





Web Development

Introduction



Your Host

- **My career at Globant**
- **Contact me!**
- **Who are you?**



Table of Contents

- **What's uCertificate for developers?**
- **Web Development track program and objectives**
- **Back to the roots: introduction to the World Wide Web**



What's uCertificate?

- **Talent hunting**

We're encouraging you to choose your own career path based on specializations.

- **Building common value**

We all have valuable knowledge, let's share it in search of the best practices, spreading a common culture over our partners and customers.



What's uCertificate?

- **Choose your challenge**

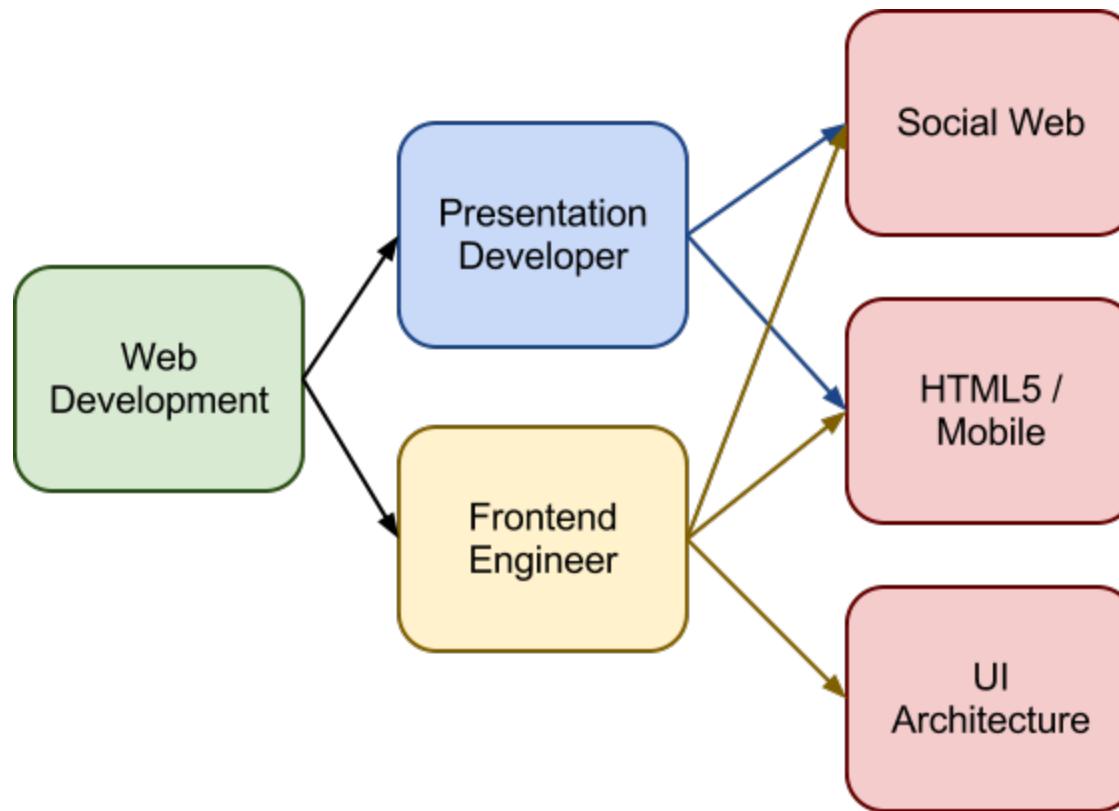
Sharing a common culture let us move throughout projects smoothly becoming referents in specific technologies.

- **Be a team player**

Encourage your team to reach the best standards; leverage discussions and solutions; help to your partners :)

UI Development Career Path

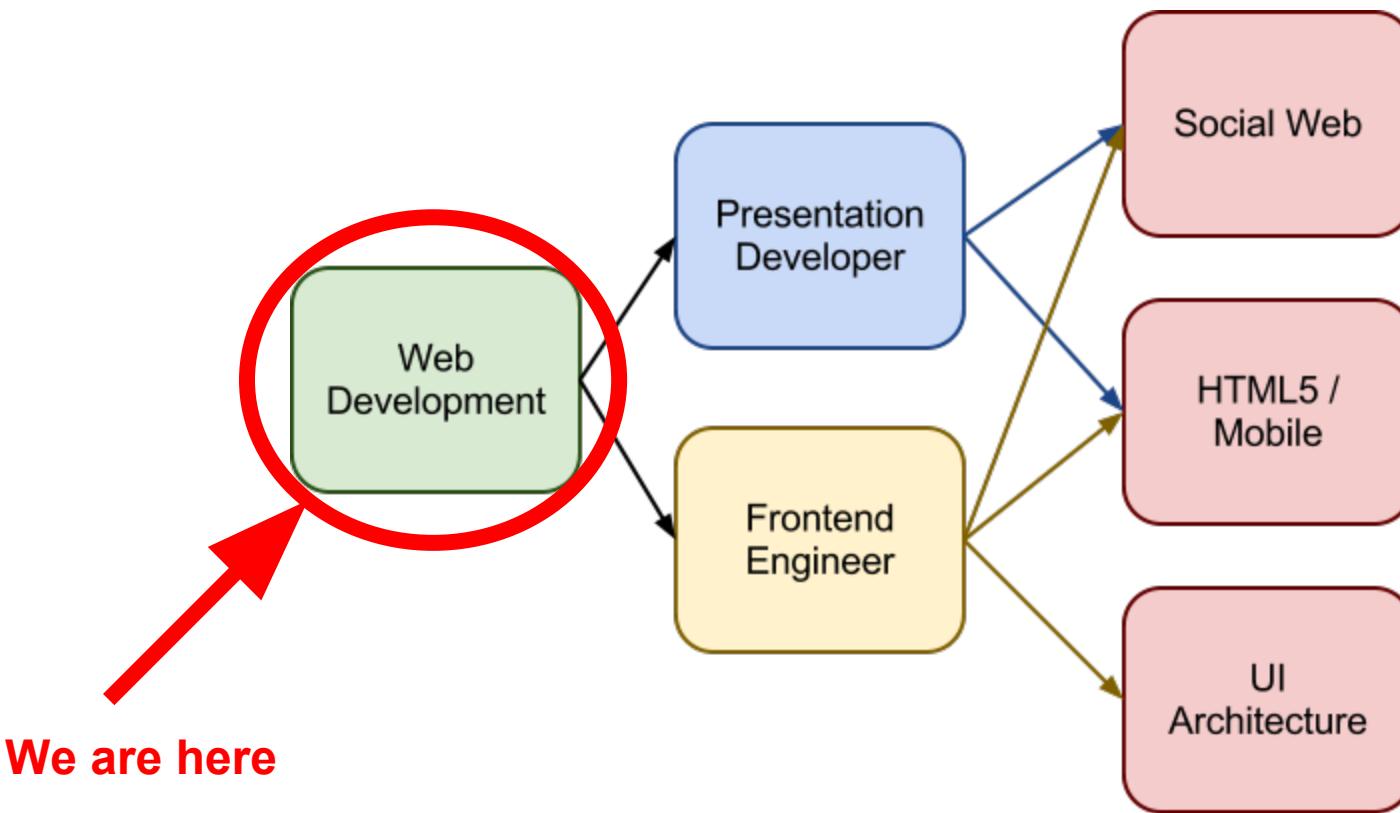
- Tracks dependency graph:





UI Development Career Path

- Tracks dependency graph:



We are here



uCertificate Tracks Objectives

- **Web Development**

Build a common knowledge about how web technologies work from inside. Leverage skills with different backgrounds such as graphic designers, former web developers or computer science students. Getting involved with both theory and practice to reach a solid and general knowledge about web applications development.



uCertificate Tracks Objectives

- **Presentation Developer**

Build the best experience for the final user. It involves strong knowledge of HTML semantics and CSS, UX concepts, building of customer value; indeed, this track is customer-oriented.



uCertificate Tracks Objectives

- **Presentation Developer**

Deep knowledge of jQuery in order to generate widgets.

Meet several rich components libraries. Help design comprehensive widgets catalogs. Understand page loading benchmarking tools and perform optimizations.



uCertificate Tracks Objectives

- **Frontend Engineer**

Build a strong knowledge of software development approaches and patterns applied over large frontend applications. Meet configuration management tools to build quality-in applications. Understand different models of web applications. Understand different models of communication layers, pros and cons.

uCertificate Tracks Objectives

- **Frontend Engineer**

Define a project structure depending on the backend technology. Introduce deep knowledge of domain-oriented modeling in JavaScript. Provide constraints to build clean, easy-to-refactor applications. Meet dependency management tools. Understand optimization techniques and tools; identify when optimizations are needed.

uCertificate Tracks Objectives

- **Social Web**

Meet social networks core concepts. Understand information targeting and viralization strategies.

Understand API design techniques. Getting involved with widely used social APIs: Facebook, Twitter, Google Maps.



uCertificate Tracks Objectives

- **UI Architect**

Choose the best application model and frameworks based on requirements. Understand what scalability means for the customer and apply it on large applications; build easy-to-refactor components. Build environment-agnostic applications. Perform packaging and distribution management of JavaScript sources.

Develop long-life features and make them grow smoothly.



uCertificate Tracks Objectives

- **UI Architect**

Understand the application layer of backend technologies and design integration plans together with backend developers. Understand the customer value founded on requirements in order to participate in functional definitions.

uCertificate Tracks Objectives

- **UI Architect**

Coordinate requirements implementation between functional areas and development teams. Build high-performance teams based on people development.

Understand responsibility over the frontend delivery.



Web Development Track

• Objectives

Understand the basis of web development core concepts.

Meet Globant best practices and understand common development flows and structures.

Integration between different profiles and specializations.



Web Development Track

- **Group project: a very simple twitter client**

We'll start a project at the beginning of the module in order to apply what we're learning on each class. We'll finalize the project and it will be part of the final evaluation.



Web Development Track

- **Evaluation**

At the end of the module there will be a challenging test :). Results will be returned to each participant via email after the module finalization.



Let's start!

Web Development

Back to the roots: introduction to the World Wide Web

- **Class Objective**

Understand the web environment, how it works and in which ways users are involved. Learn common concepts and patterns.



Back to the roots

Introduction to the World Wide Web

- **The Web Platform**

Introduction to the Web and Web Applications.

- **What's a Document?**

Introduction to browsers rendering.

- **What's a Document for users?**

Introduction to user experience, usability and accessibility.

- **Web Development core concepts applied to documents**

Introduction to common concepts, patterns and practices.

