Web Development
Module Overview

Timetable + Schedule

Module Overview
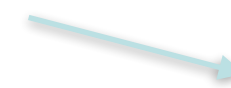
Assignment Sequencing

THURSDAY	FRIDAY	

10:45

Webinar →

Web Development
Webinar
12:15-2:00

12:15

Lab support
throughout
the week

13:45

15:15

Assessment Schedule

Semester 1		T
January	Week	10
	1	17
	2	24
	3	31
February	4	7
	5	14
	reading-week	21
	6	28
March	7	7
	8	14
	reading-week	21
	9	28
April	10	4
	11	11
		18
Easter-break		25
	12	2
May	reading-week	9
	reading-week	16

	January					February				March				April			May
week no.	1	2	3	4	5	rd	6	7	8	rd	9	10	11	Easter	12	rd
Web Development																
Assignments					W1									W2		
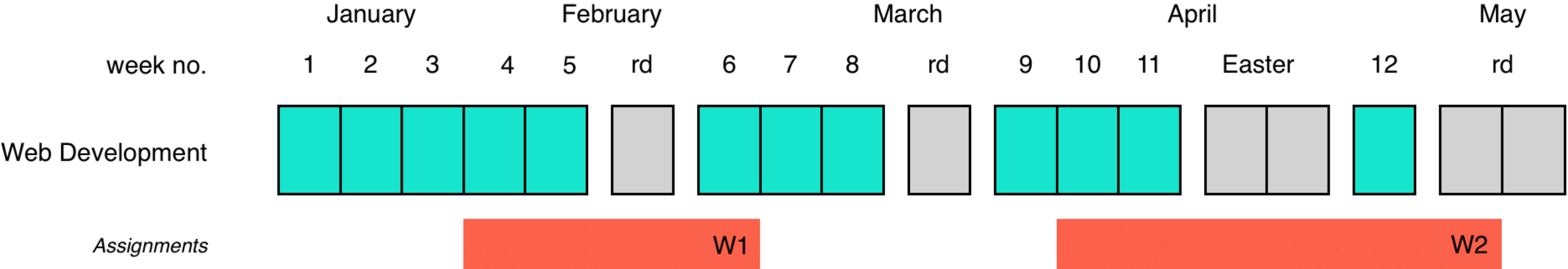
12 Topics – one topic per week

Each Topic builds on concepts, tools and techniques from previous weeks.

01: Introducing HTML

web · client/server · html · documents · attributes · links ·ima structure · nes wireframing · blo

02: Introducing CSS

03: The Box Model

content · padding · border ·

04: Navigation, Semantics & Style Guides

05: HTML Templates & Deployment

clients · servers · hosting domains · dns · paths · ht command prompt · node · · surge · server · compile · dry · wet · engine · partia includes · layouts · paths compile

06: CSS Frameworks

review · bootstrap · semantic ui · container · segment · grid · stackable · tables · icons ·

07: Applications

sites · apps · frameworks · command line · ide · java

08: Models & Views

Models · Views · Controllers · conf · Song · Playlist · ArrayList · OneToMany · Bootstrap

Design Guides

visual design principles · structure & layout · typography · colour design

The UX

guiding principles · personas & scenarios · information architecture · prototyping · product testing

09: Forms

routes · get · post · delete · template loops · submit · buttons · 404

10: Sessions

stateless · stateful · tracking · cookies · signup · login · logout · session object · clearing

