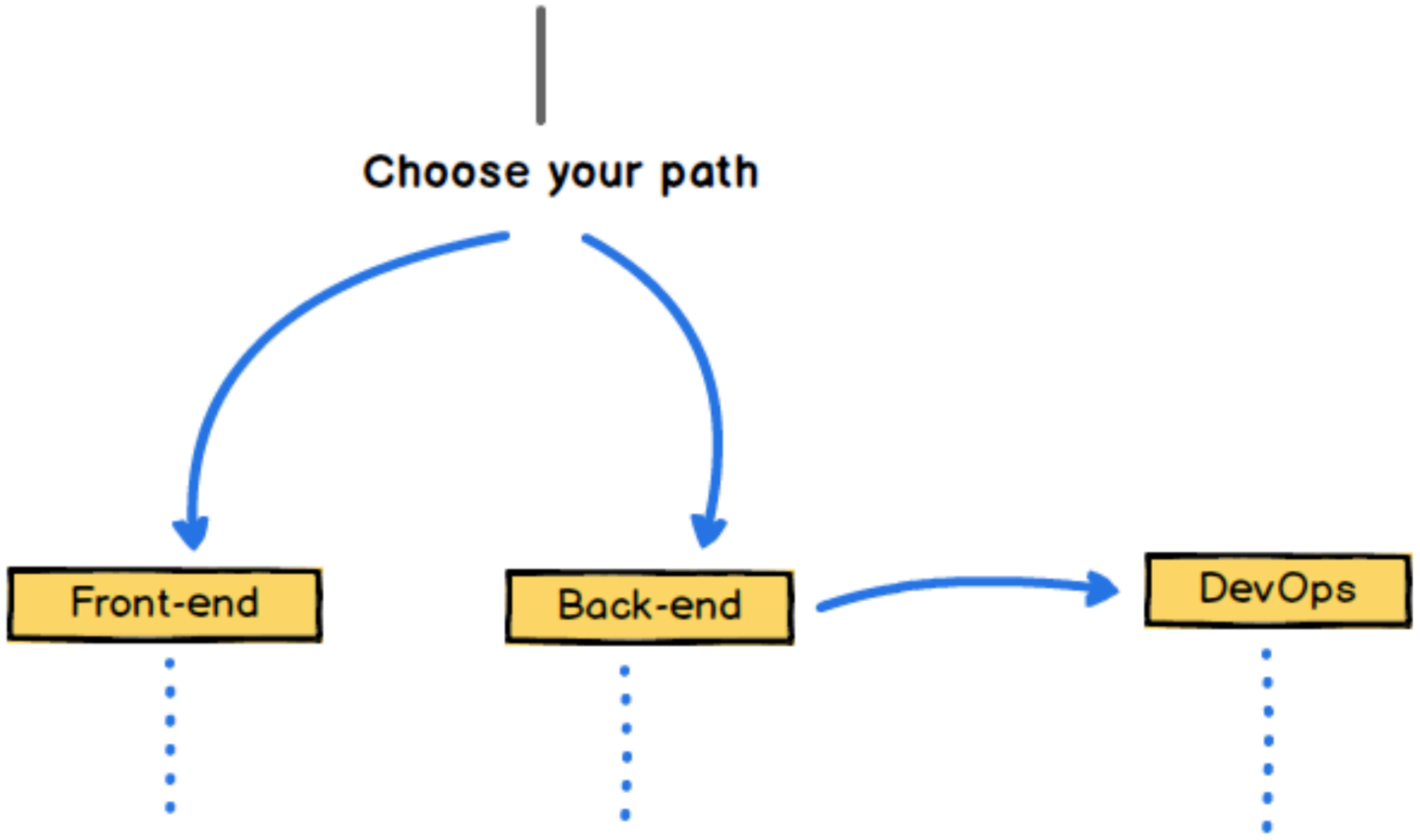
Modern Developer - Road Map

https://github.com/kamranahmedse/developer-roadmap

Web Developer in 2018



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

Front-end Labs

Lab-1.1: Editing HTML

editor · files · text · tags · browser · reference

Lab-1.2: HTML Structure

folders · head · title · link · image · references

Lab-2 CSS Intro

inheritance · classes · fonts · colours · indentation · best practices

Lab-3a Layout

fonts · content · images · classes · folding editor · sidebar · float

Lab-3b Multicolumn

header · maincontent · navigation · footer · primary · secondary

Lab-4a Navigation

nav · tab · current · padding · border · menu · li · ul

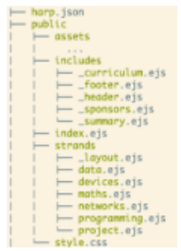
Lab-4b Case Study

header · main · nav · aside · article · footer · section · figure

Lab-5a Harp & Surge

Install software tools to serve a web site locally and also to deploy the web site to a public web server.

Lab-5b Templating



Rebuild the IoT web site from thee last lab using templating. This version of the site will aim to significantly reduce the content the author has to manage by reusing 'templates' containing common sections.

Lab-5c Templating & Nav

Rework the tabbed navigation site from lab 04 to use EJS template

Lab-6a Semantic UI 1

Rebuild the iot web site using semantic-ui

Lab-6b Semantic UI 2

Continue to enhance the IoT web site with additional Semantic-UI styles & Components

Back-end Labs

Lab-07a Play Setup

PLAY VIDEO

Install and test Git + the Play Framework

Lab-07b Playlist 1

PLAY VIDEO

Import, rename and run a new starter project. Extend the project to include a Model.

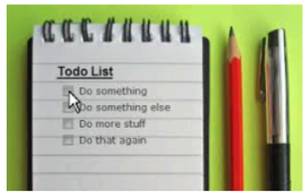
Lab-08a Playlist-2

Move the playlist model into the database. Prime the database from a YAML file.

Lab-08b Playlist-3

Move the playlists into their own view. Introduce routes for opening the playlist and also deleting individual songs.

Lab-09b Todolist-1

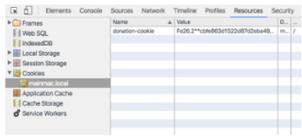


Develop a completely new application, using the techniques we have explored so far.

Lab-09a Playlist-4

Introduce forms into a play application to enable the user to create playlists.

Lab-10 Todolist-2



PLAY VIDEO

Incorporate sessions tracking into the todo app

Lab-11a Playlist Review

Review the Playlist Application

Lab-11b Playlist 5

Incorporate Sessions into the latest Playlist Application

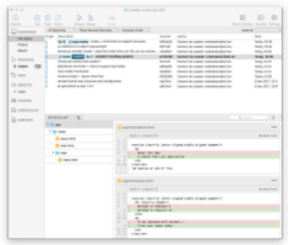
Lab-12a Deploy

Deploy a Play Application to the cloud

Lab-12b Git: Sourcdtree

Install and Configure Sourcetree

Lab-12c Todolist-3



Rebuild Todolist - this time committing to git version control as the app is composed.