THE WEB



The Internet
(a.k.a Everything in the middle)



The Client(s)

The Server



WEB DEVELOPMENT

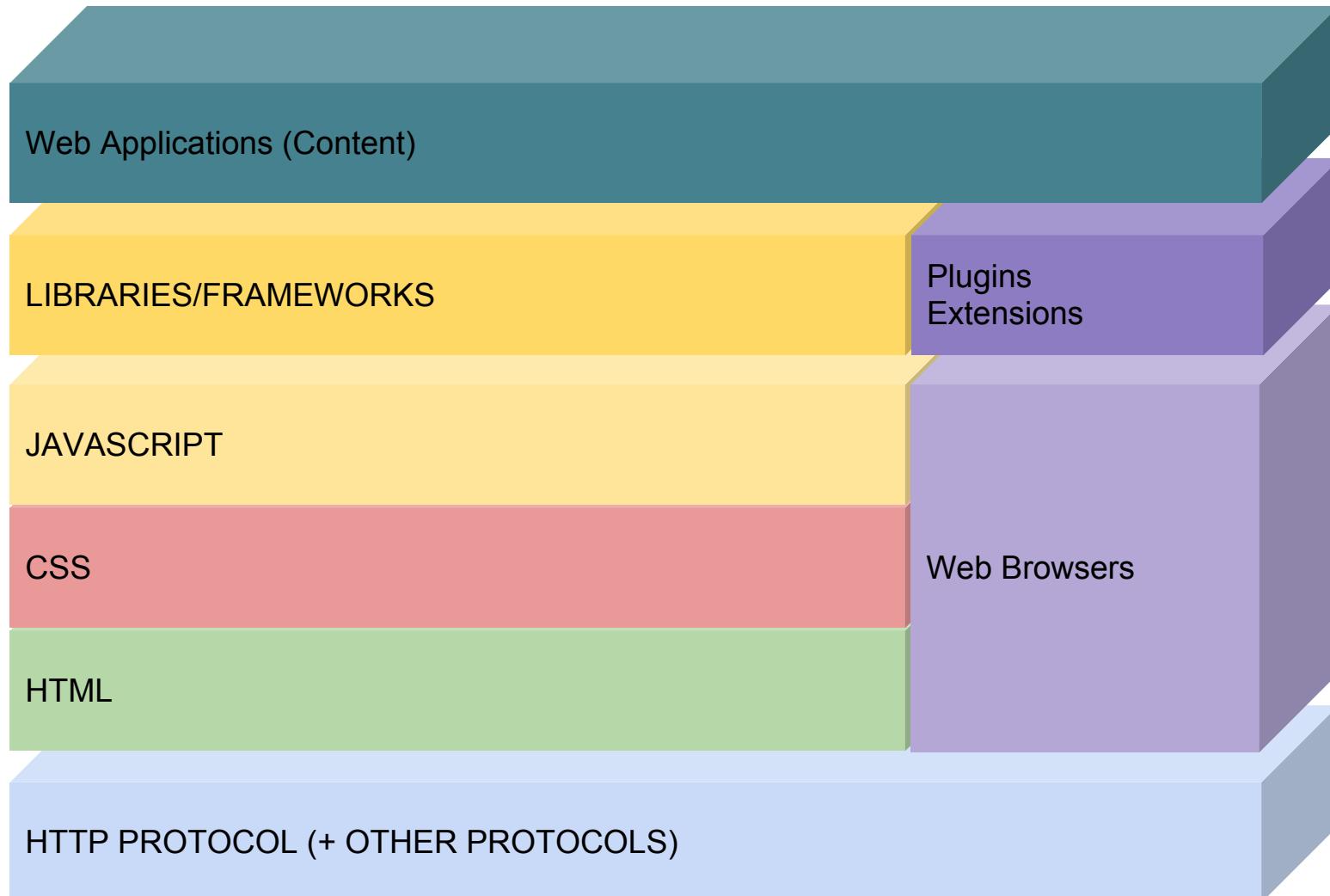


Download more graphics at www.psdgraphics.com

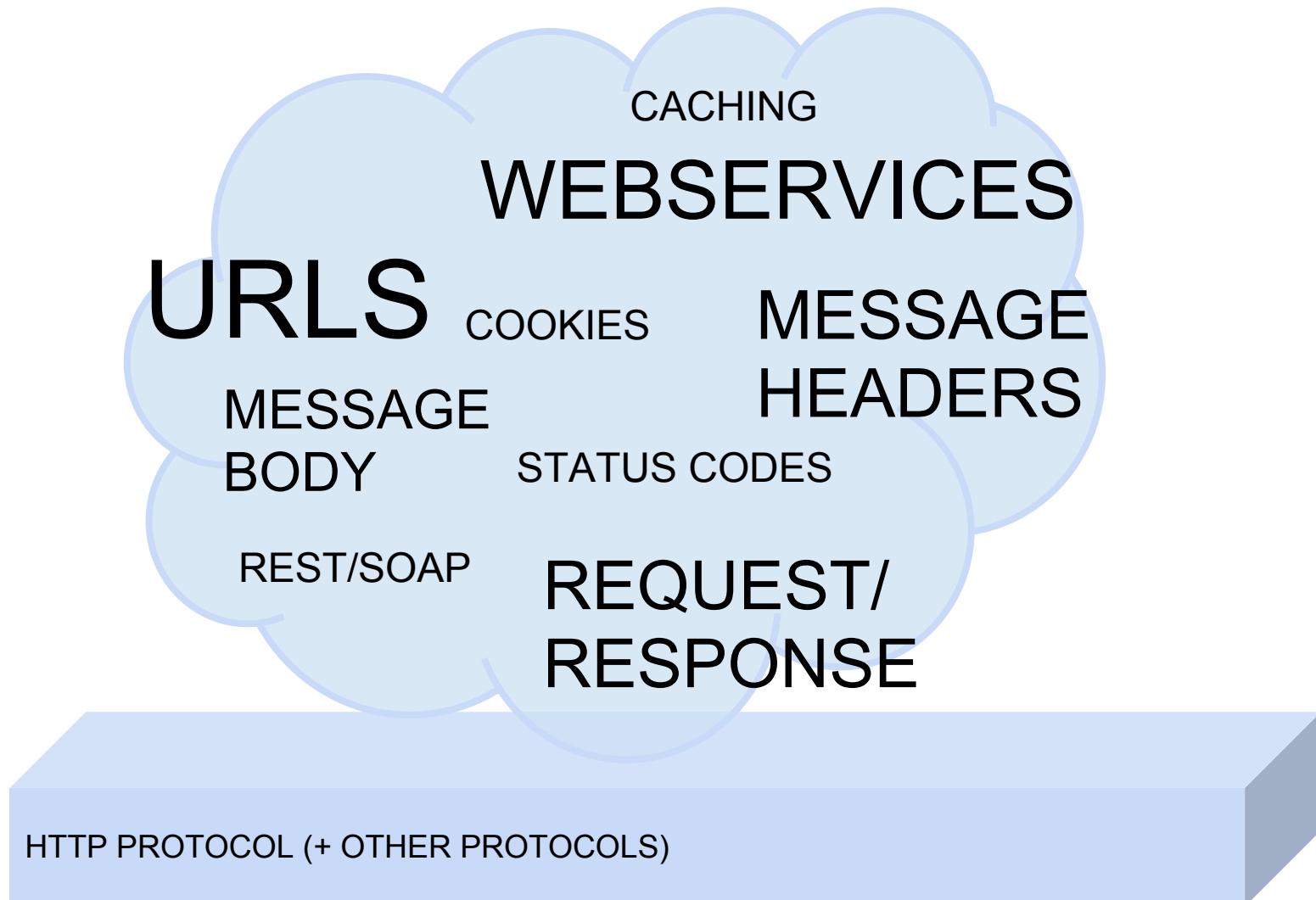




THE WEB PLATFORM

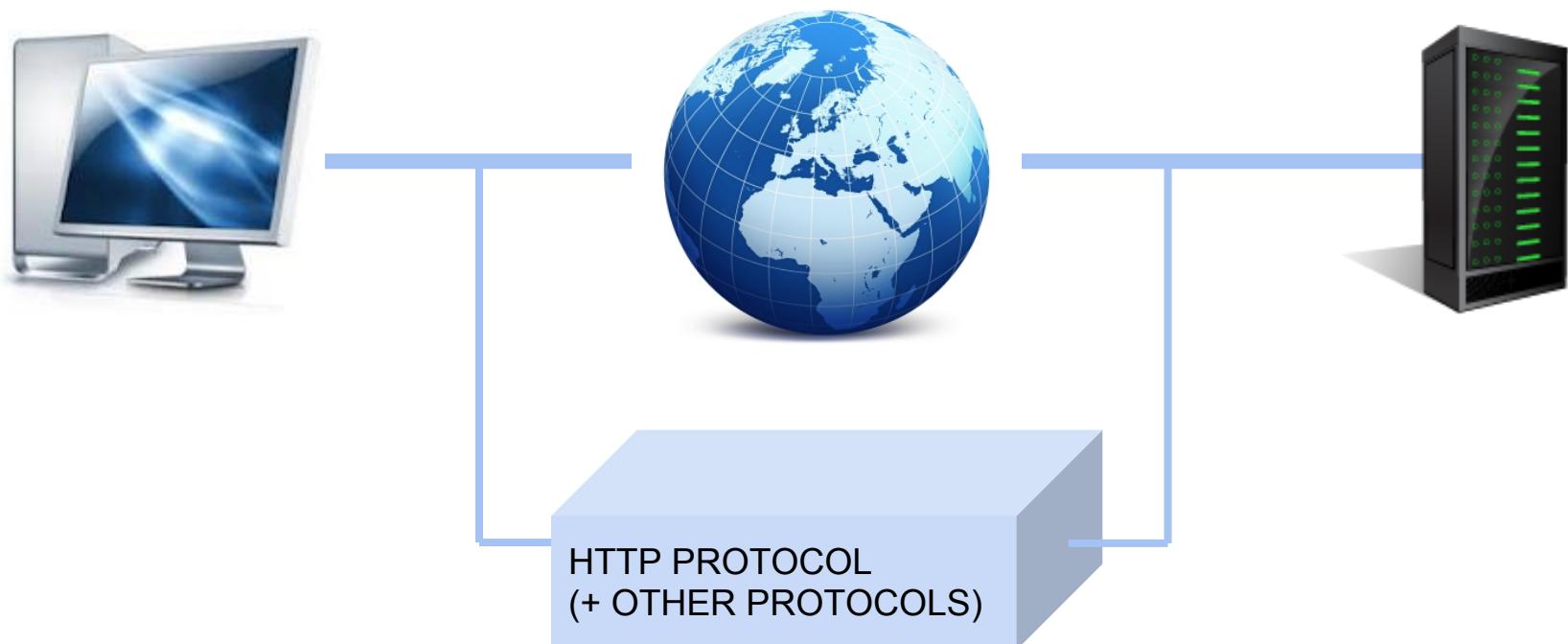


THE WEB PLATFORM: INTERNET



