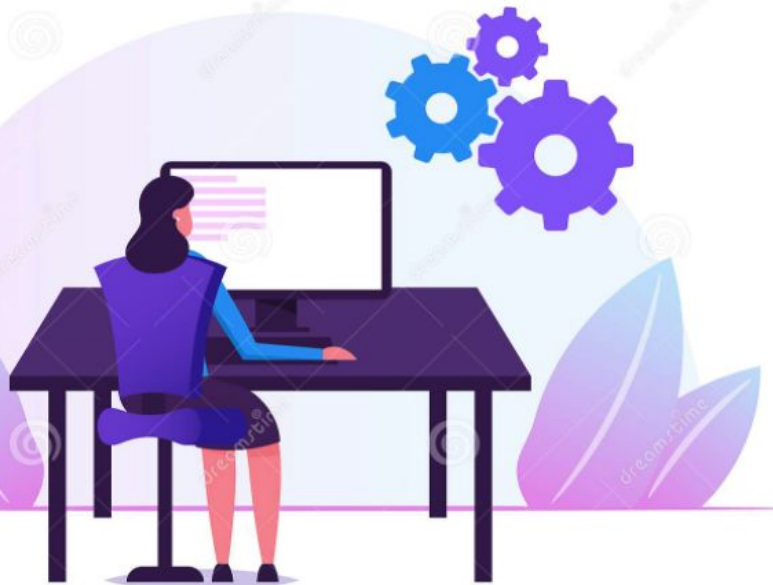# Welcome!

WWCode Digital + **Backend Backend Study Group**

June 30, 2022

- We'll start in a moment :)
- We are NOT recording tonight's event. We may plan to take screenshots for social media.
- *If you want to remain anonymous*, change your name & keep video off.
- We'll introduce the hosts & might break in-between for Q/A.
- We will make some time for Q&A at the end of the presentation as well.
- You can come prepared with questions.
- Feel free to take notes.
- Online event best practices:
  - Don't multitask. Distractions reduce your ability to remember concepts.
  - Mute yourself when you aren't talking.
  - We want the session to be interactive.
  - Feel free to unmute & ask questions.
- Turn on your video if you feel comfortable.

- *Disclaimer: Speaker doesn't knows everything!*

WOMEN WHO CODE

Introduction & Agenda

- Welcome from WWCode!
- Our mission: Inspiring women to excel in technology careers.
- Our vision: A world where women are representative as technical executives, founders, VCs, board members and software engineers.

Prachi Shah
Speaker,
Senior Software Engineer,
Metromile
Director, WWCode SF

Anjali Bajaj
Co-host,
Volunteer, WWCode SF

- Transition from a Frontend Engineer to a Backend Engineer:
- What do Frontend and Backend Engineers do?
- Why consider the transition?
- Skills and technologies to learn.
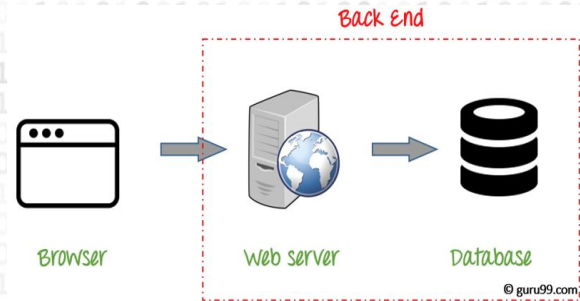- What does the transition look like at a workplace?
- Q & A.

Disclaimer:
- Sessions can be heavy!
- Lots of acronyms.
- Speaker doesn't know everything.
- Job role/duties/tech changes per company/team.

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Backend Engineering

- Design, build and maintain server-side web applications.

- Common terms: Client-server architecture, networking, APIs, web frameworks, platform, micro-service, databases, web fundamentals, operating systems, etc.

- Tech Stack: Java, PHP, .NET, C#, Ruby, Python, REST, AWS, Node, SQL, NoSQL.