11: Sessions & Models

song · playlist · session · add · delete · login · signup

12: Deployment + Review

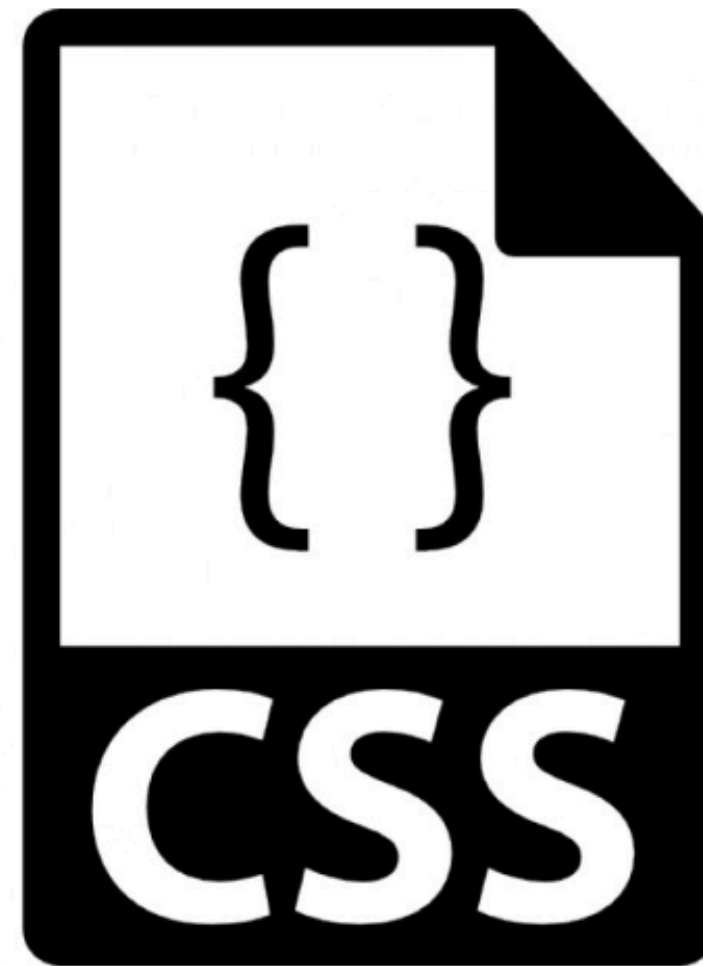heroku · cli · config · database · dashboard · logs · startup · management · shutdown

5

01: Introducing HTML

web · client/server · browser · html · documents · elements · attributes · links ·images · page structure · nesting · wireframing · block · inline

02: Introducing CSS

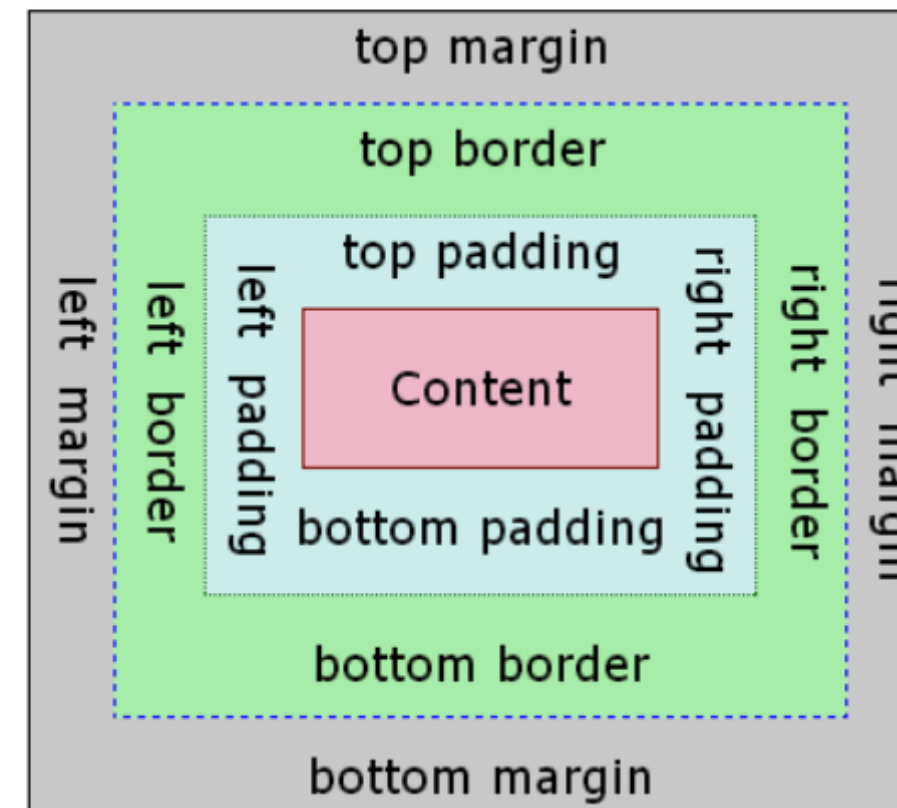markup · style · function· stylesheet · rules · selectors · declarations· properties · values · classes · ids · inheritance