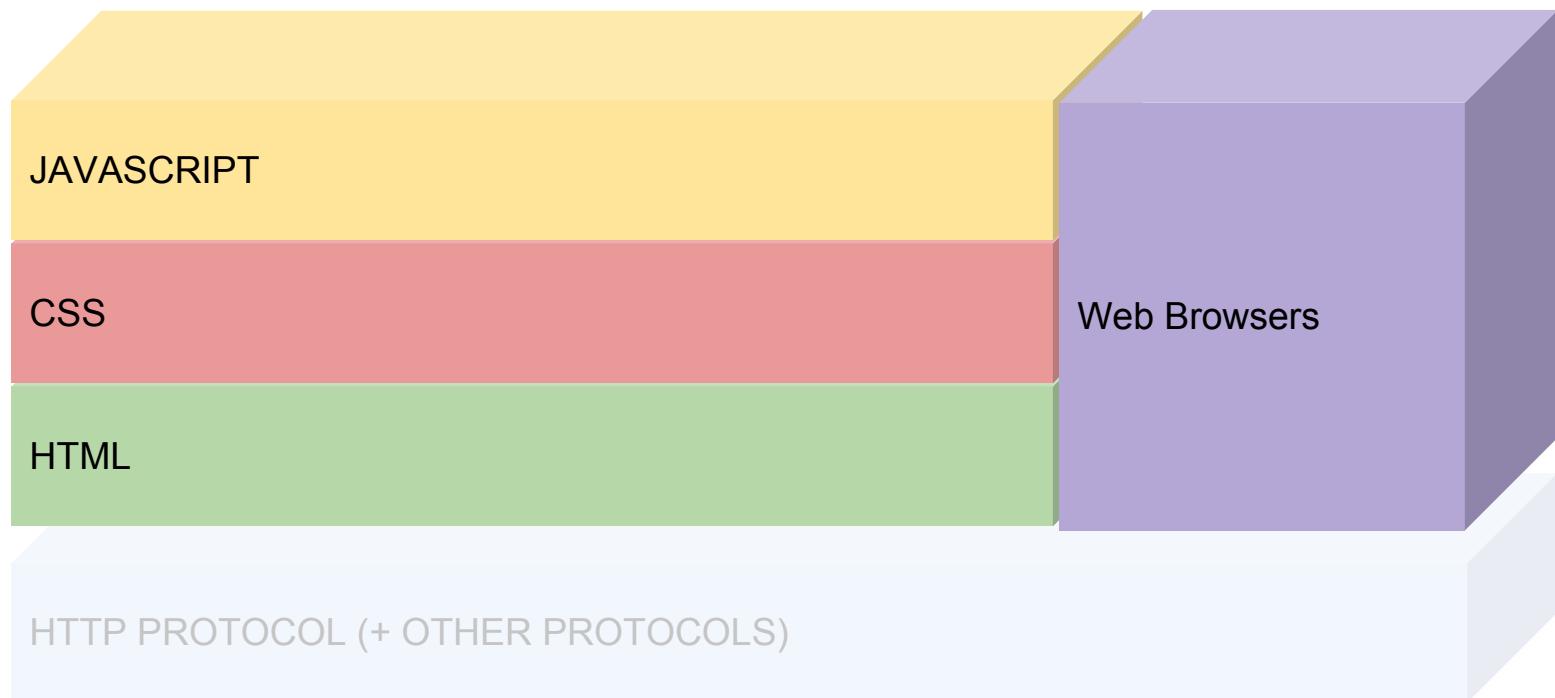


HTTP PROTOCOL





THE WEB PLATFORM



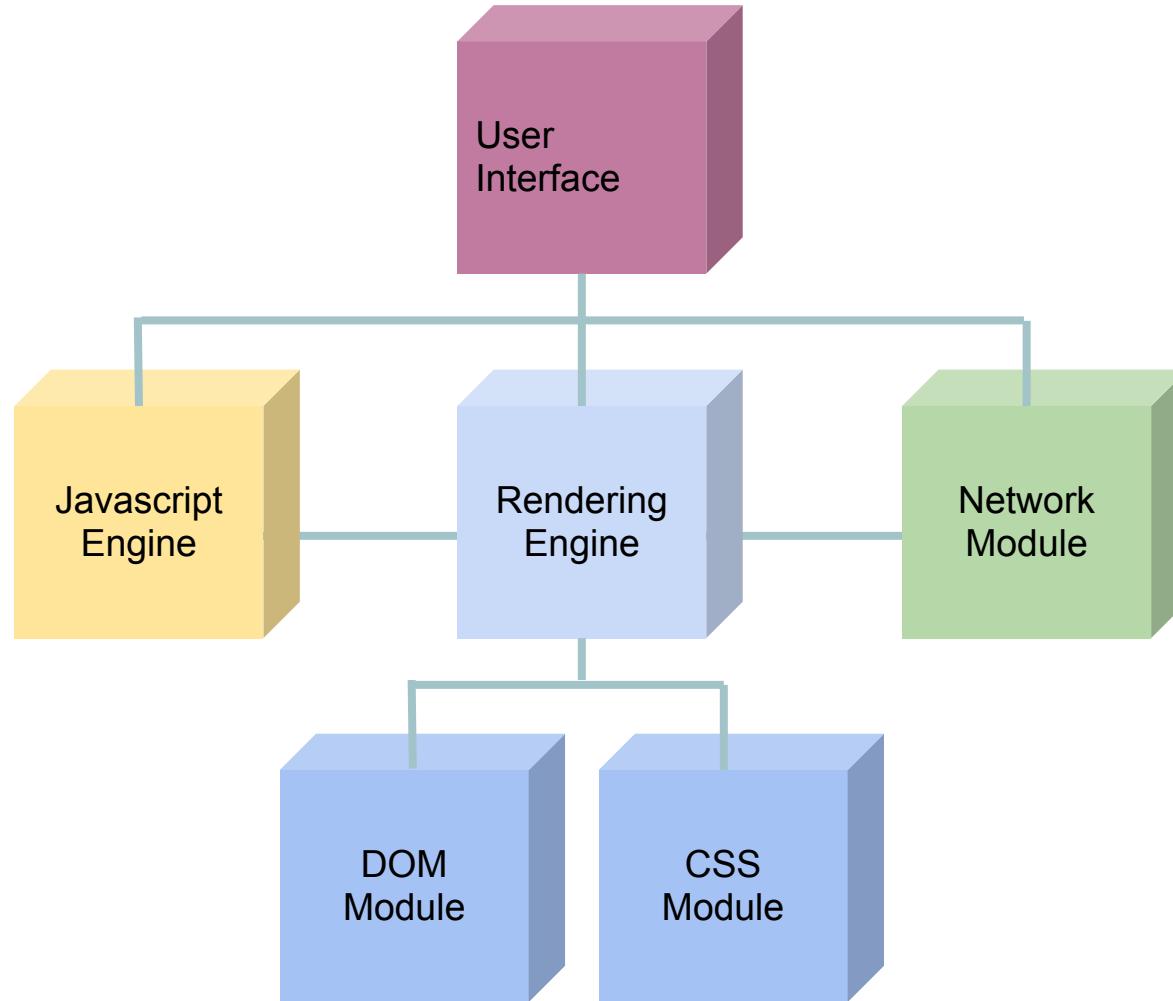


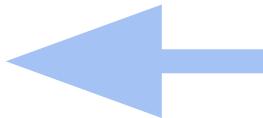
WEB BROWSERS



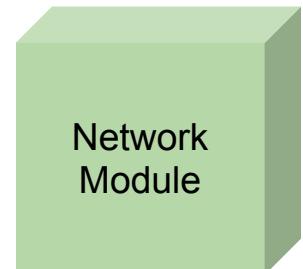
A web browser is any **agent** capable of **retrieve** and **display** **content** from the **World Wide Web**