- Other domains: Front end engineering, full stack engineering, design & user experience, mobile development, devOps engineering, machine learning, etc.

- Examples: Amazon Online Shopping, Instagram, Weather app, etc.

Back End

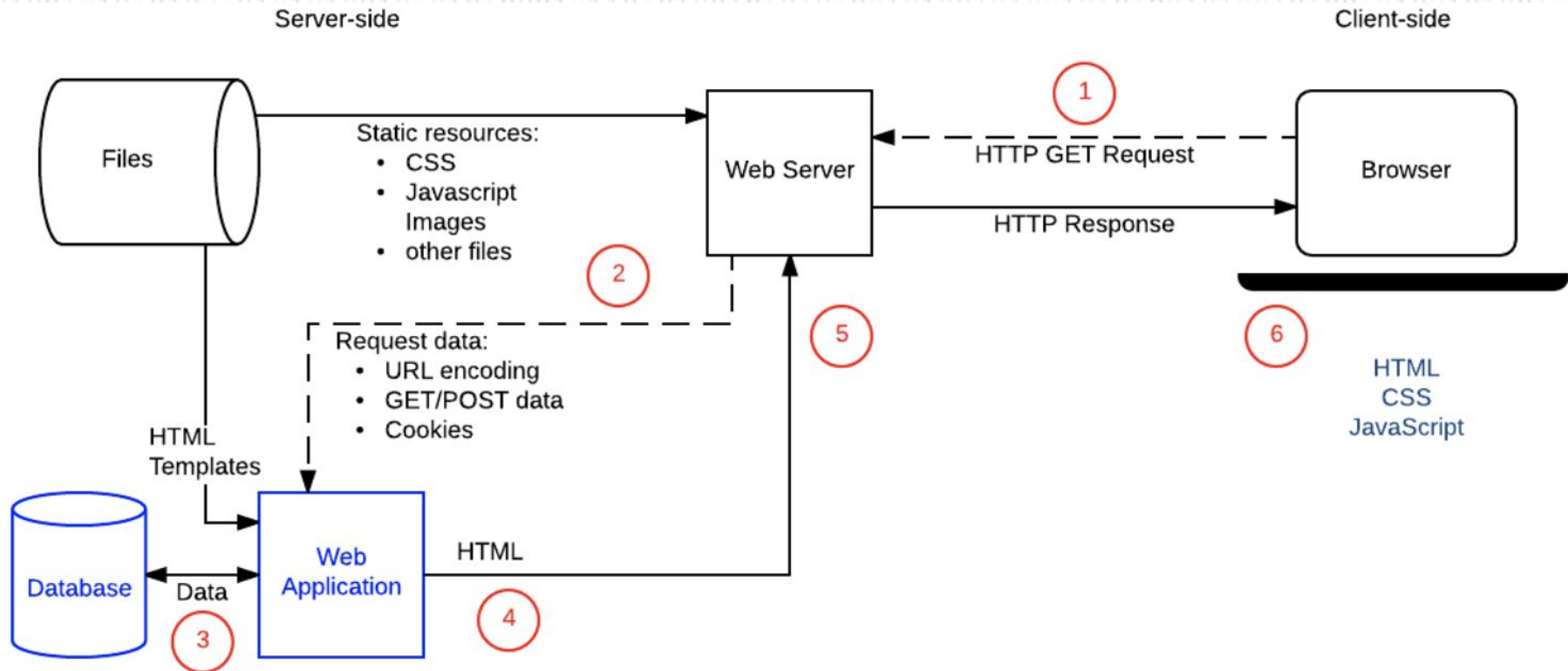Browser   Web server   Database

© guru99.com

Frontend Engineering

- Design, build and maintain user-friendly and feature-rich websites.

- Design, build and maintain the client-side.

