Welcome!

Tech, Managed KC

https://www.meetup.com/techmanaged/

Tech, Managed KC

The Front-end & Back-end Explained

Randy Burgess

@wrburgess

All Aboard Apps

CTO THINK

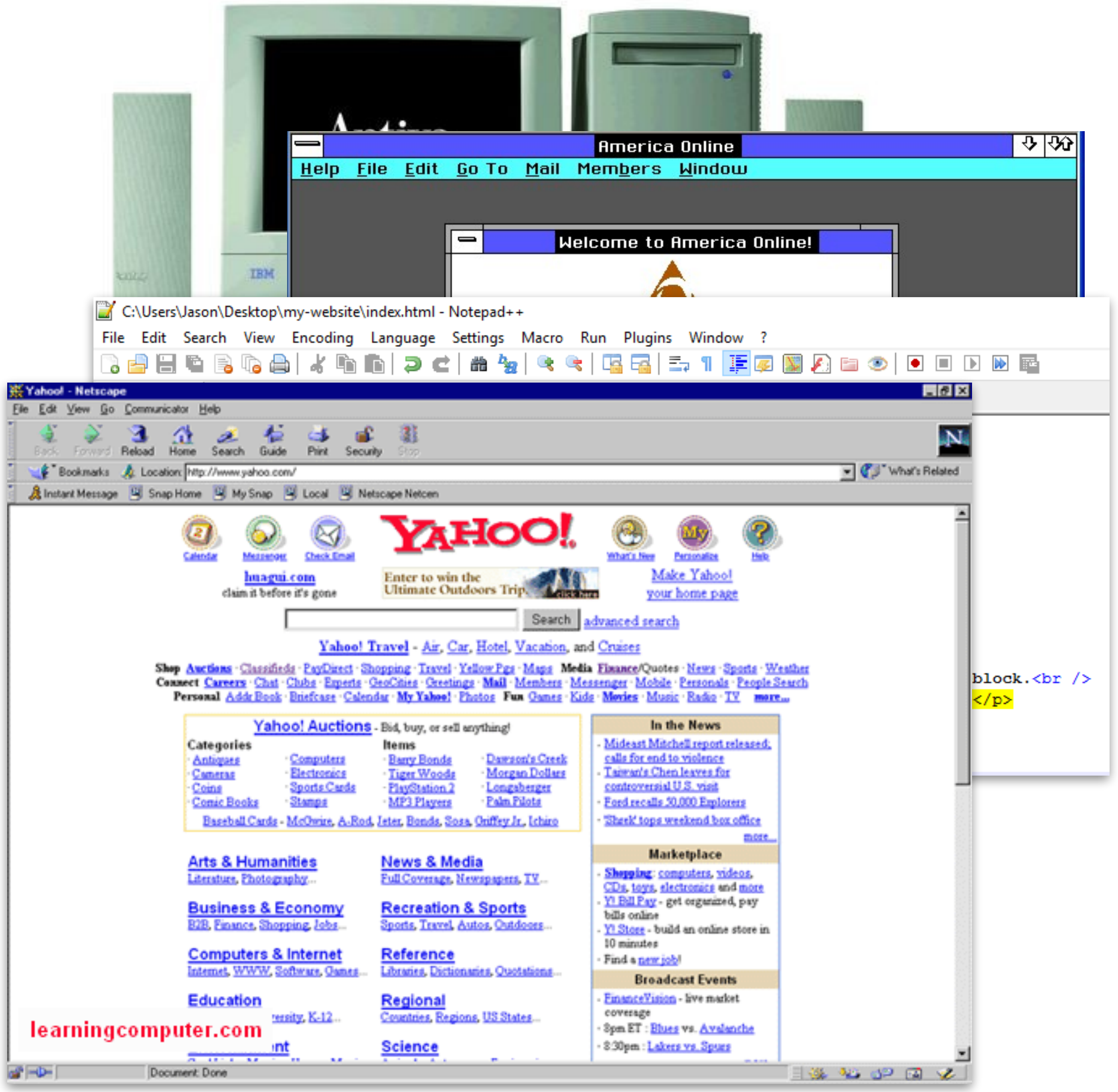
THIS OLD APP

Agenda

- History
- Examples
- Tools
- Developers

1990s - The beginning...