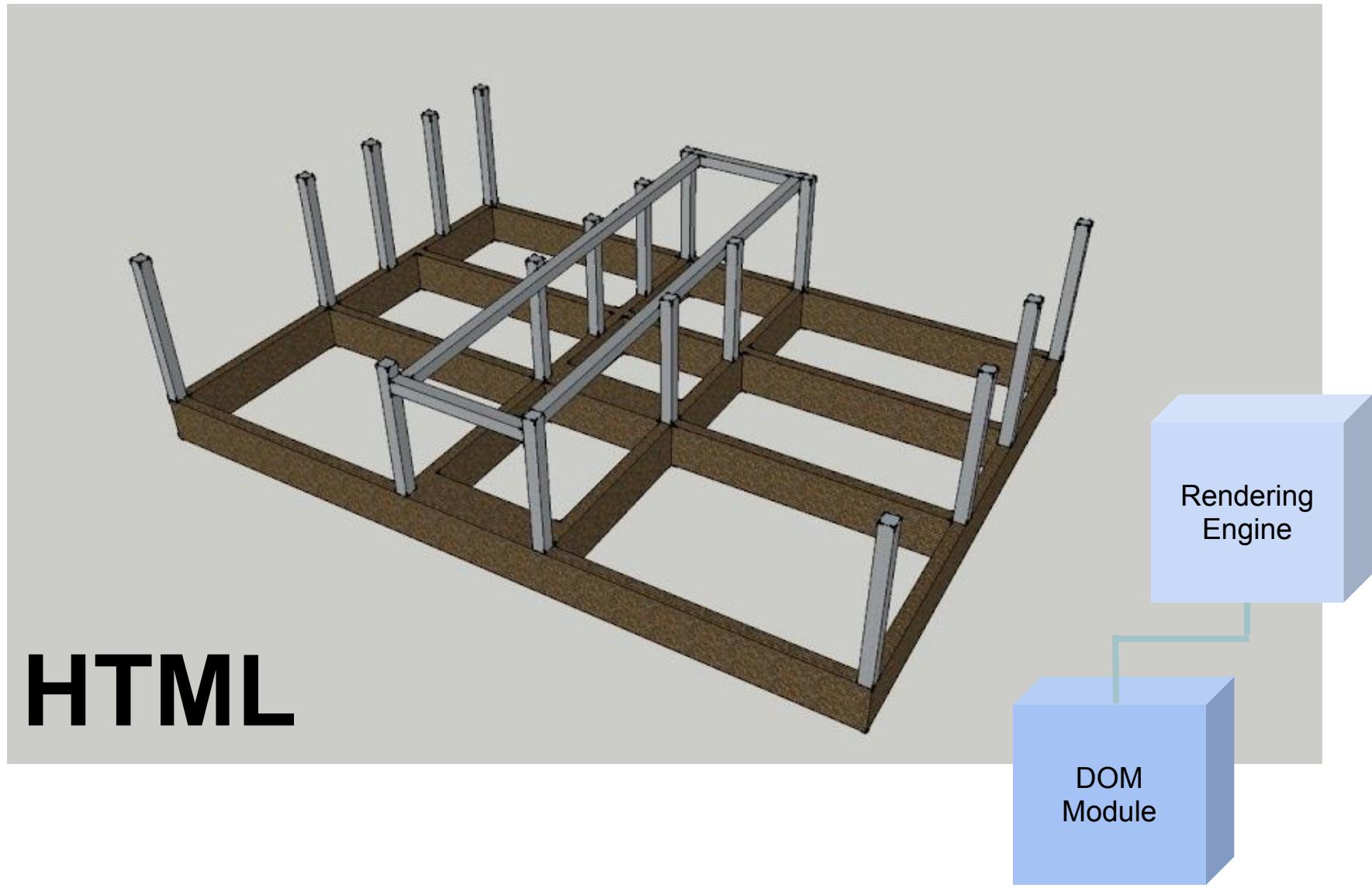
BROWSER ARCHITECTURE

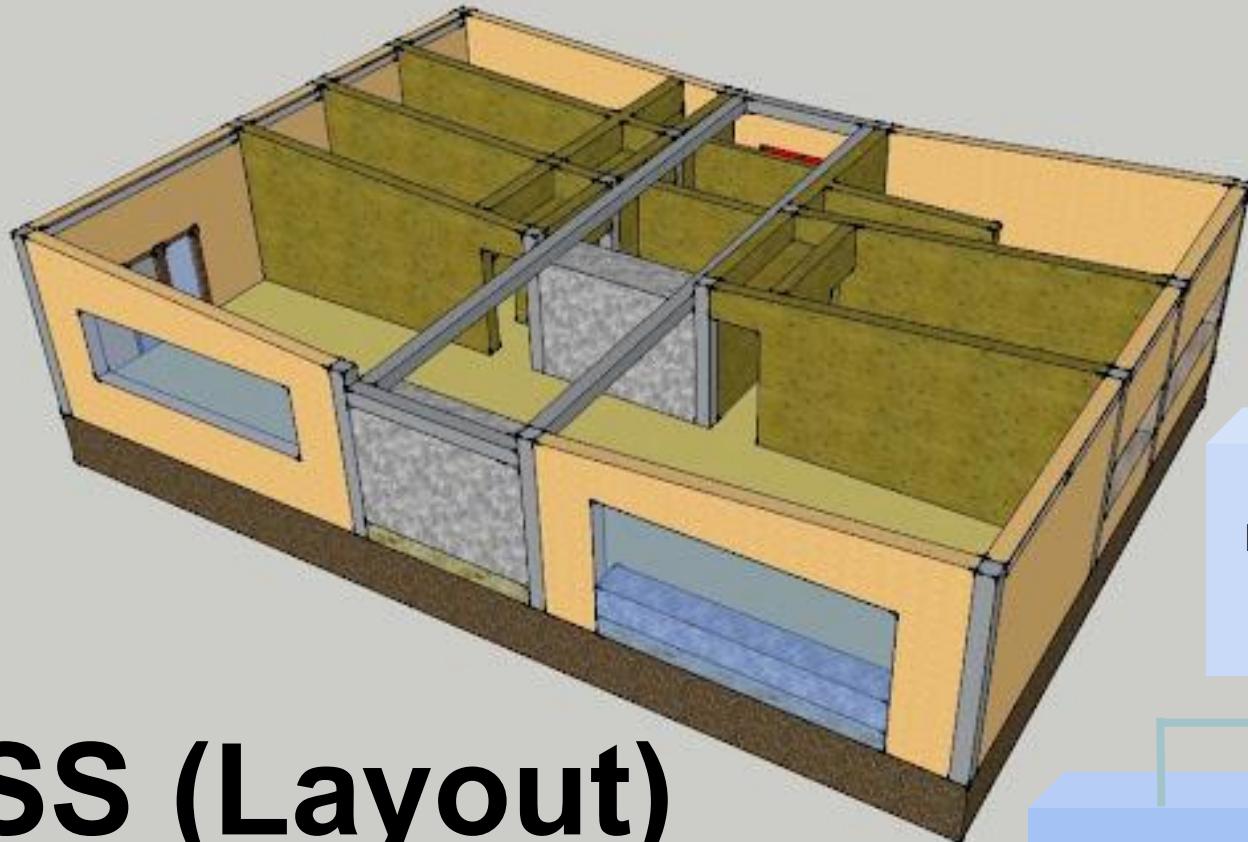




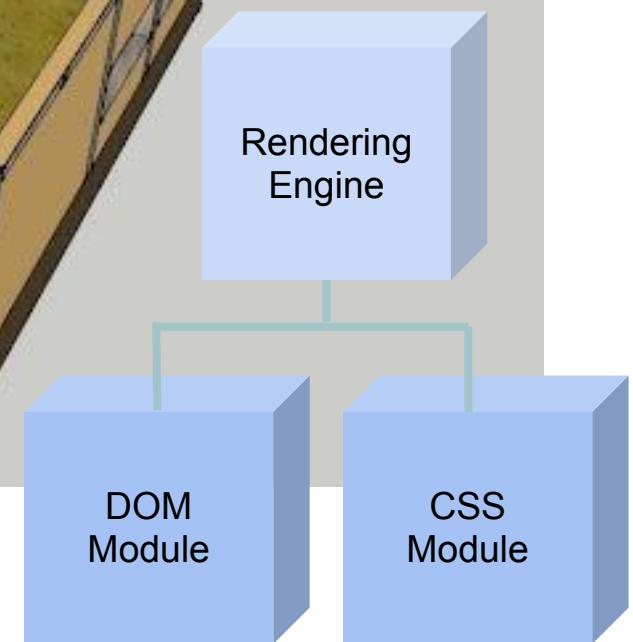
Resources







CSS (Layout)

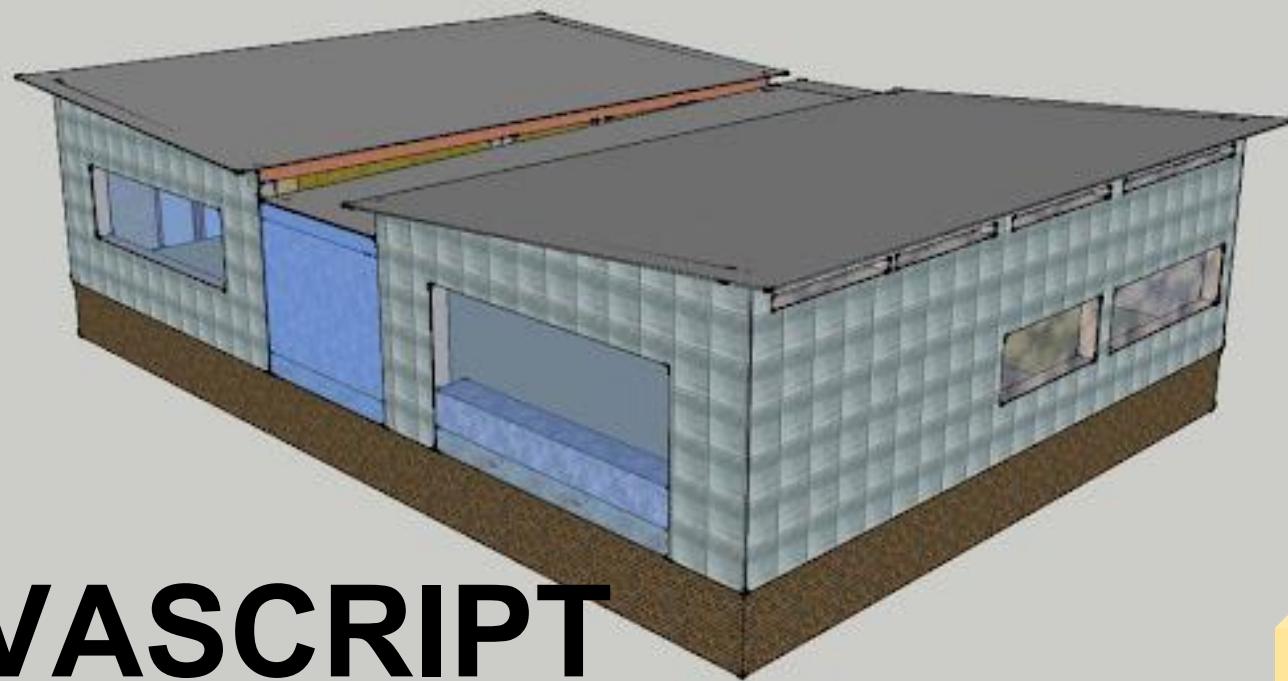




CSS (Style)

Rendering
Engine

CSS
Module

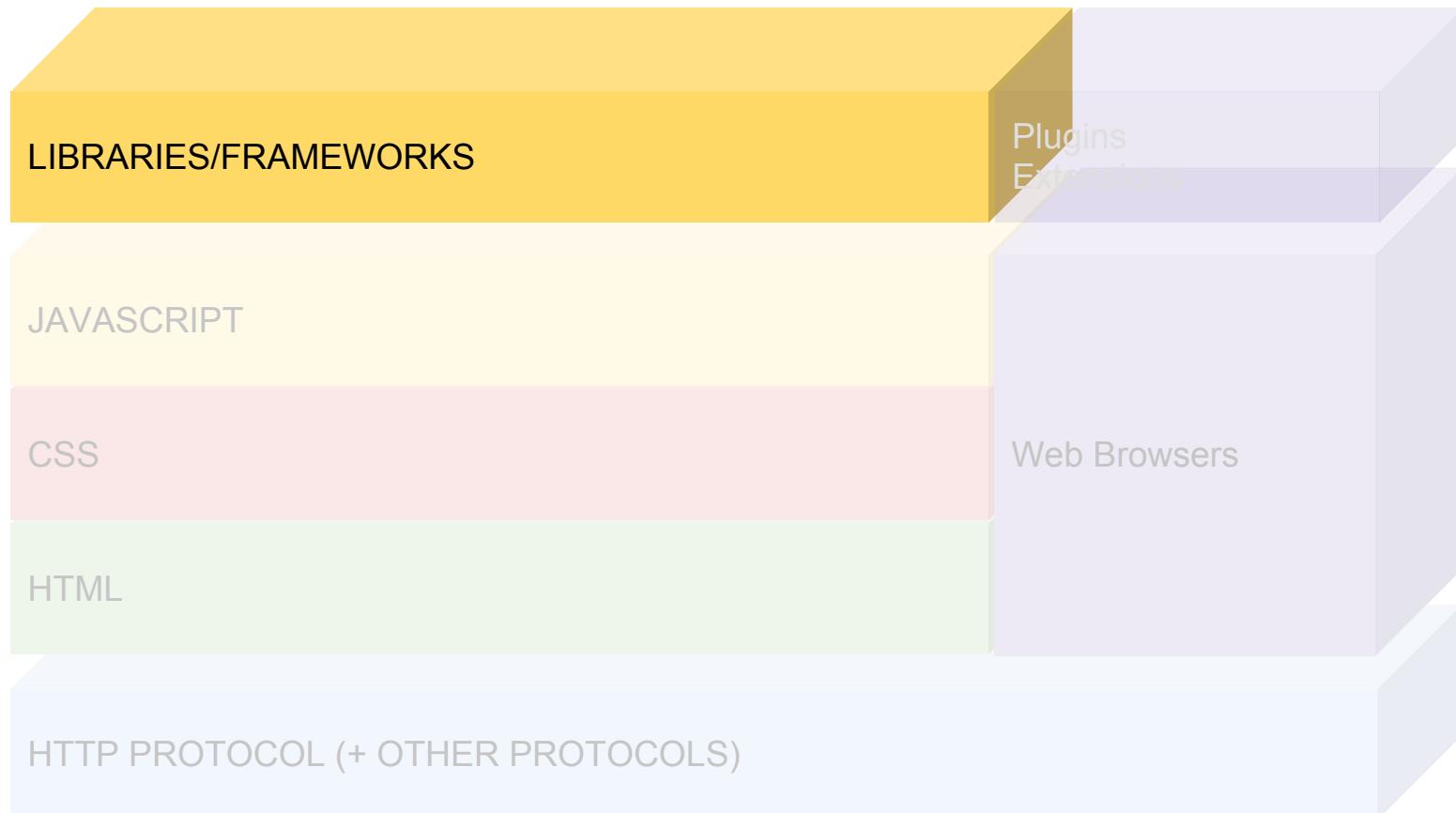


JAVASCRIPT

Javascript
Engine



THE WEB PLATFORM





LIBRARIES AND FRAMEWORKS

The Web Platform is rich on **Libraries and Frameworks** that **build upon** the basic Platform **APIs** to facilitate, guide and contribute to the development of **Rich Internet Applications**.



