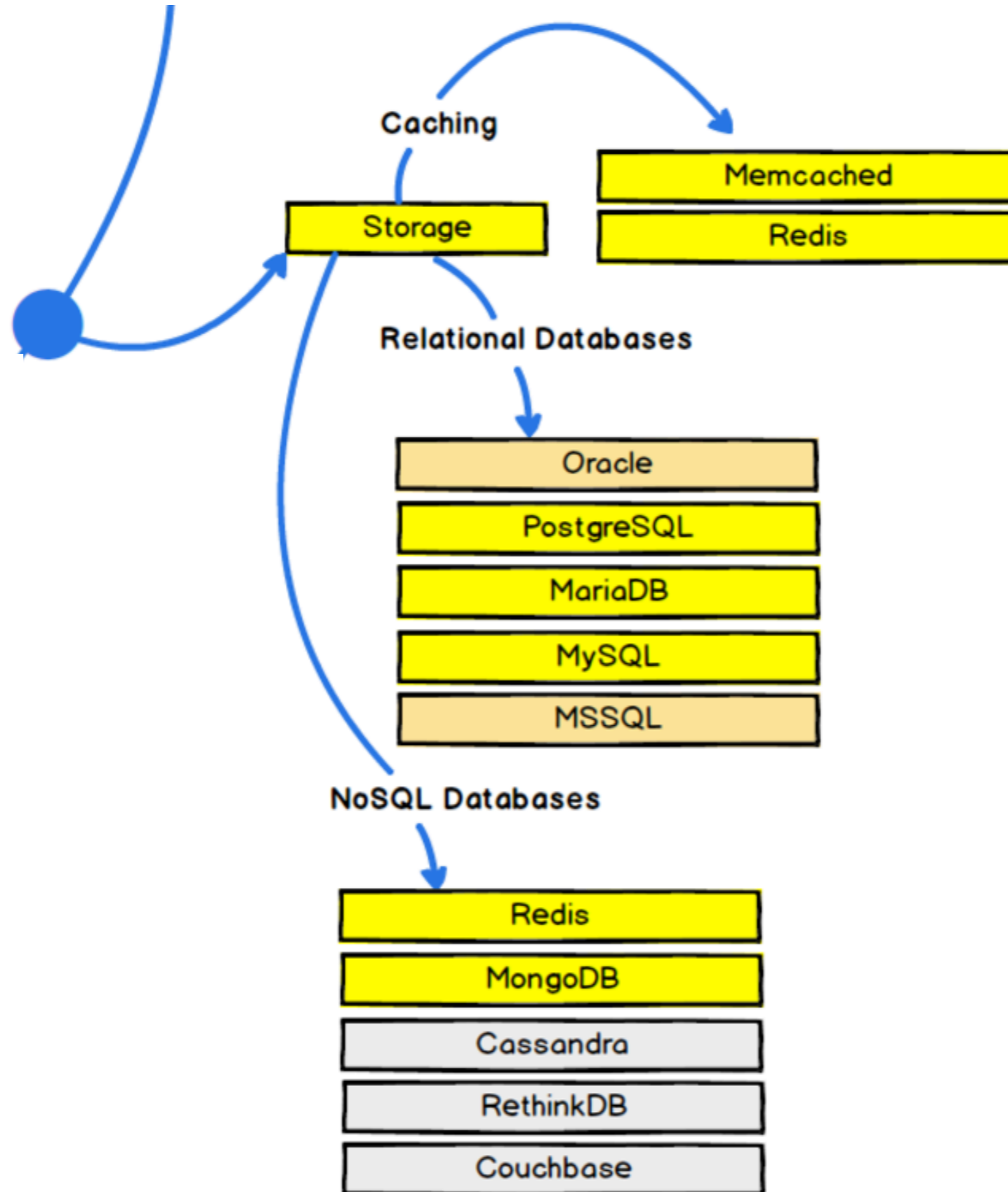
Back-end: Node