- Skills: Browser, APIs, Cookies, AJAX, SEO, Session Management, Responsive Design, UI/UX, Wireframe, Animation, Accessibility, Image Editing, Scripting, etc.
- Languages: HTML, CSS, JavaScript, etc.
- Frameworks: Angular, React, jQuery, Vue, etc.

- Examples: Amazon Online Shopping, Google.com, etc.
  - Restaurant:
    - Frontend: Dining experience and orders.
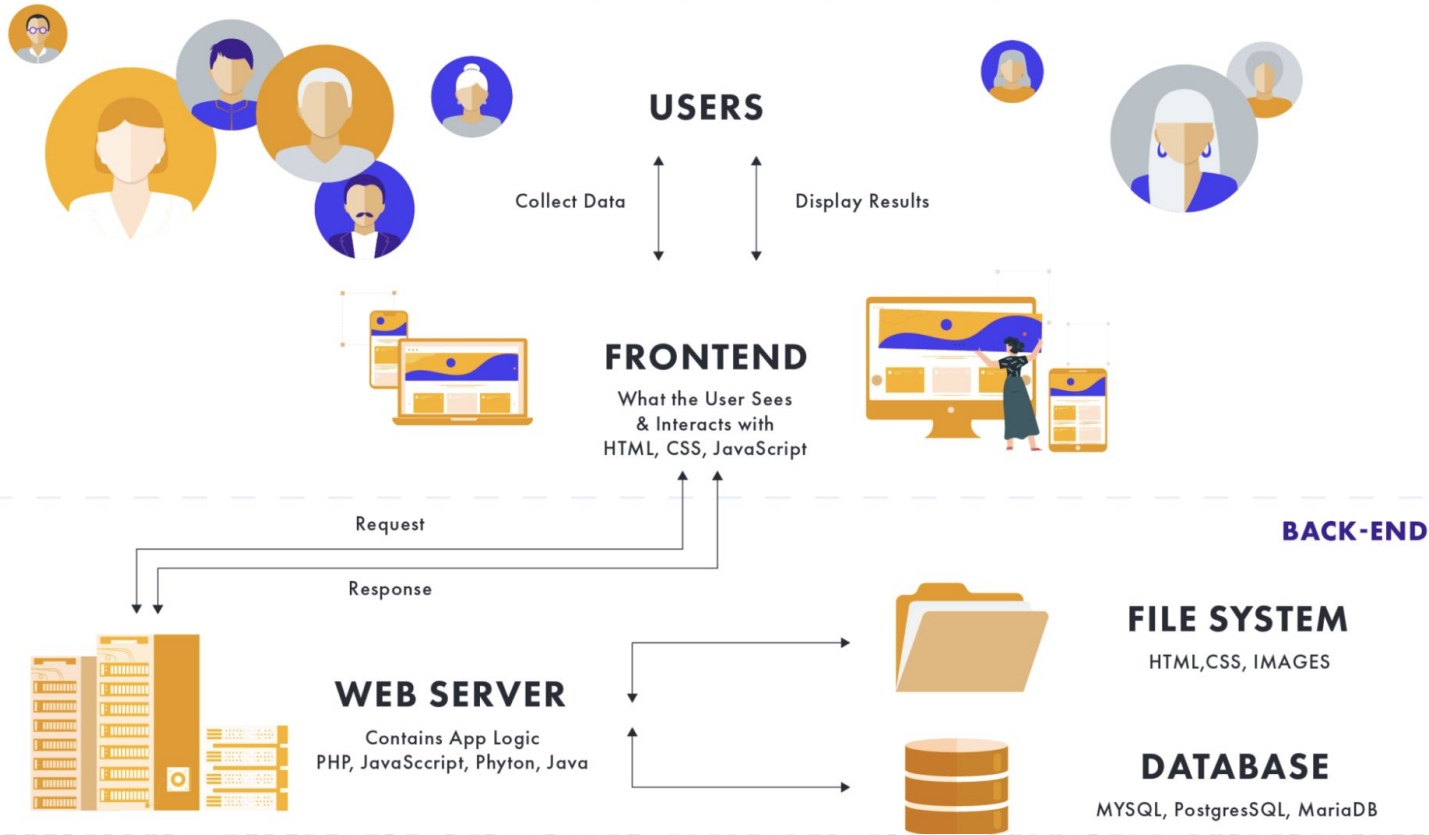   - Backend: Kitchen, order management, wait staff resourcing.