LIBRARIES AND FRAMEWORKS

JAVASCRIPT



dōjō

 BACKBONE.JS

prototype

CSS

Bootstrap



 compass

 blueprintcss

HTML
(Template Engines)

handlebars

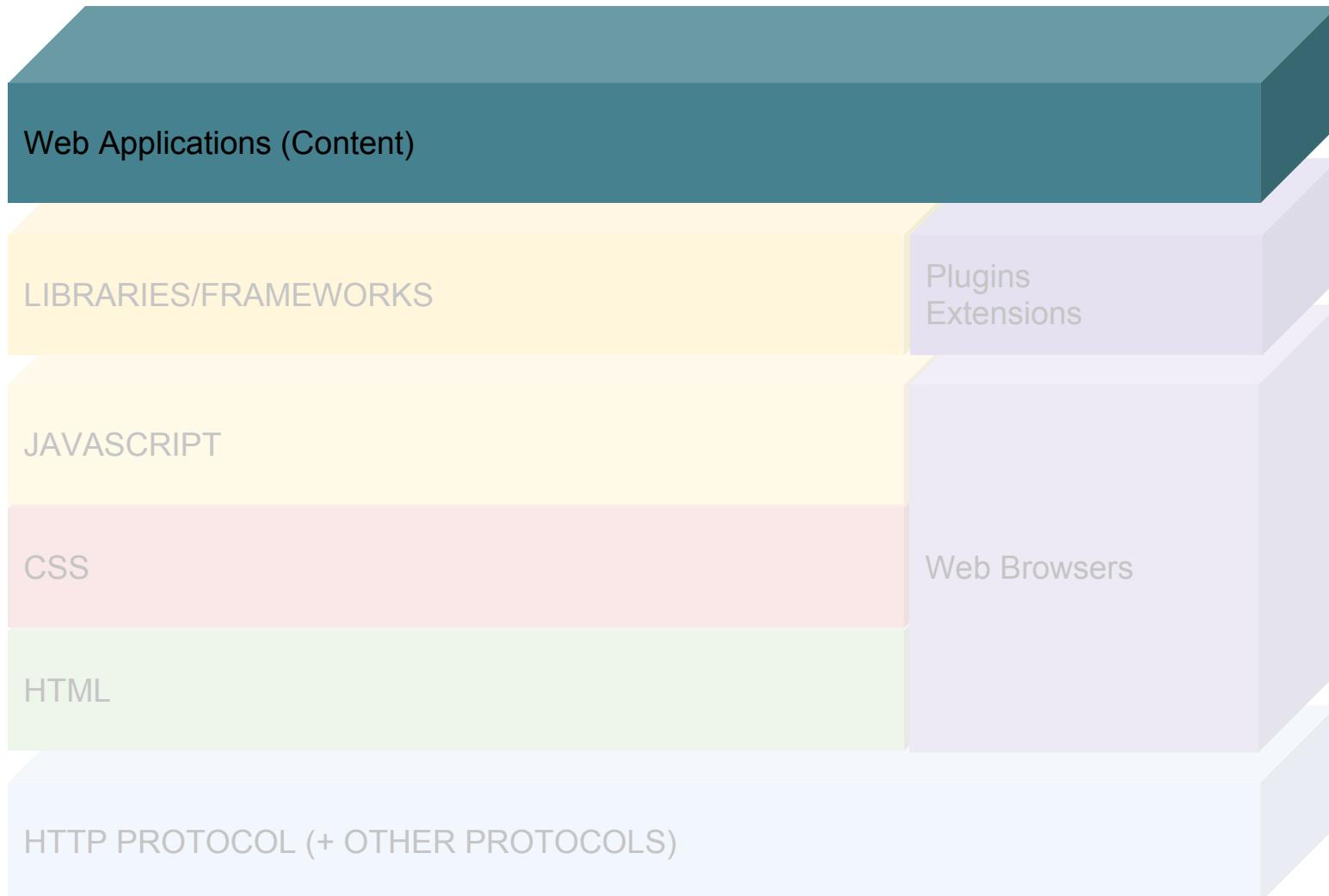


Haml.

{markup haiku}



THE WEB PLATFORM





WEB PAGE

MEANWHILE IN THE 90's

Google!

Search 1,326,920,000 web pages

Google Search

In honor of our [10th birthday](#), we've brought back our oldest available index. Take a look back at Google in January 2001.

[Google Home](#) - [Google 2001](#) - [FAQ](#) - [Privacy](#)

©2001 Google

WEB PAGE

MEANWHILE IN THE 90's

TESLA Home Page - New Version - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Discuss Messenger

Address http://tesla.desy.de/new_pages/0000_TESLA_Project.html Go Links >

The TESLA Project The International Linear Collider and X-ray Laser Project News & Search
Interdisciplinary Research Famous links (TDR incl. XFEL Supplement etc.) Free-Electron Laser
Collaboration / Reports Last update: 30.01.2003. Suggestions to the webmaster TESLA Test Facility

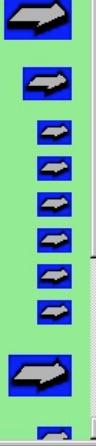
Welcome

TESLA for Press and Public

 english  german

Visit Tour

- **Facts and Figures**
- General
- Technical Data
- Schedule
- International Participation
- Tunnel Route
- TESLA Test Facility
- **A Linear Collider With Integrated X-ray Laser**

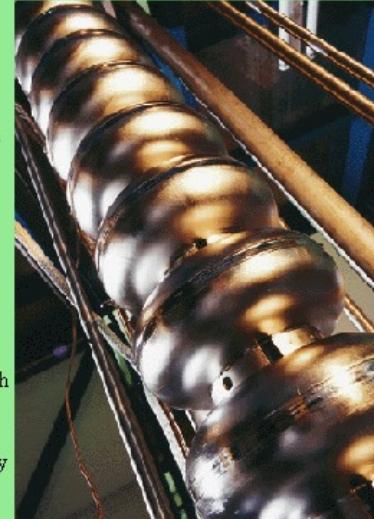


"TESLA"

A new large-scale facility is currently being planned and developed by an international collaboration at the Deutsches Elektronen-Synchrotron DESY in Hamburg, Germany. **TESLA** - the acronym stands for:

T era Electron Volt
E nergy
S uperconducting
L inear
A ccelerator

opens up new possibilities for both research and a broad range of applications in a variety of fields. Characterized by an unusual degree of versatility, the new facility is ideally suited to form the heart of an innovative, interdisciplinary research and development center.



Local intranet



The Web Platform has evolved so
much that is now a full stack
Application Development Platform.



WEB APPLICATION

Búsqueda Imágenes Correo Drive Calendar Sites Grupos Contactos Maps Más ▾

Google web application matias.figueroa@globant.com ▾

Búsqueda Aproximadamente 2.020.000.000 resultados (0,15 segundos)

Filtro SafeSearch desactivado ▾

Configuración de búsqueda

Búsqueda avanzada

Historial web

Buscar en la Ayuda

Web

Imágenes

Maps

Vídeos

Noticias

Shopping

Libros

Blogs

Más

Cualquier fecha

Últimas 24 horas

Última semana

Intervalo personalizado...

Todos los resultados

Por tema

Cualquier tamaño

Grande

Mediano

Icono

Mayor que...

Tamaño exacto...



WEB APPLICATION

github

Search or Type a Command ? ⚙ Explore Gist Blog Help matix

PUBLIC jquery / jquery Watch Star 16,932 Fork 2,327

Code Network Pull Requests 24 Graphs

jQuery JavaScript Library — Read more
<http://jquery.com/>

Clone in Mac ZIP HTTP Git Read-Only https://github.com/jquery/jquery.git Read-Only access

branch: master Files Commits Branches 6 Tags 82 Downloads

Latest commit to the master branch

Revert "Chrome fails in ajax.js tests because TestSwarm/Nginx won't g... ..." 2 comments

dmethvin authored 2 days ago commit ebf4d43011

jquery /

name	age	message	history
build	12 days ago	Tagging the 1.8.2 release. [dmethvin]	
speed	3 months ago	Fixes a variety of typographical problems. Closes gh-853 [faulkner]	
src	2 days ago	Fix #12537, element.css('filter') returns undefined in IE9. Close gh-942 [mikesherov]	
test	2 days ago	Revert "Chrome fails in ajax.js tests because TestSwarm/Nginx won't g... [dmethvin]	
.editorconfig	23 days ago	Update .editorconfig with new properties. Close gh-915. [sindresorhus]	
.gitattributes	2 years ago	Mark *.jar files as binary. [hwiechers]	
.gitignore	4 months ago	Allow users to store custom dist destinations in dist/.destination.json [rwldrn]	
.gitmodules	2 years ago	Update the Sizzle location to point to the newly-moved repo. [jeresig]	
ishintre	3 months ago	Adds ishintre files for grunt (default set), src, tests, Adants iQui [rwldrn]	

