

Front end vs back end

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Front end

user's components directly through
their browser

JS, HTML, CSS

Work w/ any screensize, browser, OS

other tasks:

- Visual concept web design
- UI design
- UX design

Back end

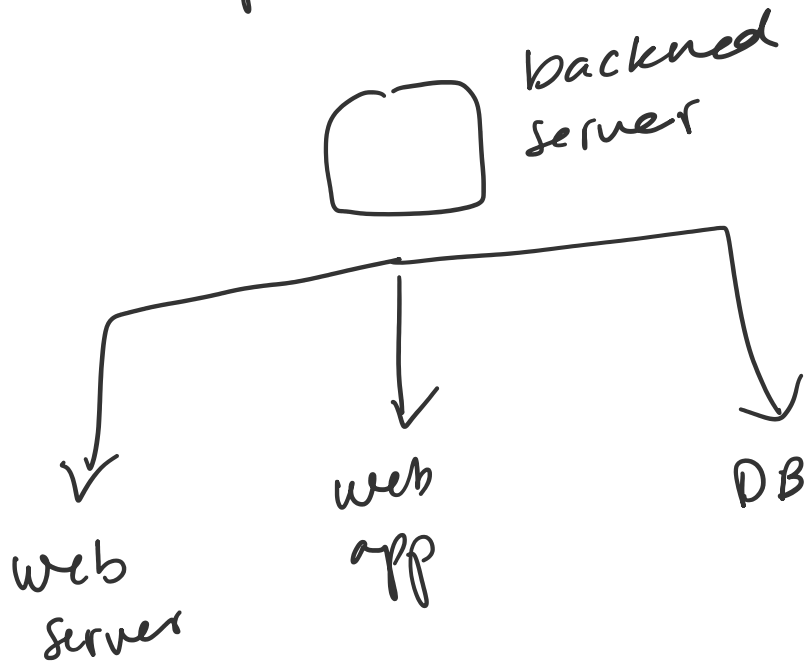
drives all core web app functionalities

four main components

...S - typically

- Back end servers = typically linux or windows or in containers
- web servers = handle HTTP requests
Apache, NGINX, IIS
- Databases = store and retrieve web app data
relational / non-relational
- Development frameworks = develop the core app
 - Laravel PHP
 - ASP.NET C#
 - Spring java
 - Django python

- Node.js
- Express JS



possible to host each component of backend on its own server or in containers w/ something like docker

ex: web app and DB in their own containers

could also each have own server
more expensive

but more expensive

main jobs of back end components

- develop main logic and services
- main code and functionalities
- backend db
- libraries for frontend to use
- technical/business needs
- main APIs
- integrate remote servers and cloud services

Securing front/back end

can use techniques like SQLi to exploit hidden backend

Sometimes vulns like local file inclusion

Sometimes vulns like buffer overflow
reveal backend code

OWASP top 10:

- Broken access control
- cryptographic failures
- injection
- insecure design
- security misconfiguration
- vulnerable and outdated components
- identification and authentication failures
- software and data integrity failures
- security logging and monitoring

failures
· server-side request ~~forgery~~ SSRF