Devops Labs

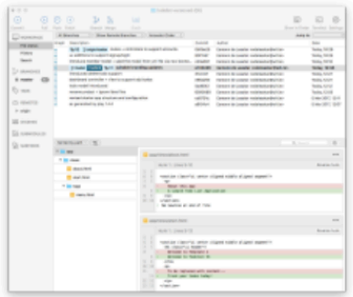
Lab-12a Deploy

Deploy a Play Application to the cloud

Lab-12b Git: Sourcdtree

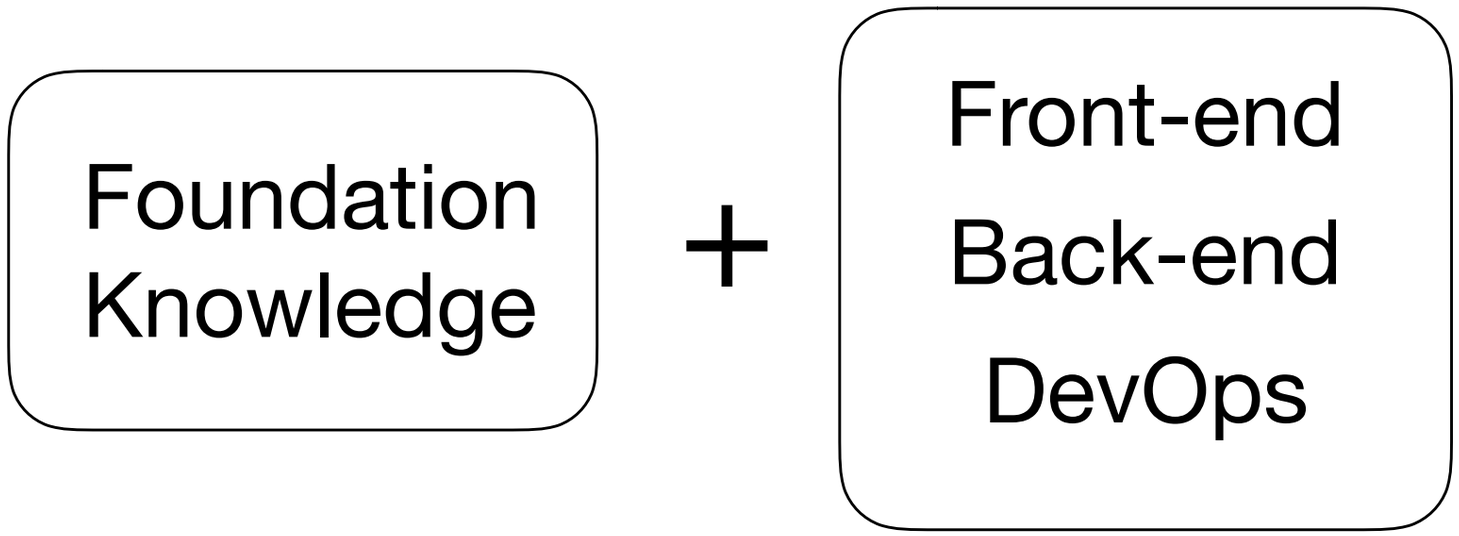
Install and Configure Sourcetree

Lab-12c Todolist-3



Rebuild Todolist - this time committing to git version control as the app is composed.

A roadmap to becoming a web developer in 2017



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Foundation Knowledge

Git - Version Control

SSH

HTTP/HTTPS and APIs

Basic Terminal Usage

Learn to Research

Data Structures & Algorithms

Character Encodings

Design Patterns

GitHub

Create a profile. Explore relevant open source projects. Make a habit of looking under the hood of projects you like. Create and contribute to open source projects.