WEB APPLICATION

Grooveshark Search Popular Explore My Music Community Sharker Search

Songs Play All + Add All Sort by Date Added Filter

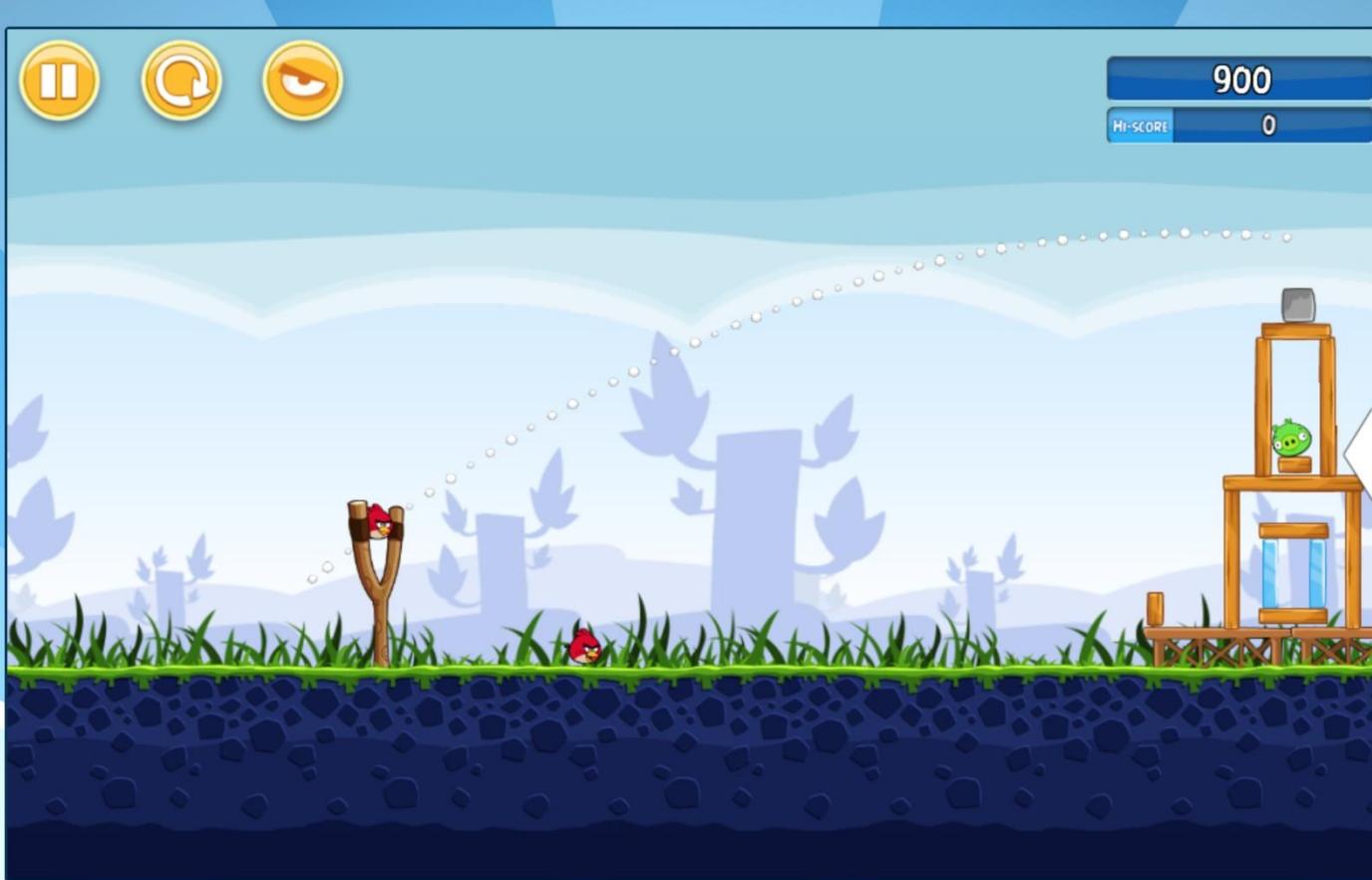
Favorites	Song	Artist	Album	Track #
	Opticon	Orgy	Unknown	
	T.H.E (The Hardest Ever) (feat. Mick Jagger & Jer	will.i.am	T.H.E (The Hardest Ever)	1
	ScheiÃŸe	Lady Gaga	Born This Way	7
	Embody	SebastiAn	Total	1
	We Come Together	Goldfish	Get Busy Living	7
	Get Busy Living	Goldfish	Get Busy Living	2
	Judas	Lady Gaga	Judas	
	On the Floor (feat. Pitbull)	Jennifer Lopez	On the Floor	
	The Tempest	Pendulum	In Silico	10
	Megalomaniac (Radio Edit)	Incubus	Megalomaniac	
	Hey Eugene	Pink Martini	Hey Eugene!	9
	& Down	Boys Noize	Oi Oi Oi	1
	Elektrotechnique	De Jeugd van Tegenwoordig	De Lachende Derde	4
	Let's Never Stop Falling in Love	Pink Martini	Hang on Little Tomato	1
	Sympathique	Pink Martini	Sympathique	3
	S&M	Rihanna	Rihanna	
	I Wrote The Book - Original Mix	Beth Ditto	EP	
	La La Land	Green Velvet	Whatever	
	Don't Trust Me	3Oh3	New Forms Disc 2	3

Embody by SebastiAn on Total 77 Current Songs RADIO OFF Stations

The Grooveshark interface displays a sidebar with navigation links like 'Songs', 'Playlists', and 'PINBOARD'. The main area shows a list of songs with columns for 'Song', 'Artist', 'Album', and 'Track #'. Each song entry includes a play button, a checkmark, and a dropdown menu. Below the list is a tracklist with album art and song names. At the bottom, there's a playback bar showing the current song (Embody by SebastiAn), its duration (01:17 / 03:45), and various control icons.



WEB APPLICATION

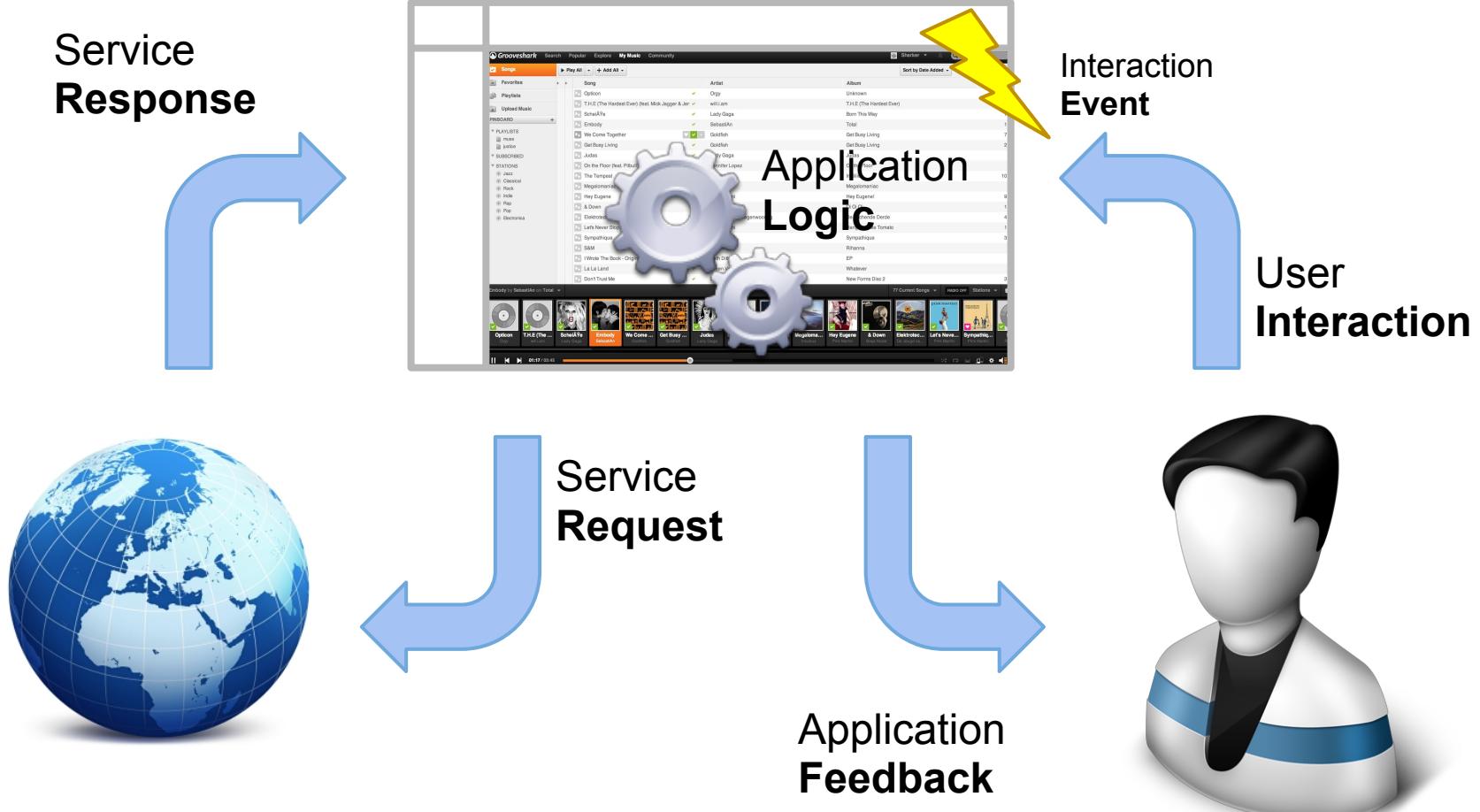




WEB APPLICATION

- Behaviour
- View
 - Layout
 - Look & Feel
 - Widgets
- Lifecycle

APPLICATION: BEHAVIOUR





APPLICATION: BEHAVIOUR

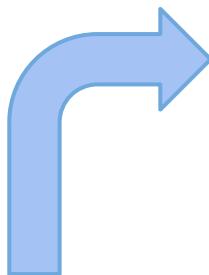
Example: Twitter - Tweet Something

The screenshot shows a mobile application interface for a social media platform. At the top, there is a navigation bar with four items: "Home" (represented by a house icon), "Connect" (represented by a person icon with an '@' symbol), "Discover" (represented by a hash tag icon), and "Me" (represented by a person icon). The main area features a user profile for "Matias Figueroa". The profile includes a small thumbnail image with the letters "MF" and the word "CENSORED" below it. Below the thumbnail, the name "Matias Figueroa" is displayed, followed by a link "View my profile page". To the right of the name are three statistics: "1,003 TWEETS", "276 FOLLOWING", and "104 FOLLOWERS". A large text input field contains the text "Tweeting stuff is fun !". Below this input field are two small icons: a camera and a location pin. To the right of the input field is a blue button labeled "Tweet" with a white hand cursor icon pointing at it. In the bottom left corner of the main area, there is a small footer snippet: "Who to follow · Refresh · View all". The bottom of the screen shows a partial view of other users' profiles, including "Lucile Rodriguez" and "Alfredo". On the right side of the screen, there is a sidebar titled "Tweets" which lists several tweets from different users, each with a small thumbnail image, the number of retweets, and a truncated message. One tweet from a user named "Personal" is fully visible: "Z “E F L P E V V ti".

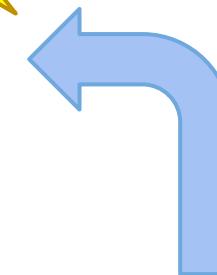


APPLICATION: BEHAVIOUR

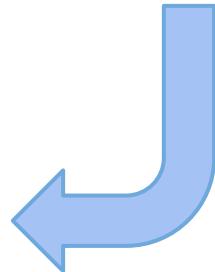
Status: 200 OK



button.tweet-button
"Click" Event



User clicks on
the "Tweet"
Button



POST <http://api.twitter.com/tweet/>
Body:
{message: "Tweeting stuff is fun!"}

Application
displays new
Tweet.



The screenshot shows the Grooveshark application interface. On the left is a sidebar with navigation links: Songs, Favorites, Playlists, Upload Music, PINBOARD, PLAYLISTS (containing 'muse', 'justice'), SUBSCRIBED (containing 'Jazz', 'Classical', 'Rock', 'Indie', 'Rap', 'Pop', 'Electronica'), and STATIONS (containing 'Jazz', 'Classical', 'Rock', 'Indie', 'Rap', 'Pop', 'Electronica'). The main area displays a list of songs with columns for Song, Artist, Album, and Track #. A search bar at the top right says 'Sharker' and 'Search'. Below the list is a preview section for the song 'Embody' by SebastiAn on 'Total'. The bottom of the screen shows a media player with controls for play/pause, volume, and track selection.

Application View Logic

Application "Business" Logic

Application Service Logic

APPLICATION: LAYOUT

Búsqueda Imágenes Correo Drive Calendar Sites Grupos Contactos Maps Más ▾

Google web application matias.figueroa@globant.com ▾

Búsqueda Aproximadamente 2.020.000.000 resultados (0,15 segundos)

Filtro SafeSearch desactivado ▾ Configuración de búsqueda

Búsqueda avanzada Historial web Buscar en la Ayuda

Web Imágenes Maps Vídeos Noticias Shopping Libros Blogs Más

Cualquier fecha Últimas 24 horas Última semana Intervalo personalizado...

Todos los resultados Por tema

Cualquier tamaño Grande Mediano Ícono Mayor que... Tamaño exacto...

APPLICATION: LAYOUT

Búsqueda Imágenes Correo Drive Calendar Sites Grupos Contactos Maps Más ▾

Google web application matias.figueroa@globant.com ▾

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Búsquedas avanzadas Historial web Buscar en la Ayuda

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Cualquier tamaño Grande Mediano Ícono Mayor que... Tamaño exacto...