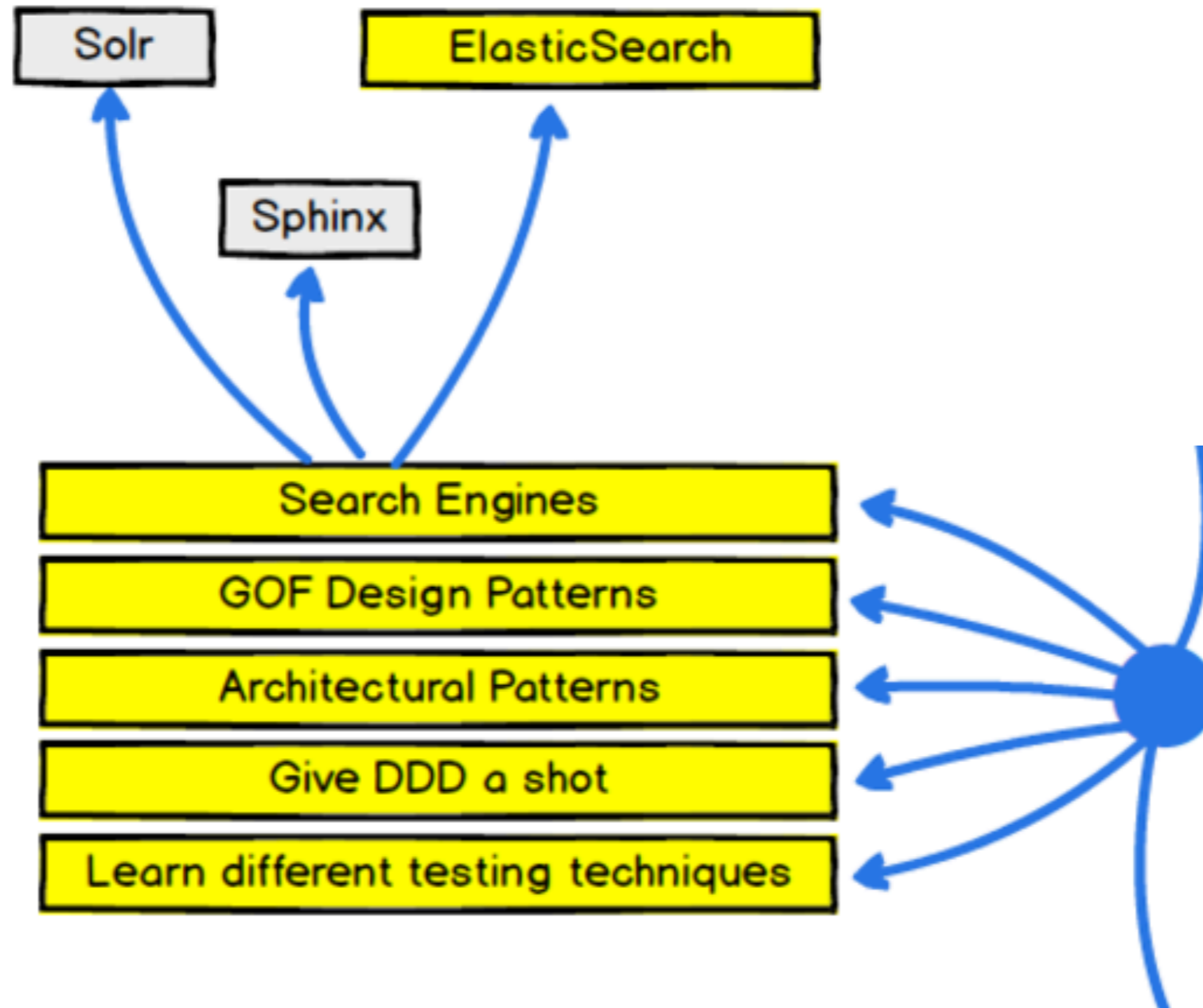
Back-end: Infrastructure + Key Techniques



