

Desarrollo de APPs WEB

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Web Apps - Basics



Web server (NGINX)

- <https://www.nginx.com/resources/glossary/web-server/>

Browser (Mozilla)

- <https://www.mozilla.org/en-US/firefox/browsers/what-is-a-browser/>

Internet

- <https://www.youtube.com/watch?v=21eFwbb48sE>

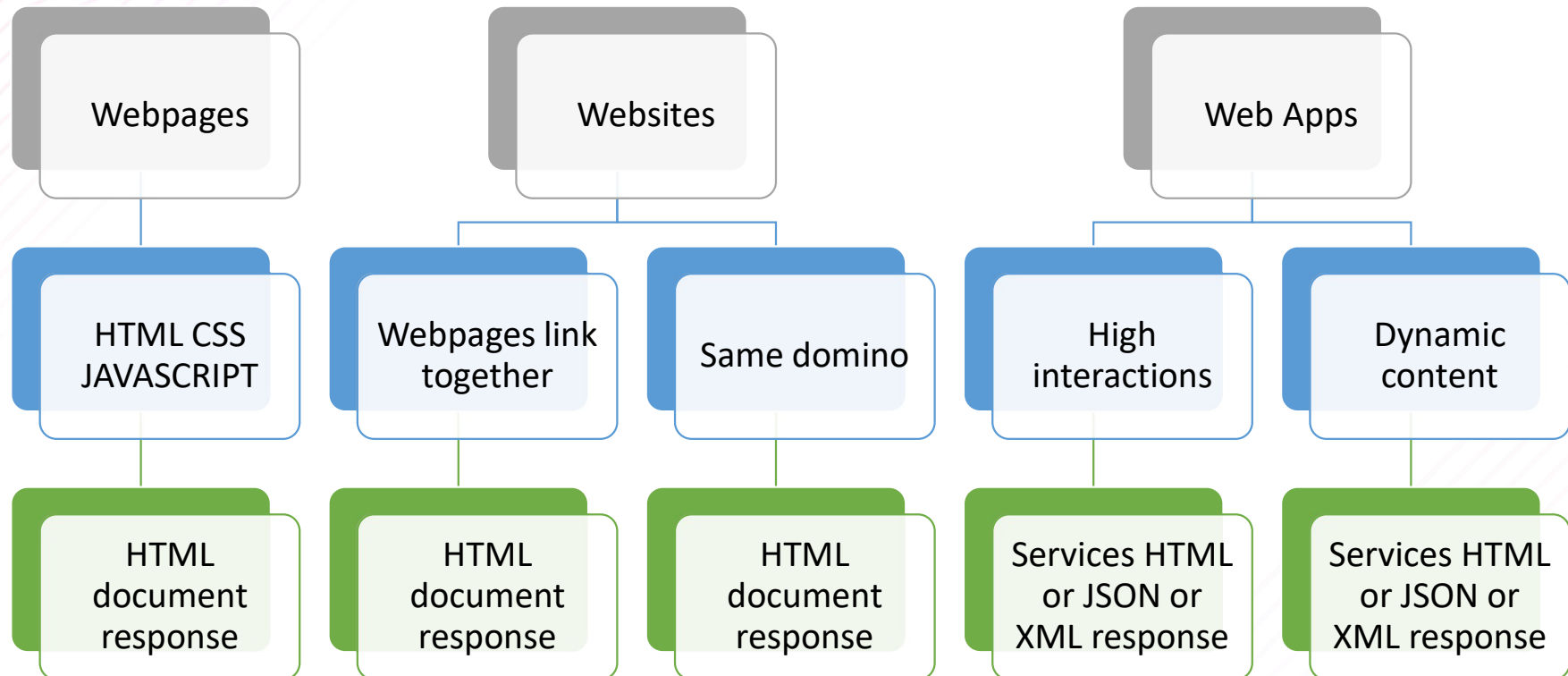
Cloud

- <https://www.youtube.com/watch?v=mxT233EdY5c>

Browser engines

- https://en.wikipedia.org/wiki/Browser_engine

Web Apps - Web types



Web Apps - Design process



Requirements

Service Level
Agreements (SLA)

add(Operations Level Agreements - OLAs)

SLA client based

SLA service based

SLA multilevel (organization - client - service)

G. J. Mirobi and L. Arockiam, "Service Level Agreement in cloud computing: An overview," 2015.

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Web Apps - Design process



Method (designing an SLA)	Declaration of the parties involved
	SLA Statement of Purpose
	List of services provided
	Detailed description of how services will be performed and when
	Supplier and customer requirements
	Rules for post-agreement management
	Acknowledgment of SLA approval

G. J. Mirobi and L. Arockiam, "Service Level Agreement in cloud computing: An overview," 2015.

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- Key actions for elicited requirements