Our Methodology Project Phases Analysis Design Build Project Management Iterative Process

Flow Interactive Phrasing Embedded Sectioning Metadata

Project Phases Analysis Design Build Project Management Iterative Process

Header

APPLICATION: LAYOUT

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Configuración de búsqueda

Búsqueda avanzada

Historial web

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Maps

Vídeos

Noticias

Shopping

Libros

Blogs

Más

Cualquier fecha

Últimas 24 horas

Última semana

Intervalo personalizado...

Todos los resultados

Por tema

Cualquier tamaño

Grande

Mediano

Icono

Mayor que...

Tamaño exacto...

Diagramas y imágenes redactadas:

- Diagrama de flujo de datos o procesos.
- Diagrama de arquitectura de sistema con componentes como Web Server, Web Application, Database, y Firewall.
- Diagrama de protocolos de red.
- Diagrama de diseño web con secciones como Interactive, Phrasing, Embedded, Heading, Sectioning, y Metadata.
- Diagrama de metodología de desarrollo.
- Diagrama de flujo de trabajo.
- Imagen de una interfaz de usuario de administración de proyectos.
- Imagen de una interfaz de usuario de análisis de datos.

Navigation

APPLICATION: LAYOUT

Búsqueda Imágenes Correo Drive Calendar Sites Grupos Contactos Maps Más ▾

Google web application matias.figueroa@globant.com ▾

Búsqueda Aproximadamente 2.020.000.000 resultados (0,15 segundos)

Filtro SafeSearch desactivado ▾

Configuración de búsqueda

Búsqueda avanzada

Historial web

Buscar en la Ayuda

The screenshot shows a search results page for "web application". The left sidebar is highlighted with a red box and contains filters for Web, Imágenes, Maps, Videos, Noticias, Shopping, Libros, Blogs, and Más. It also includes sections for Cualquier fecha (Ultimas 24 horas, Última semana, Intervalo personalizado...), Todos los resultados (Por tema), and Cualquier tamaño (Grande, Mediano, Icono, Mayor que..., Tamaño exacto...). The main area displays a grid of 18 images representing different application components and diagrams, such as system architecture, user interface snippets, and database interactions. On the right side, there are links for Configuración de búsqueda, Búsqueda avanzada, Historial web, and Buscar en la Ayuda.

Sidebar

APPLICATION: LAYOUT

Búsqueda Imágenes Correo Drive Calendar Sites Grupos Contactos Maps Más ▾

Google web application matias.figueroa@globant.com ▾

Búsqueda Aproximadamente 2.020.000.000 resultados (0,15 segundos) Filtro SafeSearch desactivado ▾ Configuración de búsqueda

Web Imágenes Maps Vídeos Noticias Shopping Libros Blogs Más

Cualquier fecha Últimas 24 horas Última semana Intervalo personalizado...

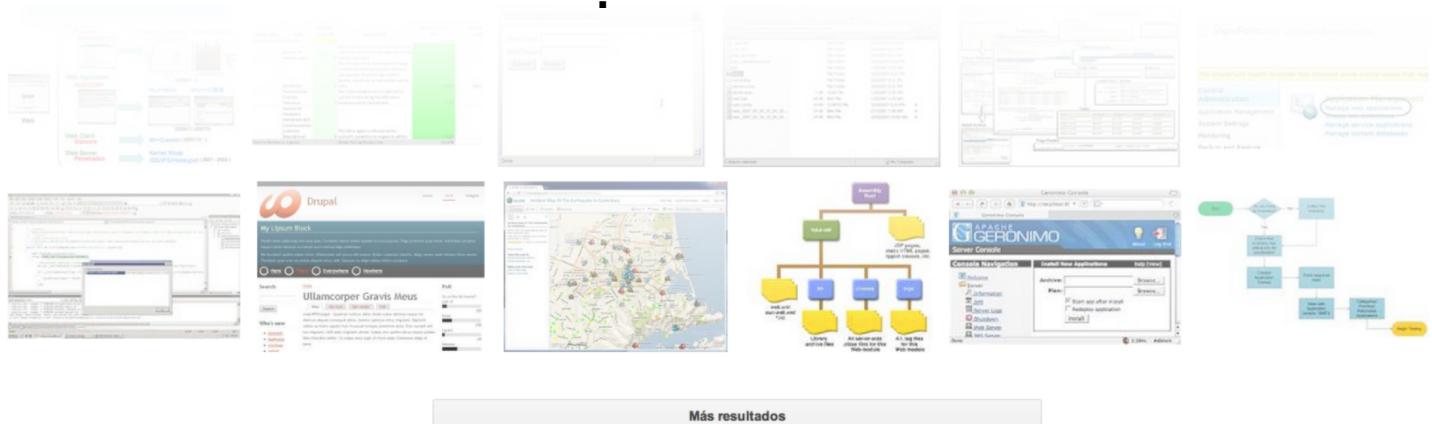
Todos los resultados Por tema

Cualquier tamaño Grande Mediano Ícono Mayor que... Tamaño exacto...

Content



APPLICATION: LAYOUT



Página principal de Google Imágenes

Cambiar a la versión básica

Ayuda

Enviar comentarios

Página principal de Google

Programas de publicidad

Soluciones Empresariales

Privacidad y condiciones

Todo acerca de Google

Footer

APPLICATION: WIDGETS

Google search results for "web application".

Approximately 2,020,000,000 results (0,15 seconds).

Filtro SafeSearch desactivado.

Configuración de búsqueda.

Búsqueda avanzada.

Historial web.

Buscar en la Ayuda.

Widgets displayed:

- Left sidebar:**
 - Web
 - Imágenes
 - Maps
 - Vídeos
 - Noticias
 - Shopping
 - Libros
 - Blogs
 - Más
- Top right:**
 - Cualquier fecha
 - Últimas 24 horas
 - Última semana
 - Intervalo personalizado...
- Middle left:**
 - Todos los resultados
 - Por tema
- Bottom left:**
 - Cualquier tamaño
 - Grande
 - Mediano
 - Icono
 - Mayor que...
 - Tamaño exacto...
- Content area (main grid):**
 - Search interface (Sign in, search bar, filters).
 - Diagram of a web application architecture showing components like Web Server, Application Server, Database, and Cache.
 - Diagram of a web service architecture showing components like Web Client, Web Service Registry, and Web Service.
 - Diagram of a distributed system architecture showing components like Frontend, Backend, and Data Layer.
 - Diagram of a web application flow showing stages like Analysis, Design, Build, and Test.
 - Diagram of a software development process showing iterative phases and feedback loops.
 - Project management tool interface showing tasks, milestones, and timelines.
 - Database management tool interface showing tables and data.
 - Reporting and analytics tool interfaces showing dashboards and data visualizations.
 - File management tool interface showing file lists and details.
 - Cloud storage interface showing file lists and details.



APPLICATION: WIDGETS

Google search results for "web application". The results include various diagrams and interfaces related to web applications. A red box highlights the search bar and the results area.

Gmail inbox. The search bar is highlighted with a red box. Below it is the "COMPOSE MAIL" button. The inbox list shows several emails from different senders, with the first one being a group email titled "Group dinner?". A red box highlights the inbox list area.

Group email titled "Group dinner?". The message body says "Hey guys, Do you want to get sushi tomorrow night? Usual place? Kenneth". Below the message are reply and forward buttons. To the right is a list of participants: Kenneth Joel, Alberto, Ana, Mary Lee, Simon, and Yan Tseytin. A red box highlights the message body and the participant list.

Inbox showing an ad for "50% Off Zurich Dining" from LivingSocial.com. The ad text says "www.LivingSocial.com - Amazing Daily Deals 50-90% Off Favorite Zurich Foods. Sign Up!" A red box highlights the ad area.