Front-end

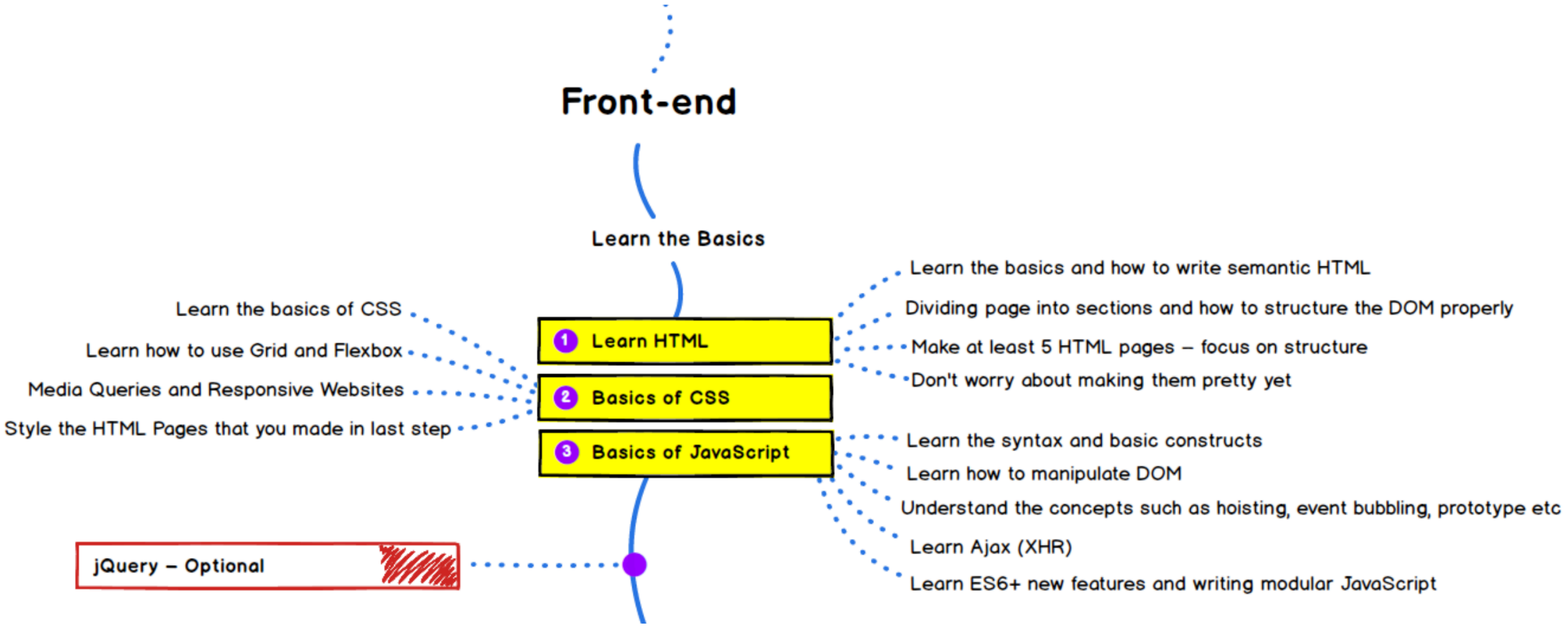
Basics

CSS Frameworks & Processors

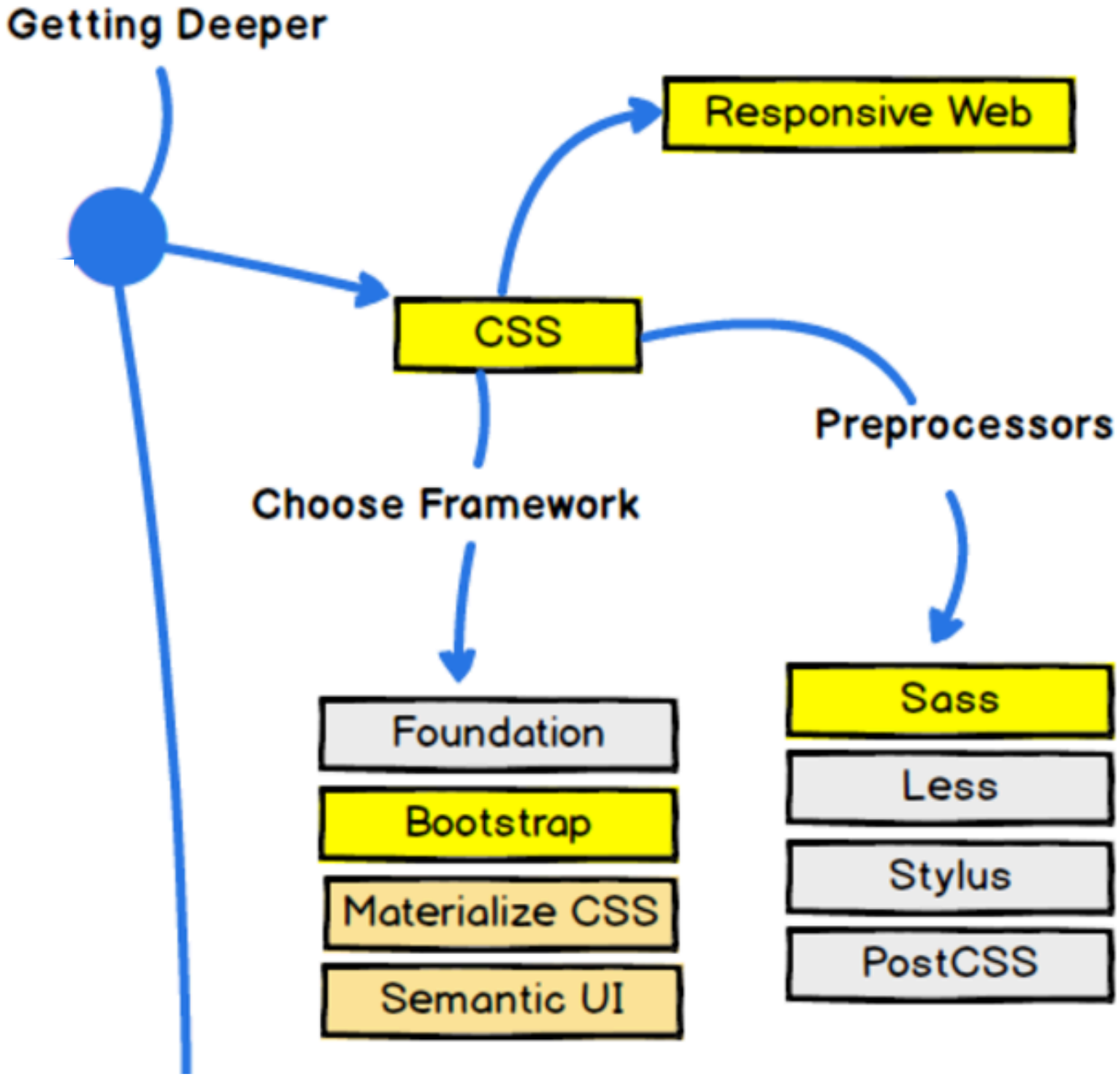