Core HTML + CSS

Laying out pages with CSS
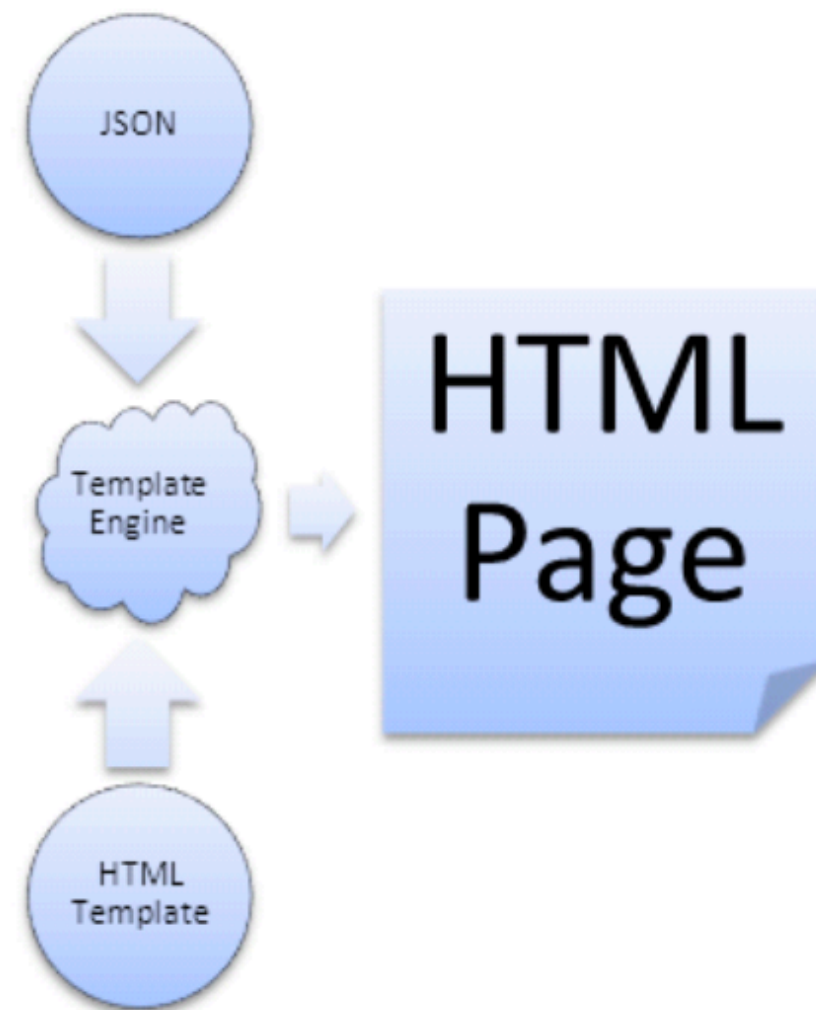Structuring a Navigation Metaphor

03: The Box Model

content · padding · border ·
margin · style · width · colour ·
dom · layout · float · left · right

04: Navigation, Semantics & Style Guides

indentation · encoding ·
doctype · validity · semantics ·
entities · type attributes ·
quotations · nav · tab · current ·
padding · border · menu · li · ul ·
header · main · nav · aside ·
article · footer · section · figure

05: HTML Templates & Deployment

JSON → Template Engine → HTML Page
HTML Template → Template Engine

clients · servers · hosting · domains · dns · paths · http · command prompt · node · harp · surge · server · compile · EJS · dry · wet · engine · partials · includes · layouts · paths · compile

06: CSS Frameworks

Programming
Learn a broad range of programming and problem solving skills, including exciting new platforms, software tools and languages. Use these skills to build apps for mobile, cloud and device based IoT applications. Evolve a portfolio of facinating aplications.

Data Science
At the heart of many IoT applications is data: measurements, events alarms and other information that must be relayed, stored and ultimately turned into knowledge. Learn the fundamentals of modern approaches to data in this strand.

Networks
This strand will explore modern networks and cloud technology. Be able to configure, network and manage all categories of computer systems from simple controlers to single board board computers, mobiles and full workstations.