Describe roles and personas

Qualitative requirements (user stories)

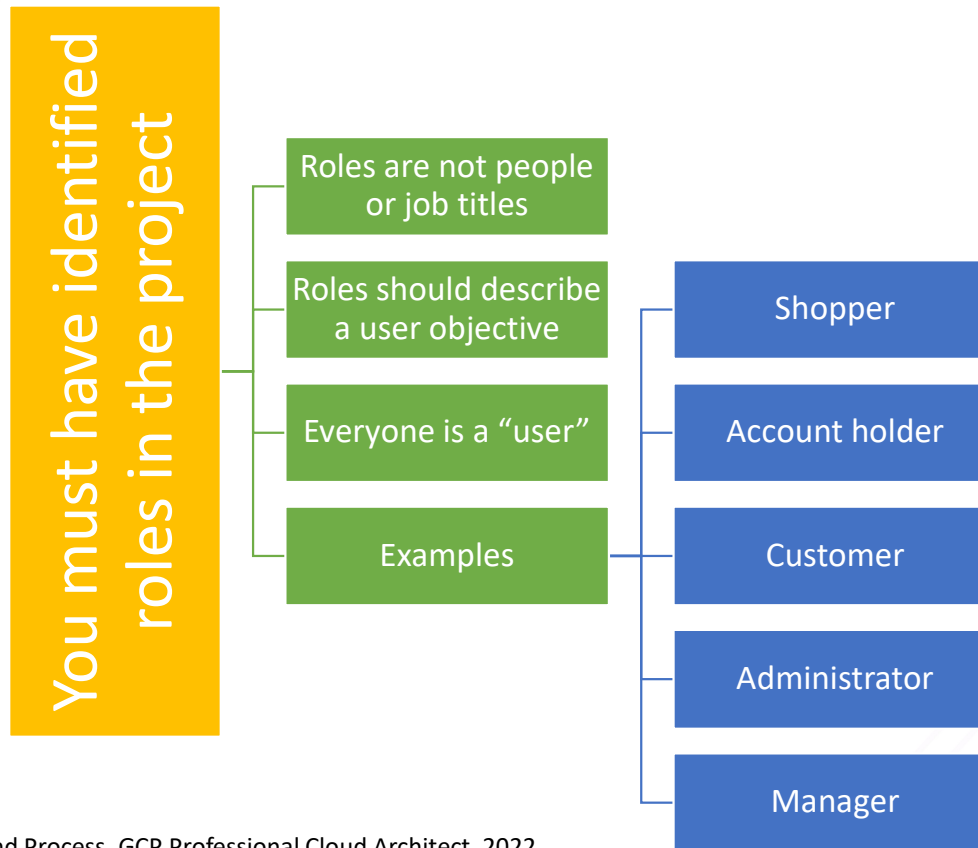
Quantitative requirements (key performance indicators - KPIs)

Evaluate service requirements (Specific, Measurable, Achievable, Relevant, and Time-Bound - SMART criteria)

Determine Service Level Objectives (SLOs) and Service Level Indicators (SLIs)

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- Roles



Reliable Google Cloud Infrastructure: Design and Process. GCP Professional Cloud Architect. 2022

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- User stories



Who

are the users?

are the developers?

are the stakeholders?

What

does the system do?

are the main features?

Why

is the system needed?

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- User stories



When

do the users need and/or want the solution?

can the developers be done?

How

will the system work?

many users will there be?

Much data will there be?

Web Apps - Design process

- User stories



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- key Performance Indicators - KPIs



KPIs

- are metrics that can be used to measure success

KPIs != Goals

- KPIs indicate whether you are on track to achieve the goal

In software:

- Page views
- User registrations
- Click throughs
- Checkouts

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- SMART criteria



Specific-----

- specific version

Measurable-

- verifiable against KPIs

Achievable--

- "~~100% secure~~" this must be able to be possible

Relevant-----

- this is relevant to the user

Time-Bound

- measurable time such as years, months, days, hours, minutes, etc.