JS Client Frameworks + Tools

CSS Mastery, Graphics & Visualisation

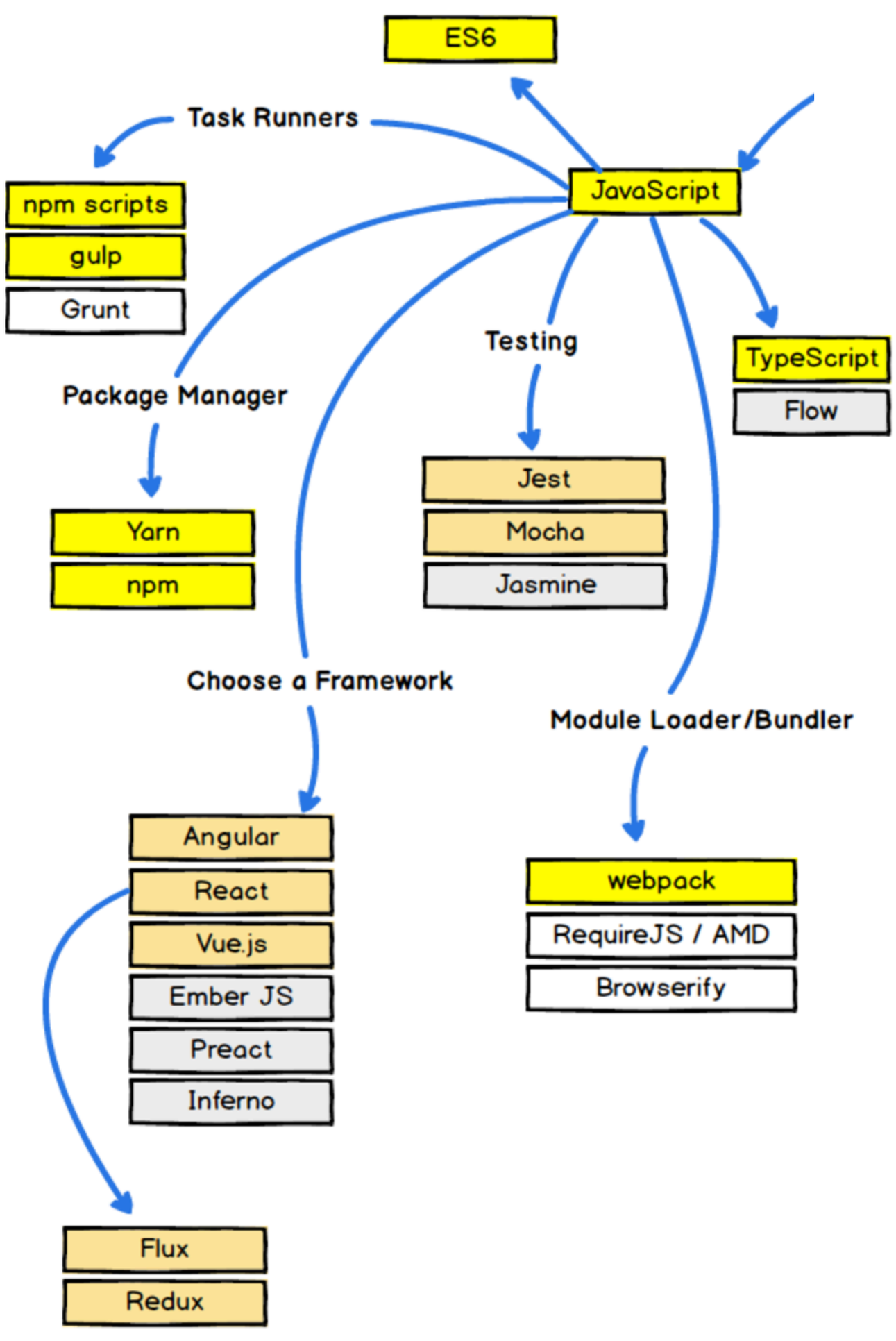
Front-end: Basics



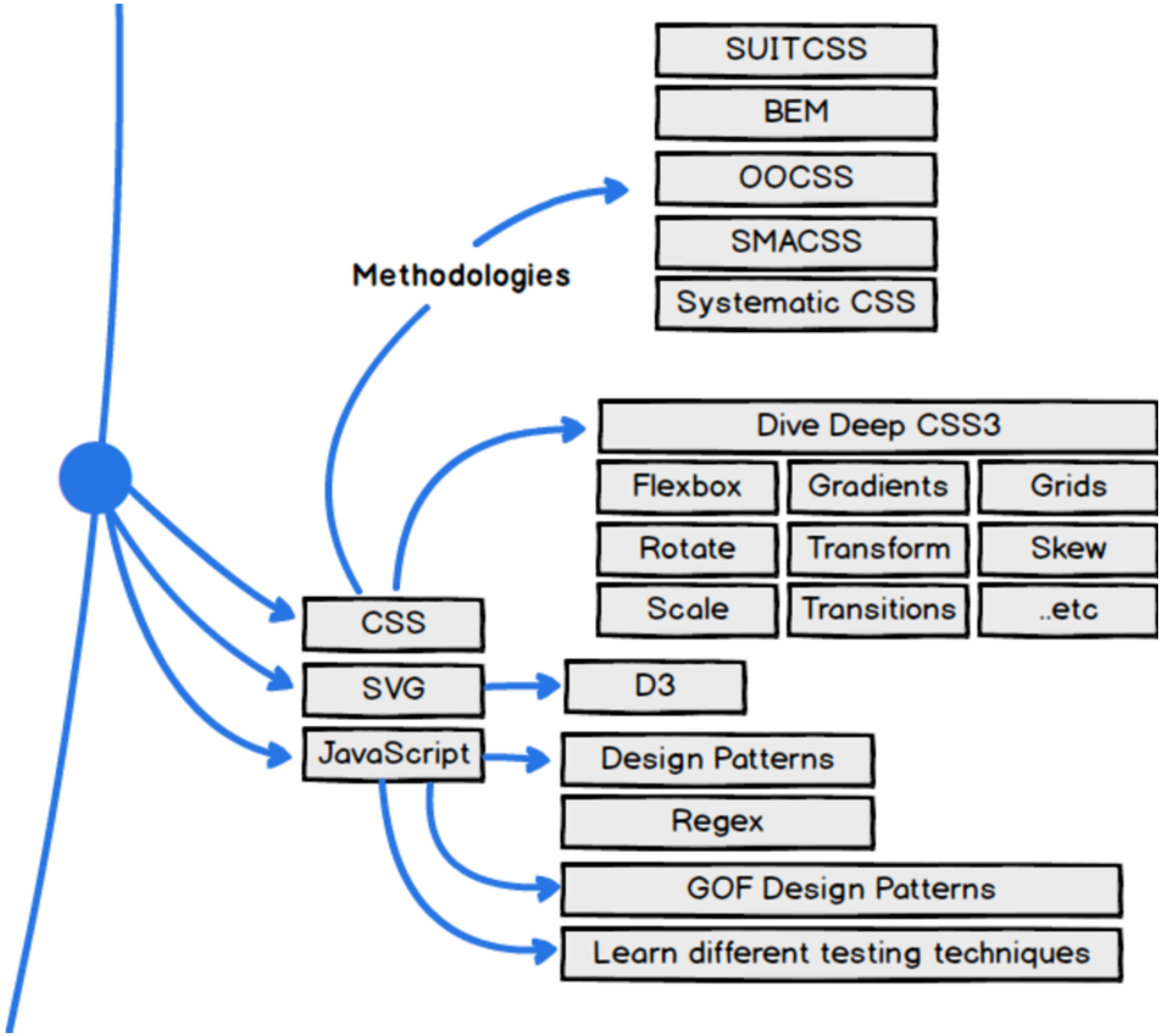