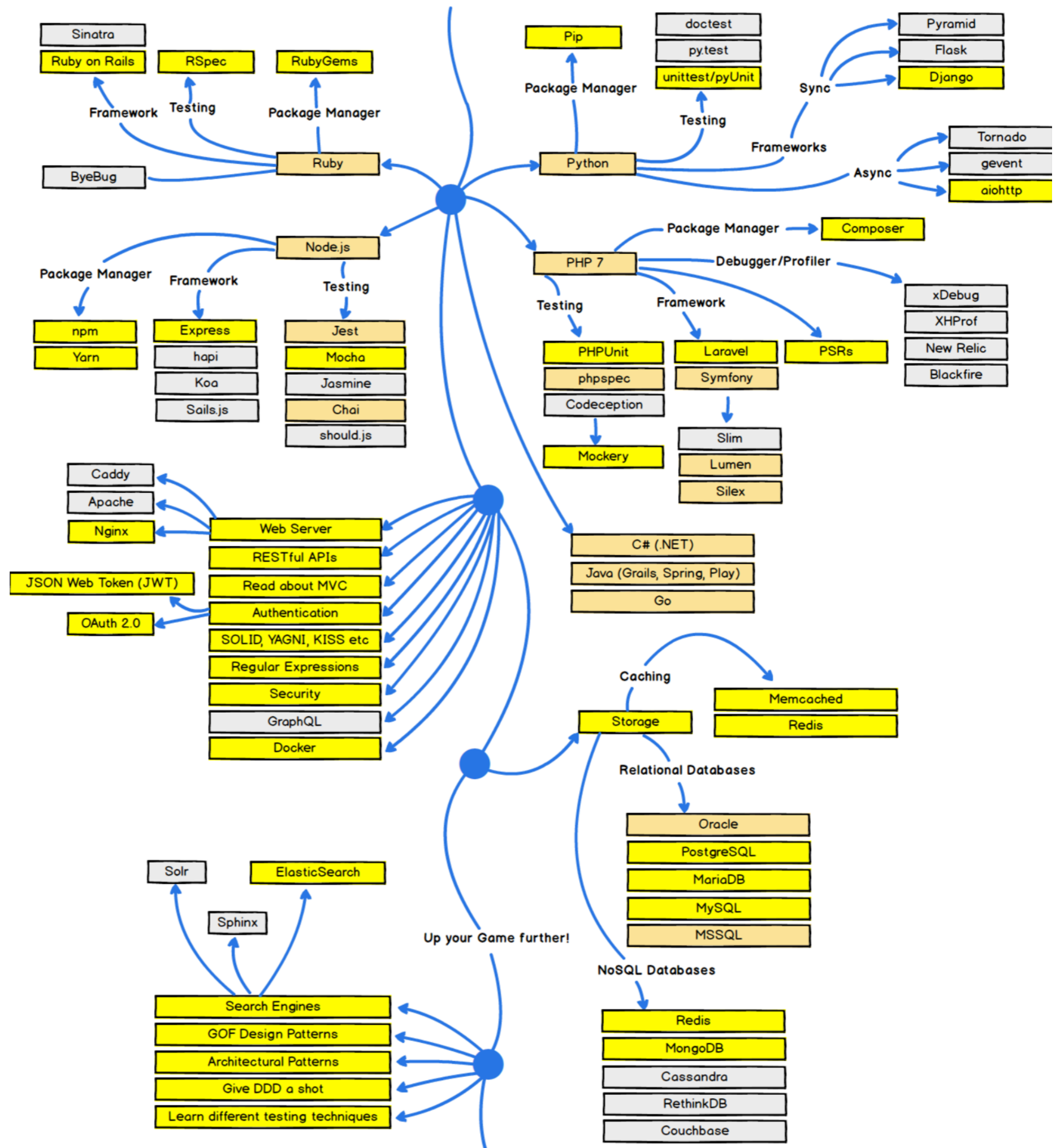
Back-end: Database



Back End: Patterns



Back End:



DevOps