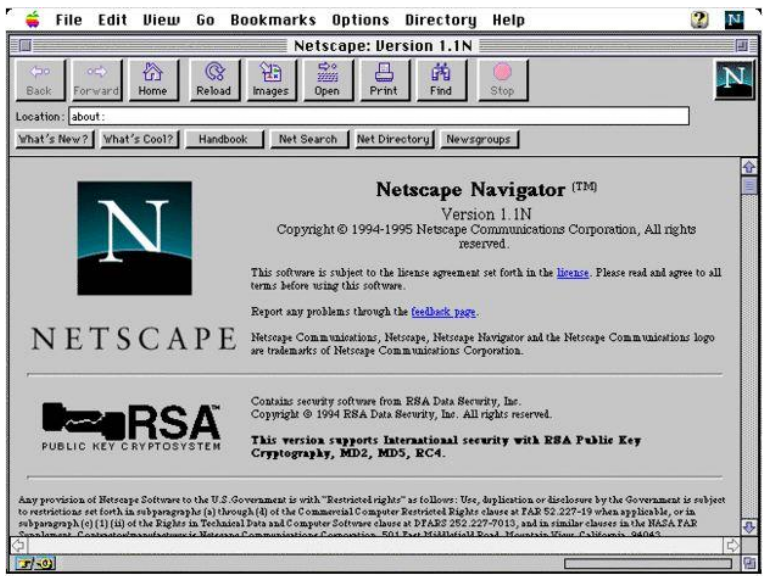
- You setup a web server
- You get a connection to the Internet
- You build a Web Page with HTML and CSS
- You view pages online with a browser


America Online
Help File Edit Go To Mail Members Window
Welcome to America Online!
C:\Users\Jason\Desktop\my-website\index.html - Notepad++
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
Yahoo! - Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Guide Print Security Stop
Bookmarks Location: http://www.yahoo.com/
What's Related
YAHOO!
Search advanced search
Yahoo! Travel
Yahoo! Auctions
In the News
Marketplace
Broadcast Events
Arts & Humanities
News & Media
Business & Economy
Recreation & Sports
Computers & Internet
Reference
Education
Regional
Science
Document: Done
block.<br />
</p>
learningcomputer.com