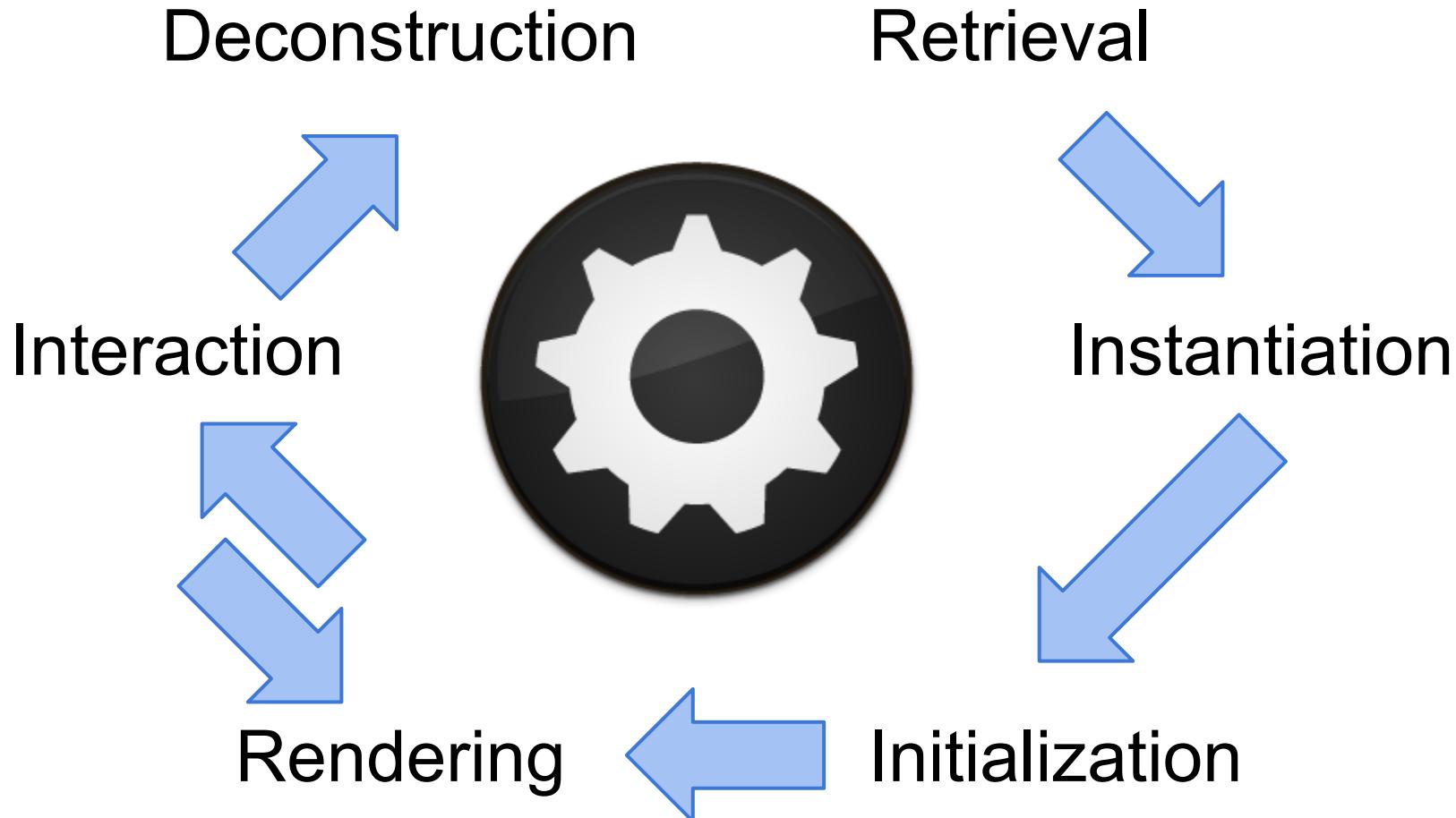
WIDGETS



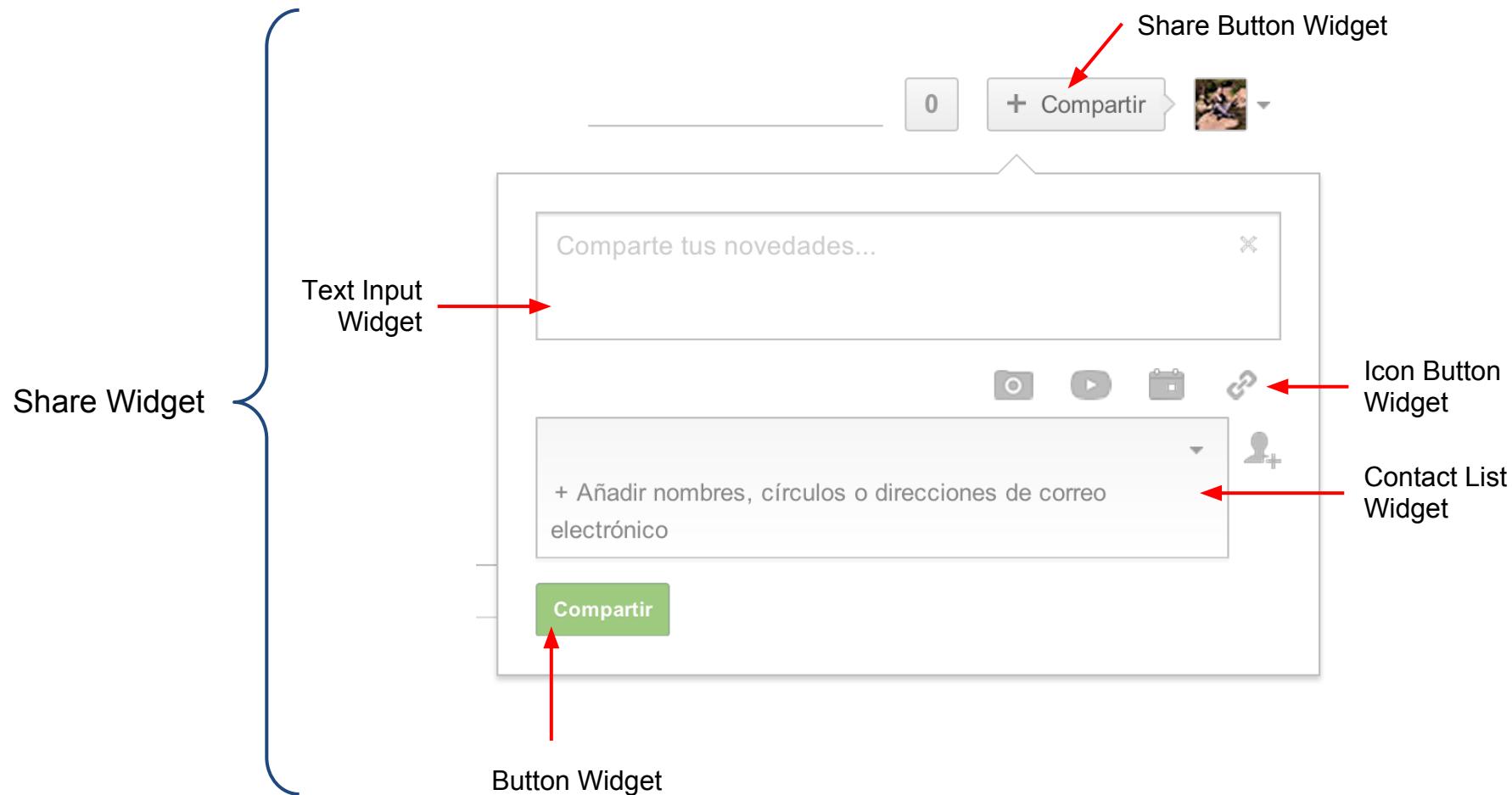
Self-Contained
Reusable
Composable
Customizable
Styleable



WIDGETS: LIFECYCLE



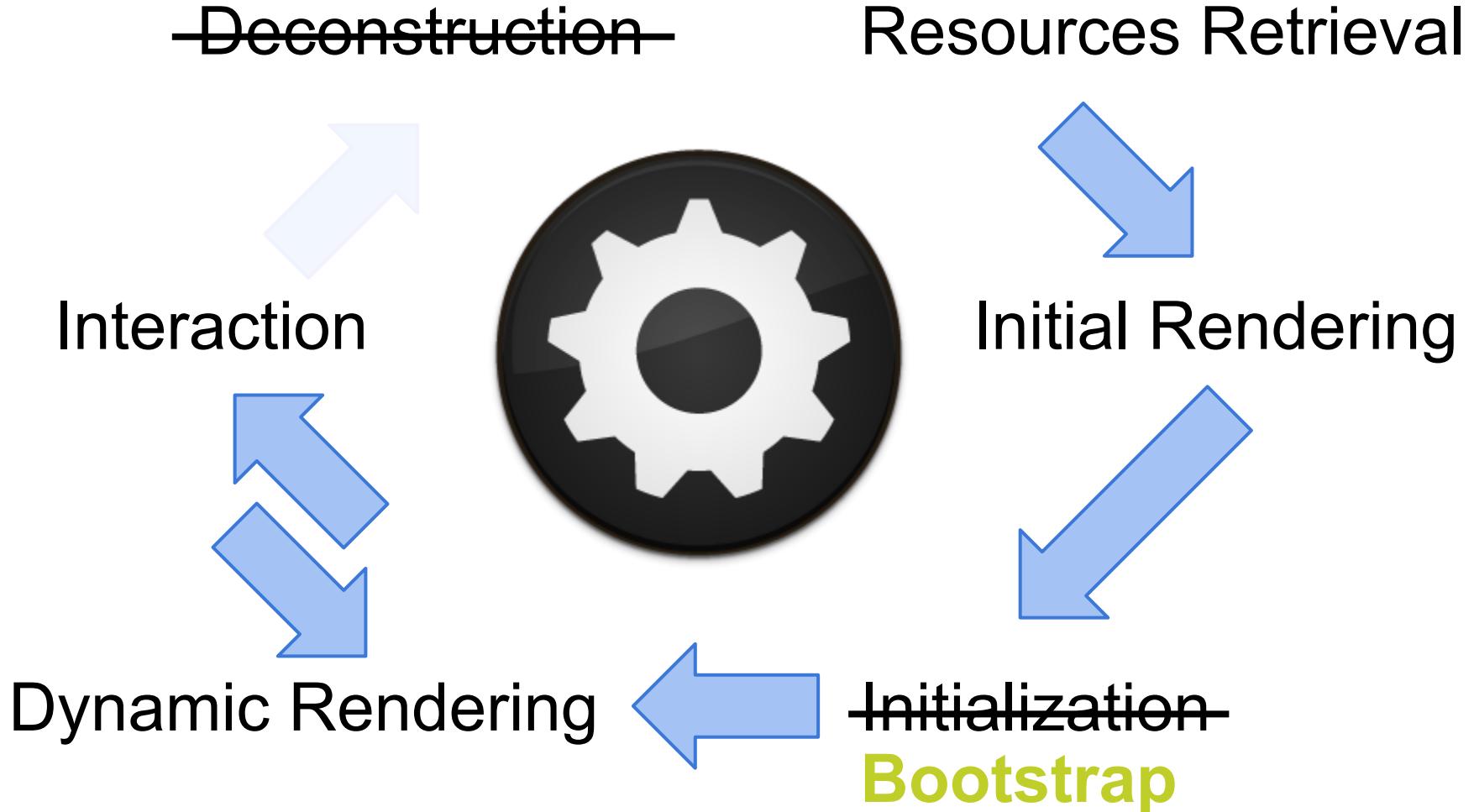
WIDGETS ARE COMPOSABLE

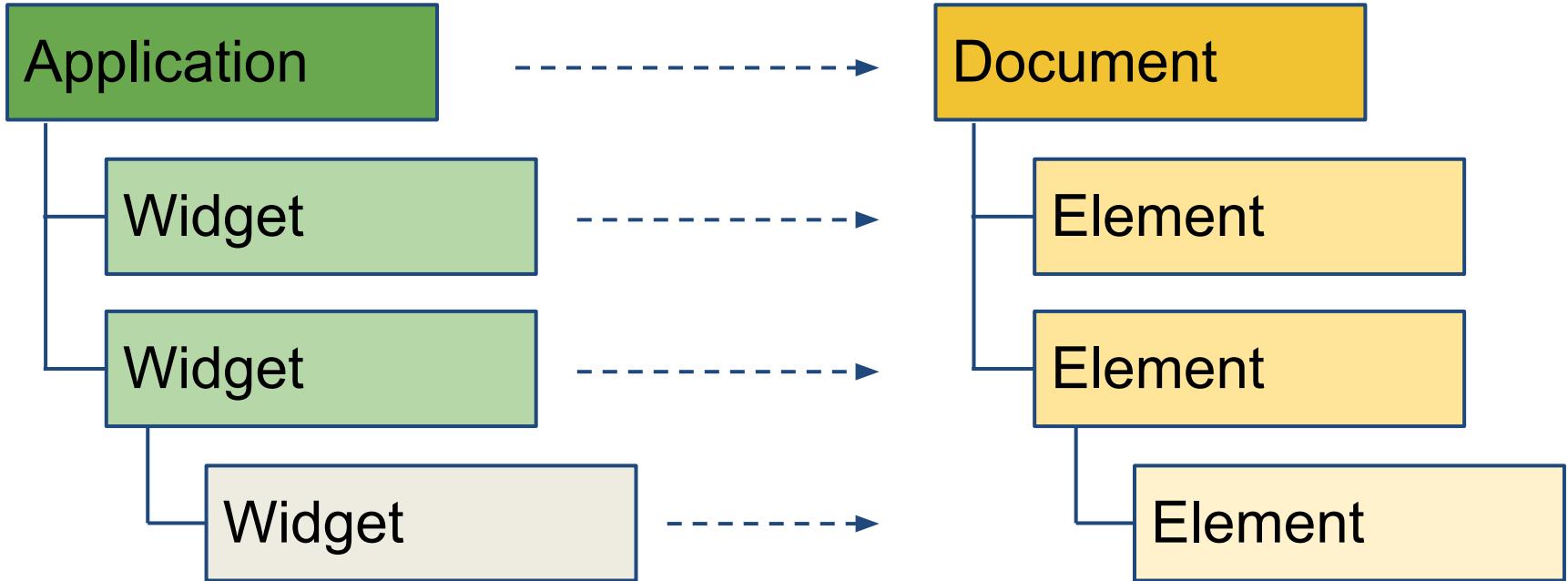




Web Applications are just **big compound widgets** that **orchestrate User Interaction.**

~~WIDGETS~~: LIFECYCLE APPLICATION





**Web Applications run on Web
Documents**

Thank
you!