Front-end: CSS Frameworks & Processors



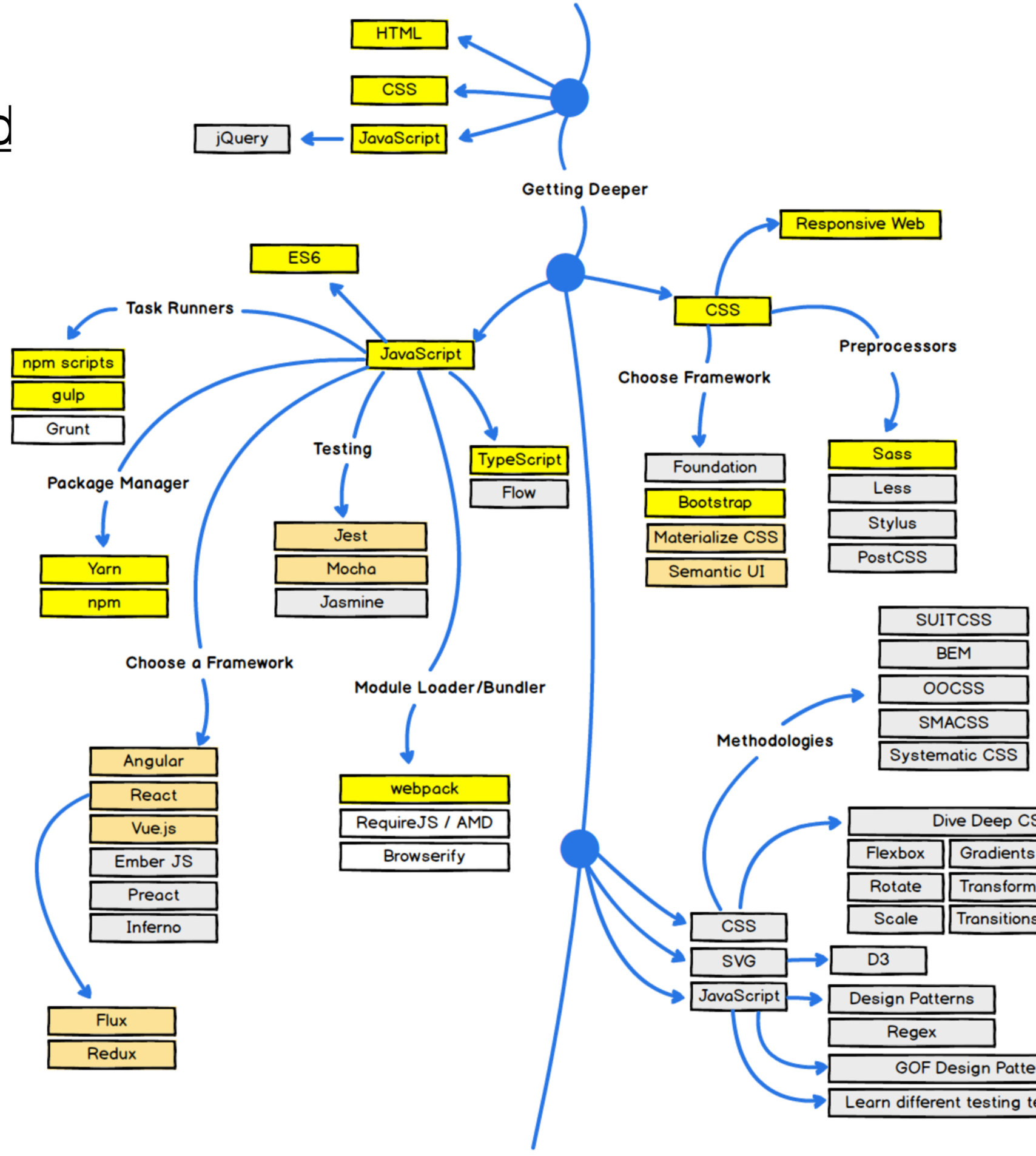
Front-end: JS Client Frameworks, & Tools