Project
Building exciting IoT projects in every semester of the programme. Your projects will combine skills acquired from the other strands and enable you to build a comprehensive an compelling portfolio of IoT applications and services.

review · bootstrap · semantic ui · container · segment · grid · stackable · tables · icons · images · row · col

Modularising a web site

Professional Styling with CSS Libraries

Design Guides

visual design principles · structure & layout · typography · colour design

The UX

guiding principles · personas & scenarios · information architecture · prototyping · product testing

Introduction to design principles for the web

Introduction to UX

From Web Sites to Web Applications

07: Applications

sites · apps · frameworks · command line · ide · java · request · response · front-end · back-end
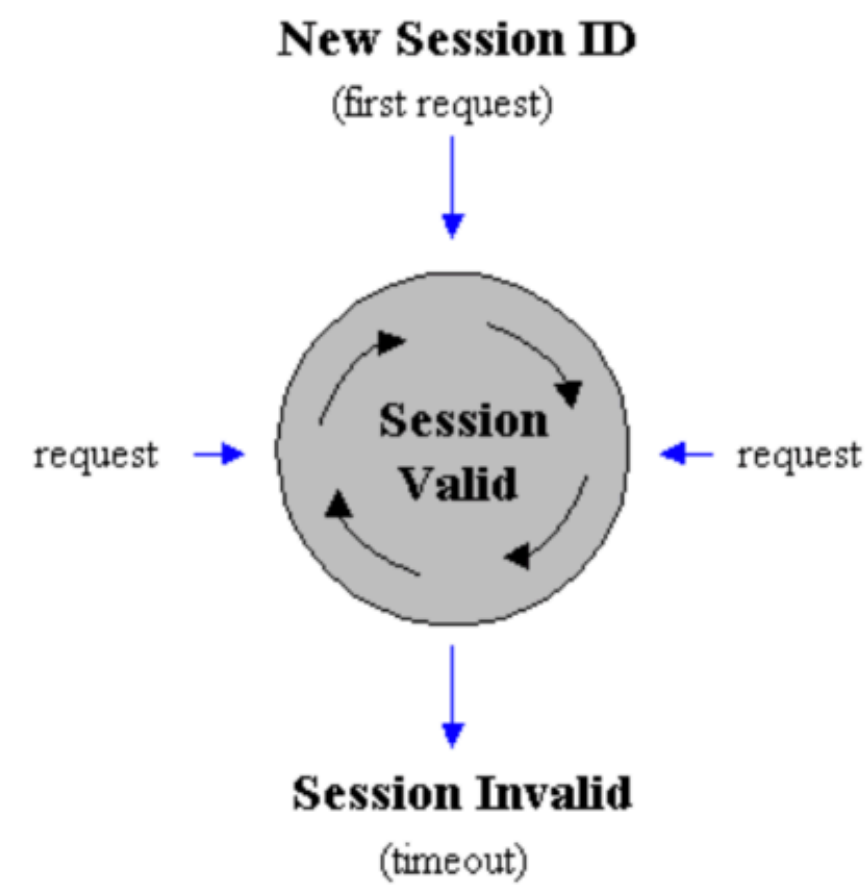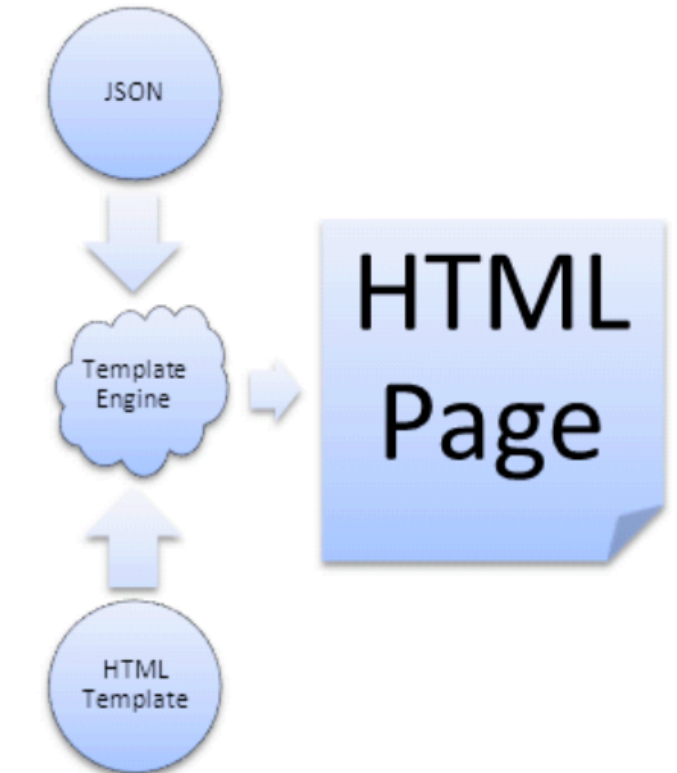
08: Models & Views

Models · Views · Controllers · conf · Song · Playlist · ArrayList · OneToMany · Bootstrap