We are fpp.

A Shopper Marketing Agency.

Scroll to walk

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Backend Engineering

Backend Engineering

WEB APPLICATION ARCHITECTURE

USERS

Collect Data   Display Results

FRONTEND
What the User Sees
& Interacts with
HTML, CSS, JavaScript

Request

Response

BACK-END

WEB SERVER
Contains App Logic
PHP, JavaSccript, Phyton, Java

FILE SYSTEM
HTML,CSS, IMAGES

DATABASE
MYSQL, PostgresSQL, MariaDB

Frontend to Backend Engineer Transition

- Why transition?
  - To be competitive, and skills development (CS, tools, best practices, principles).
  - Limited projects/initiatives, to protect a position, and to continue to be of value.
  - Upward Mobility: IC vs. Leadership roles, and better income comparatively.
  - Build a comprehensive product.
  - Build a product/application on your own.
- Roles:
  - Full-stack Engineer: Frontend and Backend skills (might not be in-depth).
  - UX Designer: Research, analyze and design user interactions and experiences.
  - Backend Engineer/ Software Engineer:
    - Server-side and application development, and database management.
    - Design web architectures, develop services and APIs.
  - Skills: Architecture, security, data management, software management, scale, etc.
  - Tech Stack: Java, PHP, .NET, C#, Ruby, Python, REST, AWS, Node, SQL, NoSQL.

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Backend Engineering

Here at XYZ Inc., we are the leading company in our industry in the Capital City area. We're pleased to have a 3.8 Glassdoor rating from our employees. We are hiring an experienced Back End Engineer to help us keep growing. If you're dedicated and ambitious, XYZ Inc. is an excellent place to grow your career. Don't hesitate to apply.

Responsibilities for Back End Engineer

- Generate recyclable code libraries
- Implement ongoing security systems
- Attend regular meeting with the front end team to expose weaknesses and problems
- Routinely inspect server code for speed optimization
- Conceptualize and implement solutions for data storage
- Configure usability of all front side applications
- Maintain a stable server with zero downtime
- Keep a backup library before any large changes to server

Qualifications for Back End Engineer

- 5+ year experience in a related field
- Large capacity for attention to detail
- Ability to meet tight deadlines
- Capable of prioritizing multiple project in order to meet goals without management oversight
- Vast knowledge of PHP, Python, Ruby, Java, .NET, JavaScript etc
- Familiarity with front side platforms such JAVA, HTML5 and CSS3
- Server side experience with SASS and LESS
- Understanding of accessibility and server compliance
- Previous experience working with multiple platforms such as Desktop, Mobile, Tablet etc

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Backend Engineering

Resources:
- [Front-end vs Back-end, and Static vs Dynamic Websites](#)
- [Introduction to the server side](#)
- [Frontend vs Backend](#)
- [Website Developer Glossary](#)
- [Back End Engineer Job Description](#)

Backend Study Group:
- [Presentations](#) on GitHub and session recordings are found on [WWCode YouTube channel](#)
- Upcoming sessions:
  - [July 21st, 2022](#) about **Microservice vs. Monolith Architecture**
  - [August 16, 2022](#) about **OOP & Design Principles**
- [Technical Tracks](#) and [Digital Events](#).
- Get updates – join the [Digital mailing list](#)!
- Have questions?
  - Contacts us at: contact@womenwhocode.com
  - Join our [Slack](#) workspace and join *#backend-study-group*!

You can unmute and talk or use the chat.

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