Front-end: CSS Mastery, Graphics & Visualisation



Front-end


HTML
CSS
JavaScript
jQuery
Getting Deeper
ES6
Task Runners
npm scripts
gulp
Grunt
JavaScript
Package Manager
Yarn
npm
Choose a Framework
Angular
React
Vue.js
Ember JS
Preact
Inferno
Flux
Redux
Testing
Jest
Mocha
Jasmine
Module Loader/Bundler
webpack
RequireJS / AMD
Browserify
TypeScript
Flow
CSS
Responsive Web
Choose Framework
Foundation
Bootstrap
Materialize CSS
Semantic UI
Preprocessors
Sass
Less
Stylus
PostCSS
Methodologies
SUITCSS
BEM
OOCSS
SMACSS
Systematic CSS
CSS
Dive Deep CSS3
Flexbox
Gradients
Grids
Rotate
Transform
Skew
Scale
Transitions
..etc
SVG
D3
JavaScript
Design Patterns
Regex
GOF Design Patterns
Learn different testing techniques

Back-end

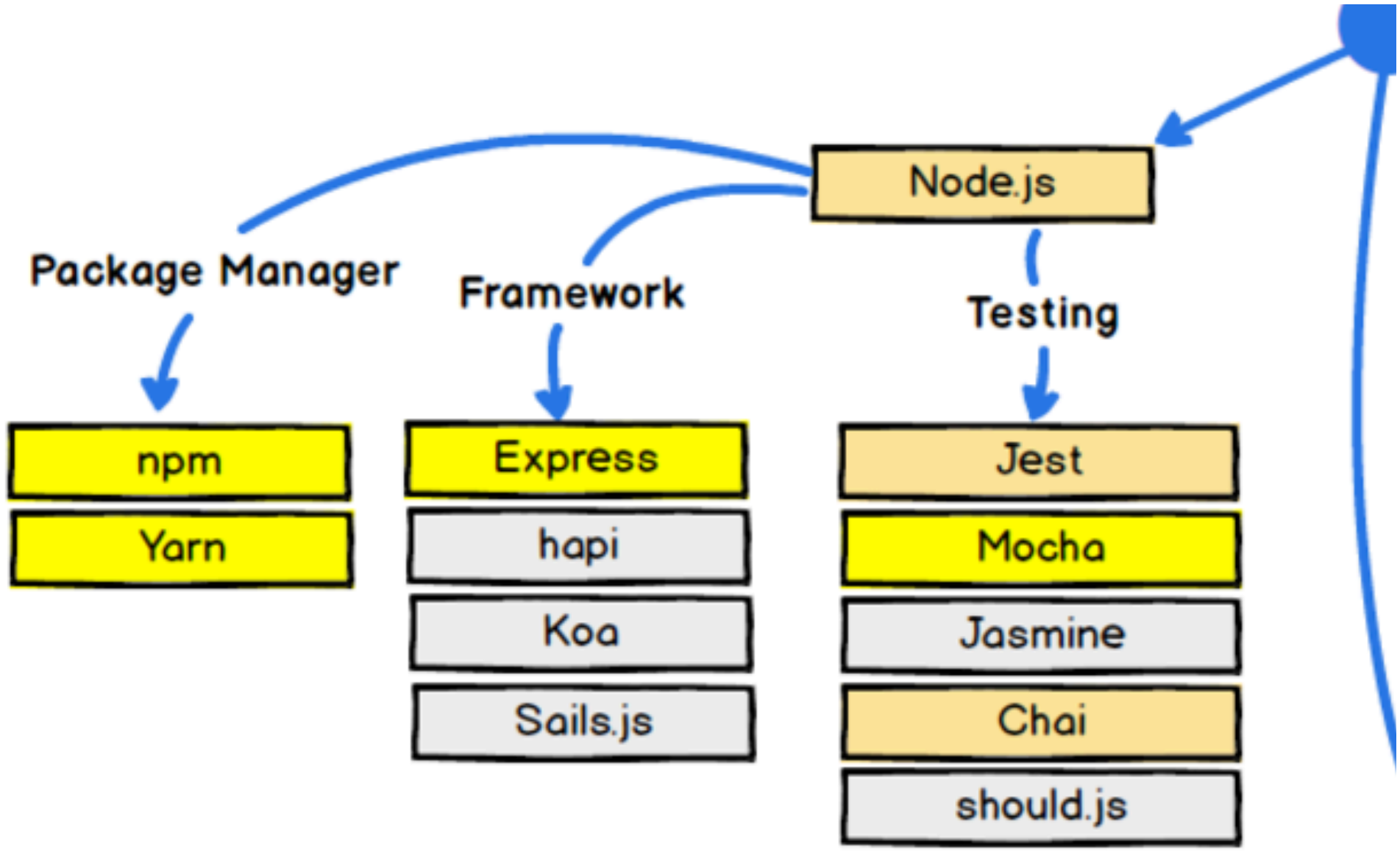
Node.js

Infrastructure + Key Techniques

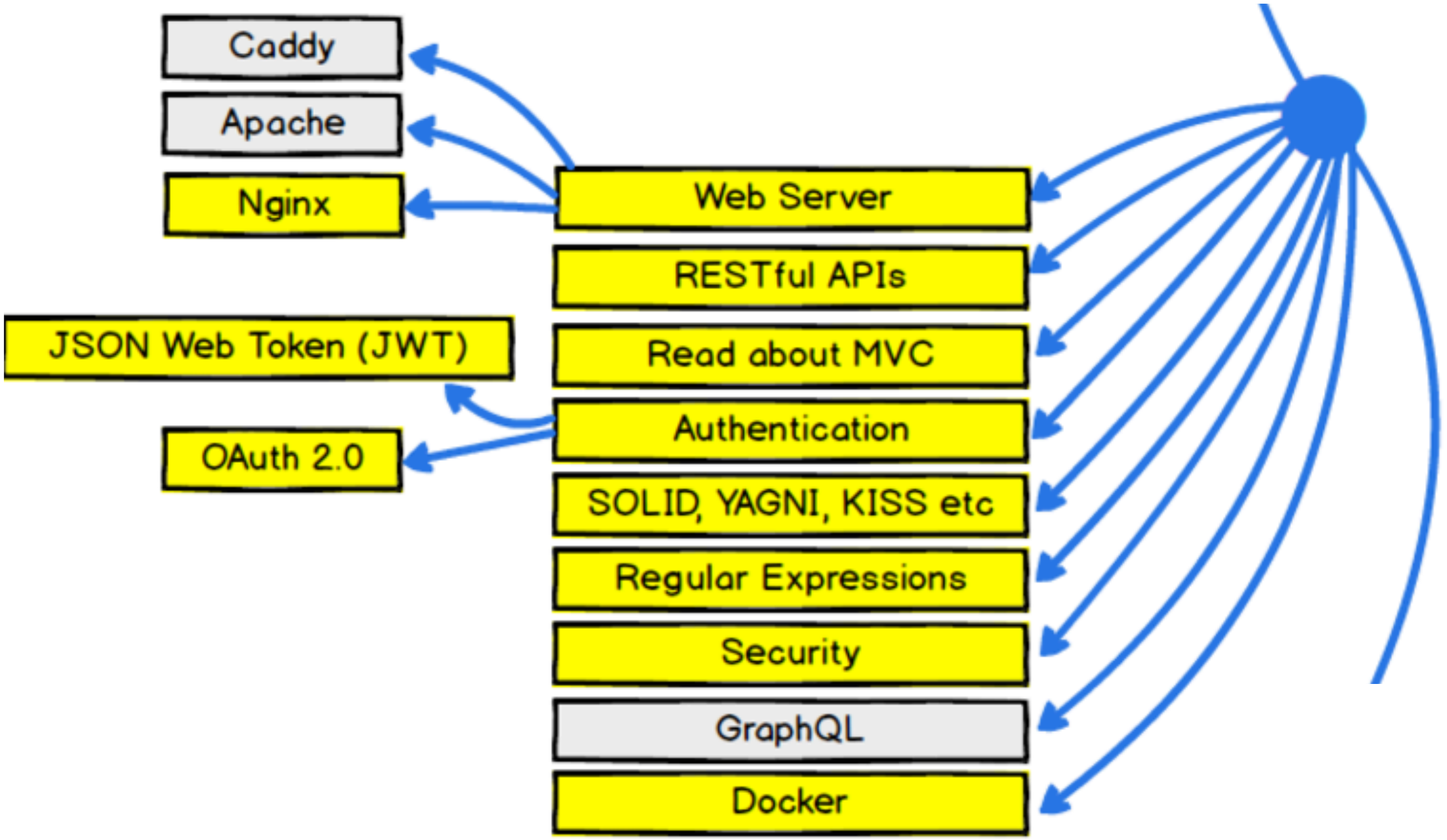
Database

Patterns

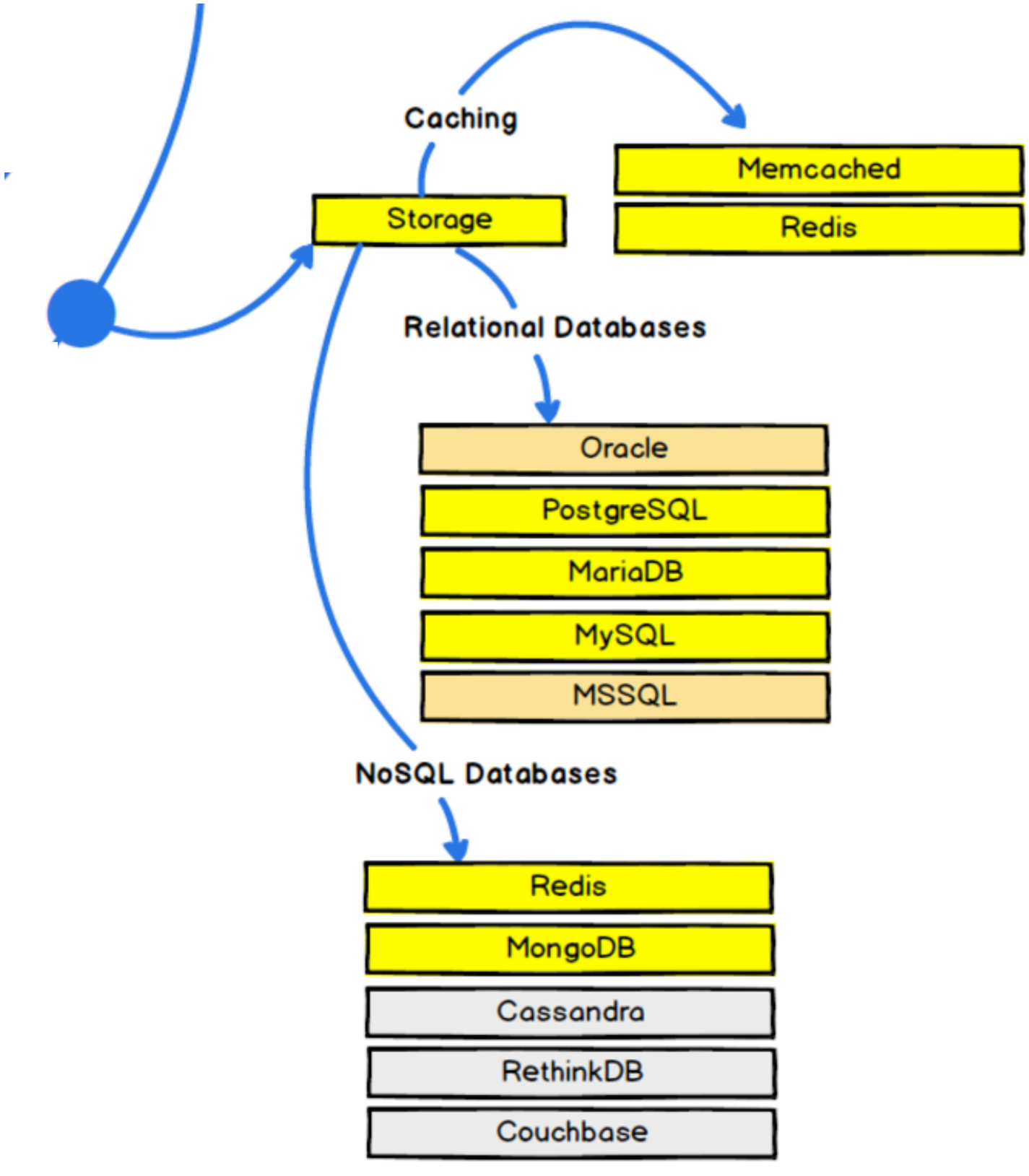
Back-end: Node



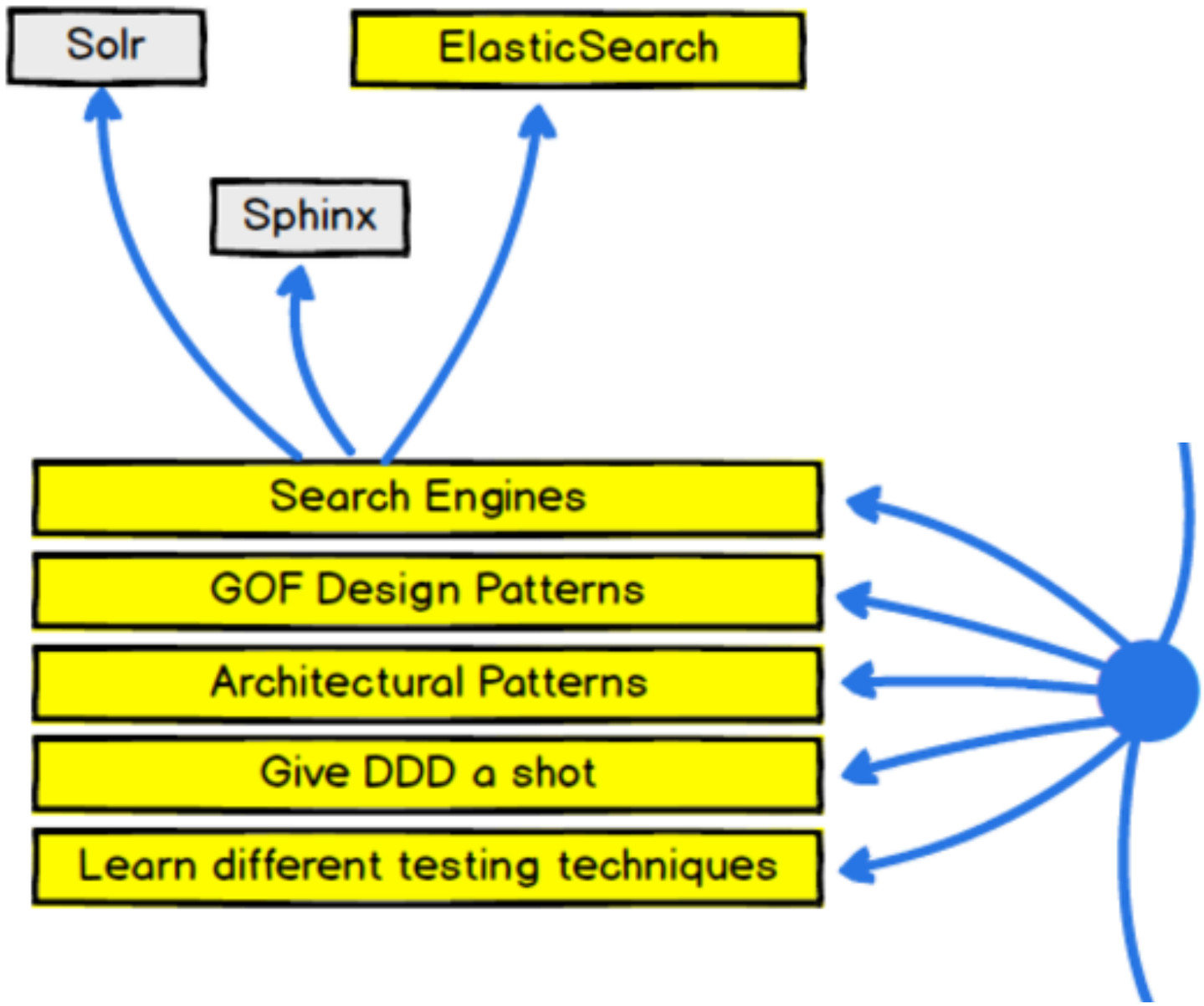
Back-end: Infrastructure + Key Techniques