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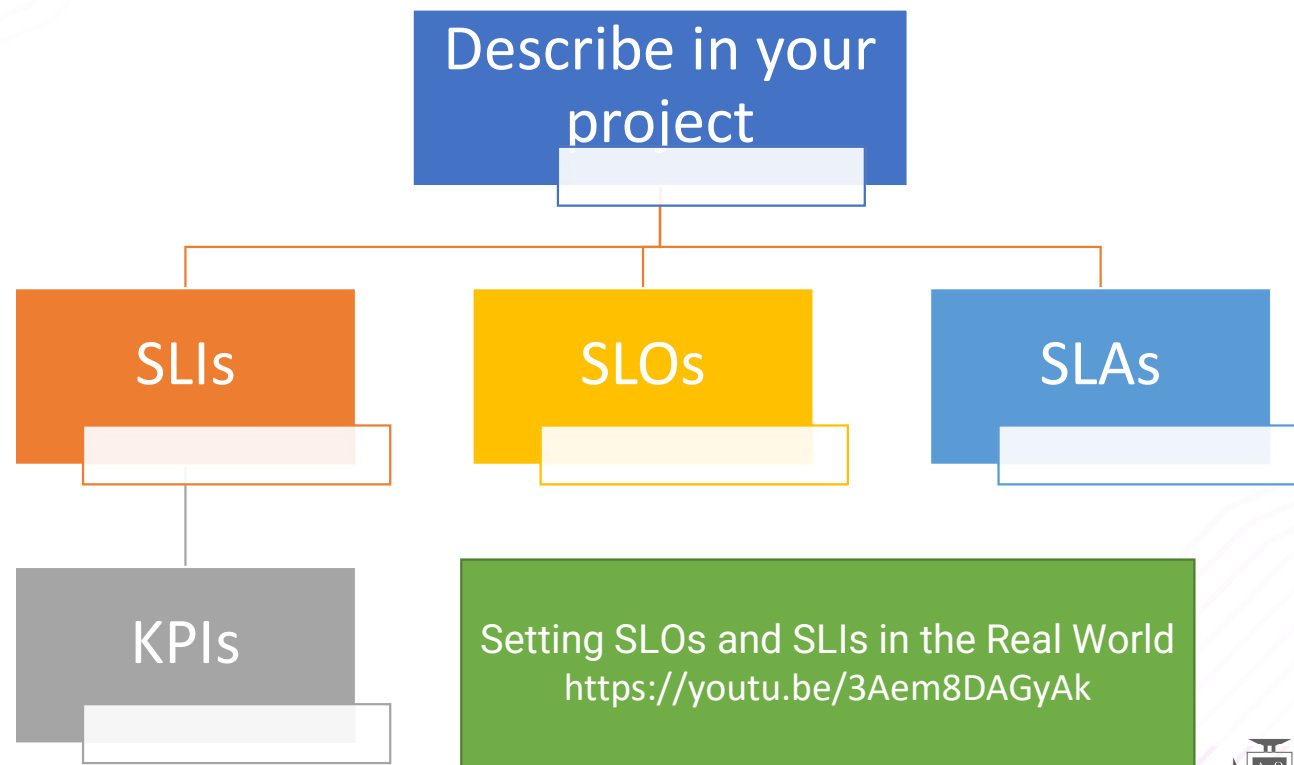
- SLIs and SLOs



Service Level Indicators (SLIs)	A measurable attribute for a service	The latency of successful HTTP response average over one minute
Service Level Objectives (SLOs)	The goal you want to achieve for a given SLI	The latency of 99% of the responses must be $\leq 200\text{ms}$
Service Level Agreement (SLA)	A binding contract providing the customer compensation if the service fail	The user is compensated if 99 th percentile latency exceeds 300ms

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- SLIs, SLOs and SLAs



References



- [1] Azaustre, C. Aprendiendo JavaScript. 1ra edición. Editorial Carlos Azaustre, 2016
- [2] De Lucas, D. Apps HTML5 para móviles: Desarrollo de aplicaciones para smartphones y tablets. Marcombo, 2da edición, 2016
- [3] Beati, H. PHP - Creación de páginas Web dinámicas (2da. edición). Editorial: Alfaomega Grupo Editor, 2015
- [4] M. Stauffer, Laravel: Up & Running: A Framework for Building Modern PHP Apps. O'Reilly Media, 2019.
- [5] A. Banks and E. Porcello, Learning React: functional web development with React and Redux. O'Reilly Media, 2017.
- [6] M. Satheesh, B. J. D'mello, and J. Krol, Web development with MongoDB and NodeJS. Packt Publishing, 2015.

References



- [7] A. Haviv, MEAN web development: master real-time web application development using a mean combination of MongoDB, Express, AngularJS, and Node.js. Packt Publishing, 2014.
- [8] D. Herron, Node.js web development: create real-time server-side applications with this practical, step-by-step guide. Packt Publishing, 2016.
- [9] K. Chodorow, MongoDB: the definitive guide, O'Reilly Media, 2013.
- [10] RFC 2616: <https://www.rfc-editor.org/rfc/rfc2616>
- [11] Meta Front-End Developer Professional Certificate. 2022
- [12] Reliable Google Cloud Infrastructure: Design and Process. GCP Professional Cloud Architect. 2022

References



[13] G. J. Mirobi and L. Arockiam, "Service Level Agreement in cloud computing: An overview," 2015 International Conference on Control, Instrumentation, Communication and Computational Technologies (ICCICCT), 2015, pp. 753-758, doi: 10.1109/ICCICCT.2015.7475380.

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