09: Forms

routes · get · post · delete · template loops · submit · buttons · 404

10: Sessions

New Session ID
(first request)

request → **Session Valid** ← request

Session Invalid
(timeout)
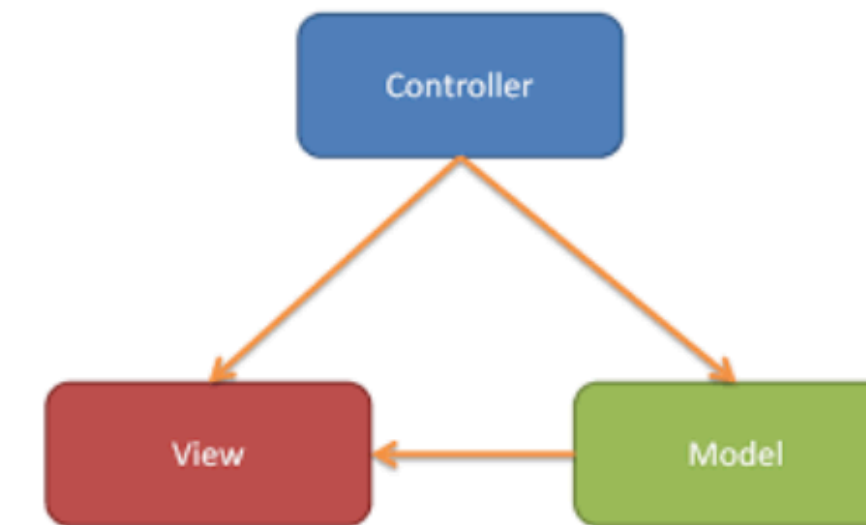
stateless · stateful · tracking · cookies · signup · login · logout · session object · clearing

11: Sessions & Models

play list

song · playlist · session · add · delete · login · signup

Fundamentals of Web Application Development

Moving an Application to the Cloud

12: Deployment + Review

heroku · cli · config · database · dashboard · logs · startup · management · shutdown
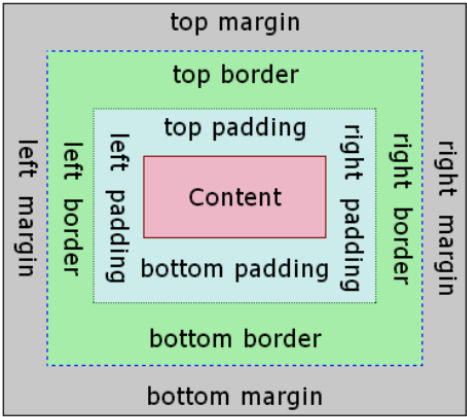
01: Introducing HTML

web · client/server · browser · html · documents · elements · attributes · links ·images · page structure · nesting · wireframing · block · inline

02: Introducing CSS

markup · style · function· stylesheet · rules · selectors · declarations· properties · values · classes · ids · inheritance
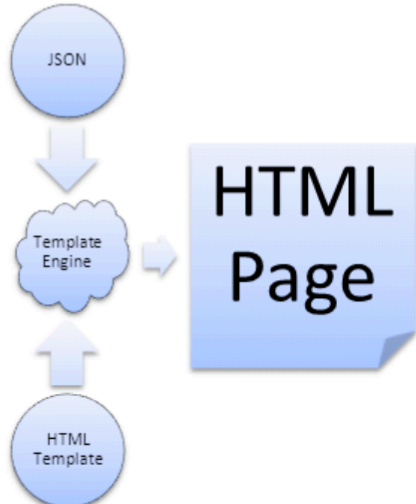
03: The Box Model

content · padding · border · margin · style · width · colour · dom · layout · float · left · right

04: Navigation, Semantics & Style Guides

indentation · encoding · doctype · validity · semantics · entities · type attributes · quotations · nav · tab · current · padding · border · menu · li · ul · header · main · nav · aside · article · footer · section · figure

05: HTML Templates & Deployment

clients · servers · hosting · domains · dns · paths · http · command prompt · node · harp · surge · server · compile · EJS · dry · wet · engine · partials · includes · layouts · paths · compile

Assignment 1 based on skills acquired in topics 1-5

Allocated 40% of overall module grade

07: Applications

sites · apps · frameworks · command line · ide · java · request · response · front-end · back-end

08: Models & Views

Models · Views · Controllers · conf · Song · Playlist · ArrayList · OneToMany · Bootstrap