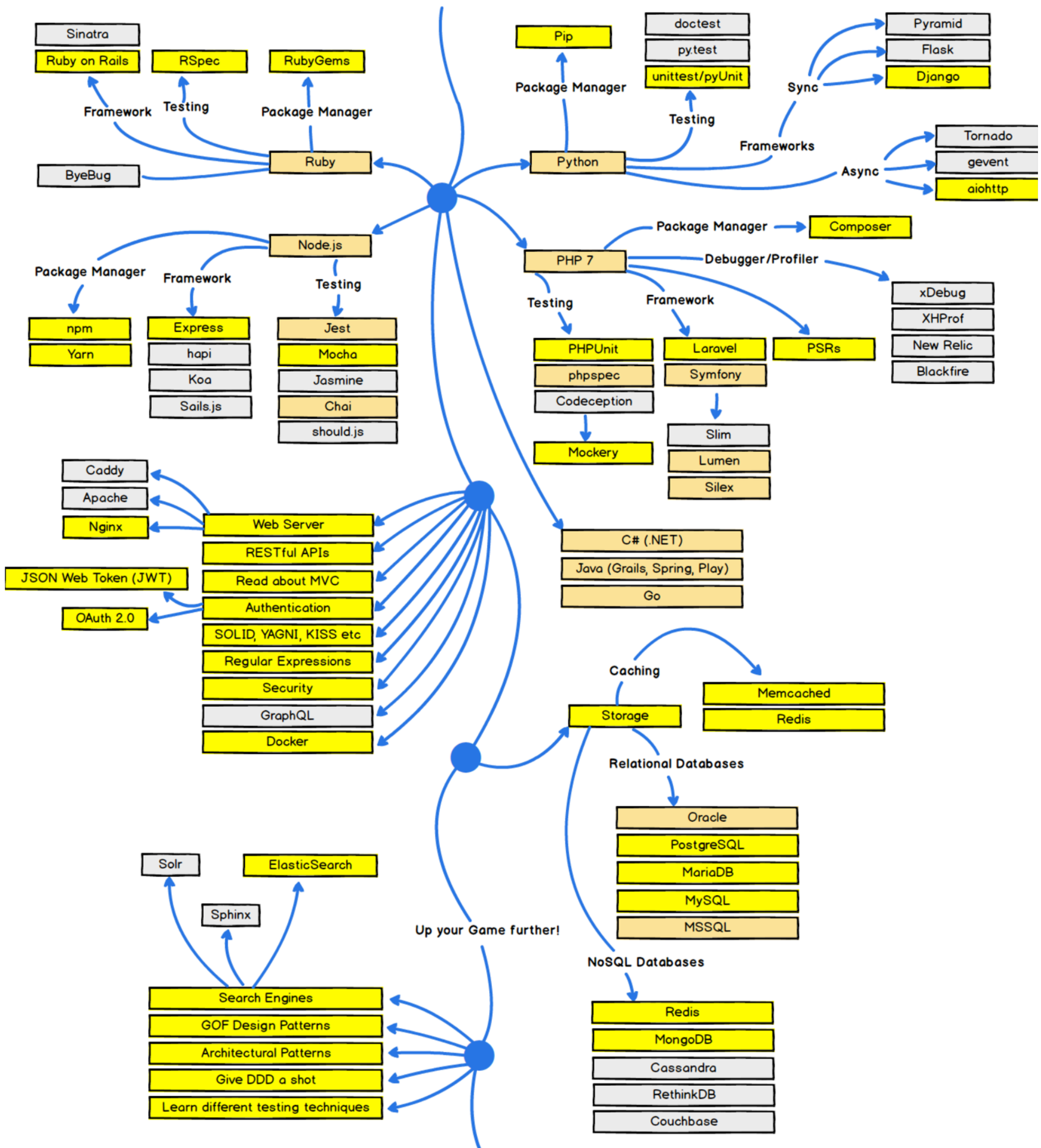
Back-end: Database



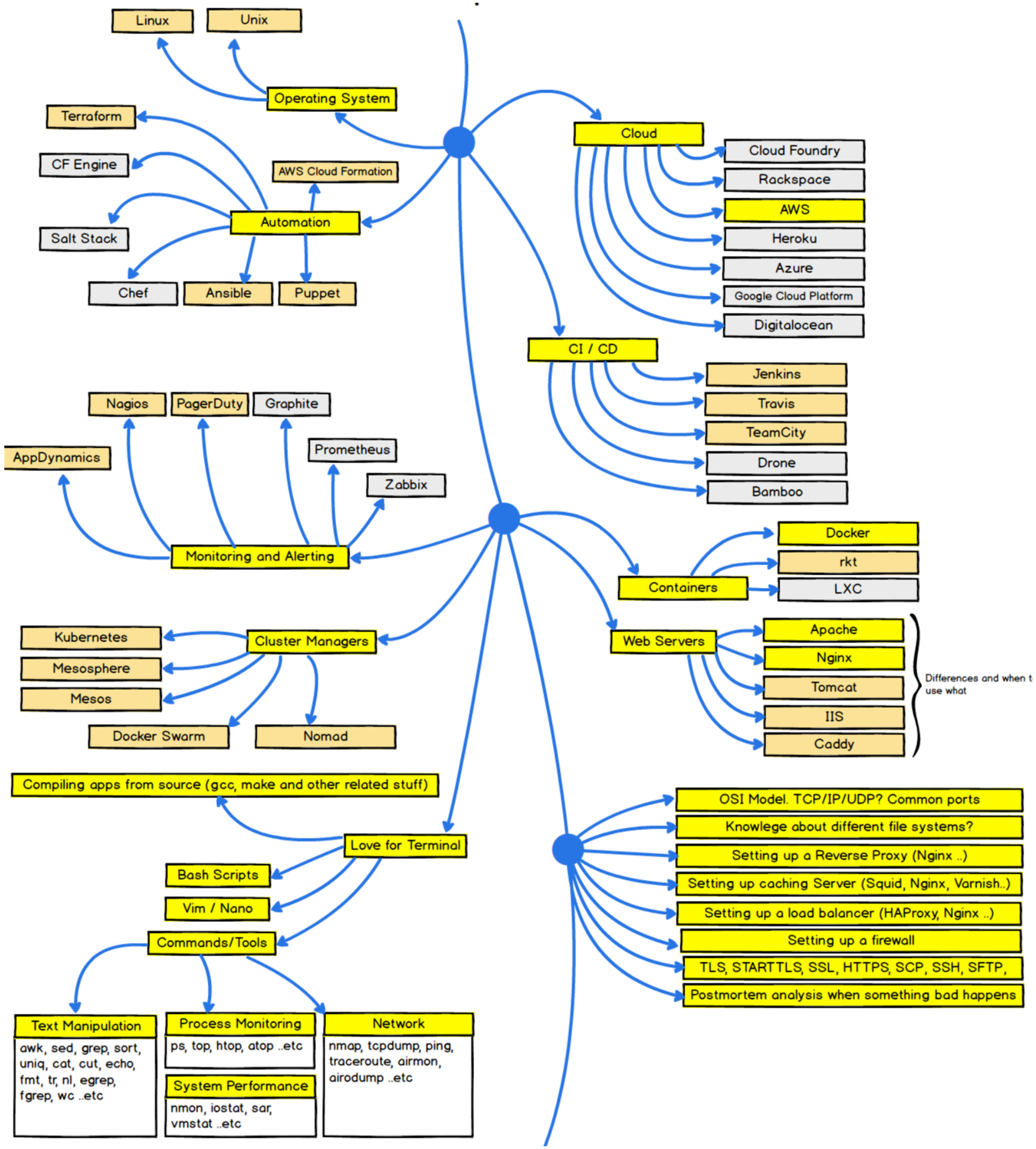
Back End: Patterns



Back End:


Sinatra
Ruby on Rails
RSpec
RubyGems
Framework
Testing
Package Manager
Ruby
ByeBug
Pip
Package Manager
doctest
py.test
unittest/pyUnit
Testing
Sync
Pyramid
Flask
Django
Frameworks
Python
Async
Tornado
gevent
aiohttp
Node.js
Package Manager
Framework
Testing
npm
Yarn
Express
hapi
Koa
Sails.js
Jest
Mocha
Jasmine
Chai
should.js
Package Manager
Composer
PHP 7
Debugger/Profiler
Testing
Framework
xDebug
XHProf
New Relic
Blackfire
PHPUnit
phpspec
Codeception
Mockery
Laravel
Symfony
PSRs
Slim
Lumen
Silex
Caddy
Apache
Nginx
Web Server
RESTful APIs
JSON Web Token (JWT)
Read about MVC
OAuth 2.0
Authentication
SOLID, YAGNI, KISS etc
Regular Expressions
Security
GraphQL
Docker
C# (.NET)
Java (Grails, Spring, Play)
Go
Caching
Storage
Memcached
Redis
Relational Databases
Oracle
PostgreSQL
MariaDB
MySQL
MSSQL
NoSQL Databases
Redis
MongoDB
Cassandra
RethinkDB
Couchbase
Solr
ElasticSearch
Sphinx
Search Engines
GOF Design Patterns
Architectural Patterns
Give DDD a shot
Learn different testing techniques
Up your Game further!

DevOps


Linux
Unix
Operating System
Terraform
CF Engine
AWS Cloud Formation
Automation
Salt Stack
Chef
Ansible
Puppet
Cloud
Cloud Foundry
Rackspace
AWS
Heroku
Azure
Google Cloud Platform
Digitalocean
CI / CD
Jenkins
Travis
TeamCity
Drone
Bamboo
Nagios
PagerDuty
Graphite
AppDynamics
Prometheus
Zabbix
Monitoring and Alerting
Docker
rkt
LXC
Containers
Kubernetes
Mesosphere
Mesos
Cluster Managers
Docker Swarm
Nomad
Web Servers
Apache
Nginx
Tomcat
IIS
Caddy
Differences and when t
use what
Compiling apps from source (gcc, make and other related stuff)
Love for Terminal
Bash Scripts
Vim / Nano
Commands/Tools
Text Manipulation
awk, sed, grep, sort, uniq, cat, cut, echo, fmt, tr, nl, egrep, fgrep, wc ..etc
Process Monitoring
ps, top, htop, atop ..etc
System Performance
nmon, iostat, sar, vmstat ..etc
Network
nmap, tcpdump, ping, traceroute, airmon, airodump ..etc
OSI Model. TCP/IP/UDP? Common ports
Knowlege about different file systems?
Setting up a Reverse Proxy (Nginx ..)
Setting up caching Server (Squid, Nginx, Varnish..)
Setting up a load balancer (HAProxy, Nginx ..)
Setting up a firewall
TLS, STARTTLS, SSL, HTTPS, SCP, SSH, SFTP,
Postmortem analysis when something bad happens