09: Forms

routes · get · post · delete · template loops · submit · buttons · 404

10: Sessions

New Session ID (first request)

request → Session Valid ← request

Session Invalid (timeout)

stateless · stateful · tracking · cookies · signup · login · logout · session object · clearing

11: Sessions & Models

song · playlist · session · add · delete · login · signup

12: Deployment + Review

heroku · cli · config · database · dashboard · logs · startup · management · shutdown

Assignment 2 based on skills acquired in topics 6-12
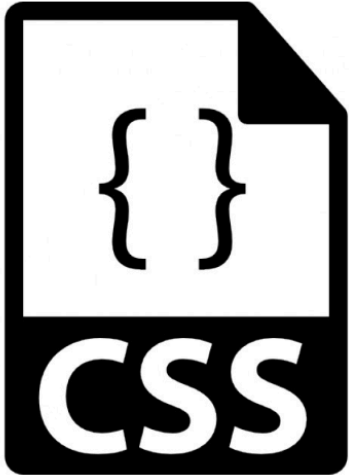
Allocated 60% of overall module grade

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02: Introducing CSS

markup · style · function· stylesheet · rules · selectors · declarations· properties · values · classes · ids · inheritance

03: The Box Model

content · padding · border · margin · style · width · colour · dom · layout · float · left · right
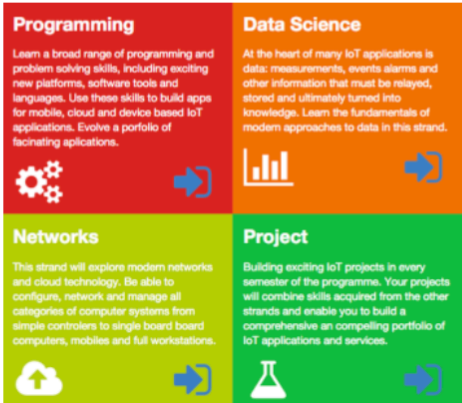
04: Navigation, Semantics & Style Guides

indentation · encoding · doctype · validity · semantics · entities · type attributes · quotations · nav · tab · current · padding · border · menu · li · ul · header · main · nav · aside · article · footer · section · figure

05: HTML Templates & Deployment

clients · servers · hosting · domains · dns · paths · http · command prompt · node · harp · surge · server · compile · EJS · dry · wet · engine · partials · includes · layouts · paths · compile
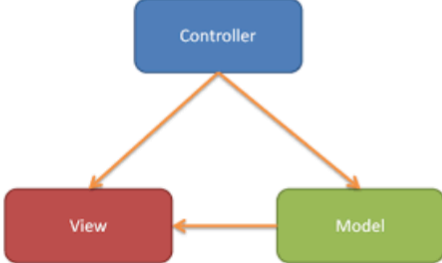
06: CSS Frameworks

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07: Applications

sites · apps · frameworks · command line · ide · java · request · response · front-end · back-end

08: Models & Views

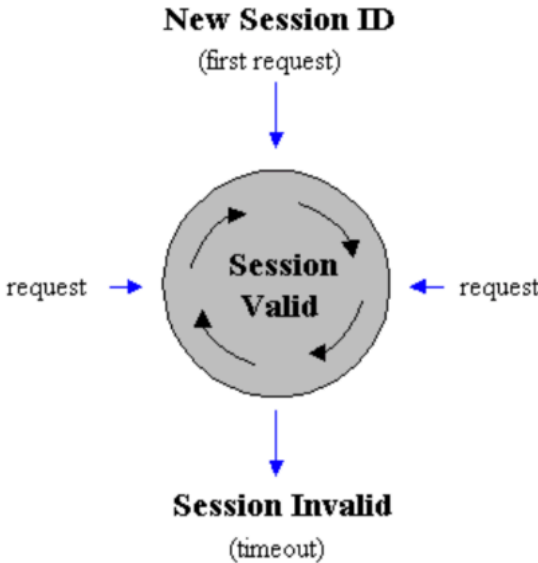Models · Views · Controllers · conf · Song · Playlist · ArrayList · OneToMany · Bootstrap

09: Forms

routes · get · post · delete · template loops · submit · buttons · 404

10: Sessions

stateless · stateful · tracking · cookies · signup · login · logout · session object · clearing

11: Sessions & Models

song · playlist · session · add · delete · login · signup

12: Deployment + Review

heroku · cli · config · database · dashboard · logs · startup · management · shutdown

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