1990s - Request/Response

FRONT-END

BACK-END



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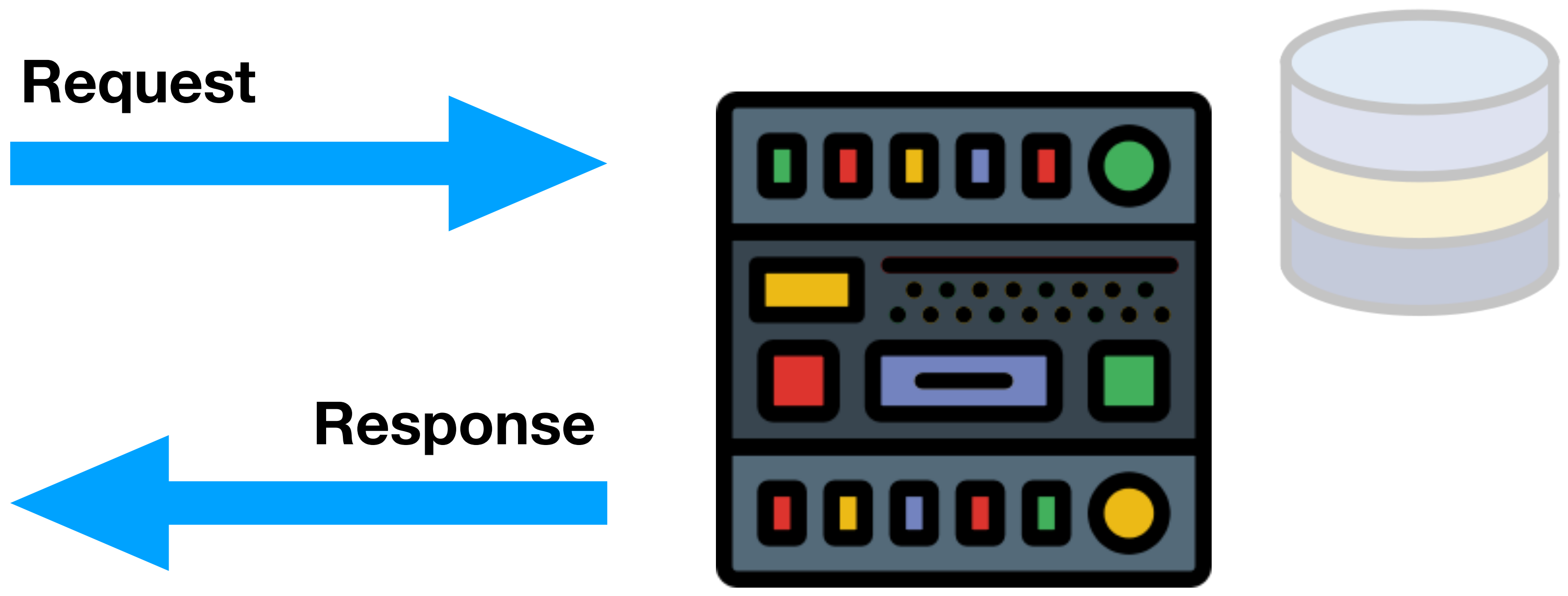

Every Click >> Full Page Refresh

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1990s - The Tools

FRONT-END

- HTML
- CSS
- JavaScript
- Images

BACK-END

- Windows, Linux
- IIS, Apache, & Java
- PHP & Perl
- MS Access, SQL Server, & MySQL

Early 2000s - The Dot Com Era

- Businesses get online
- More content, more images, more media, more structure
- Desktop browsers multiply

webvan

kozmo.com

GeoCities

WIKIPEDIA
The Free Encyclopedia

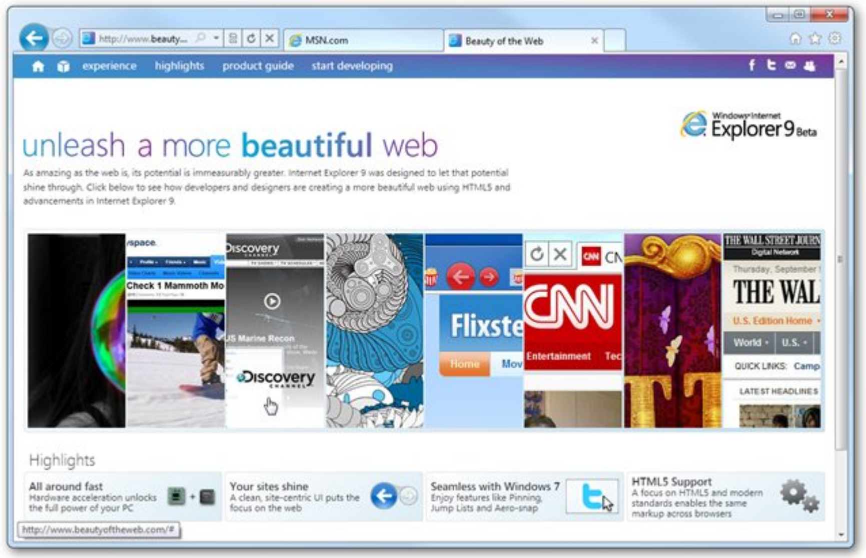
Google

YAHOO!

Early 2000s - Request/Response

FRONT-END

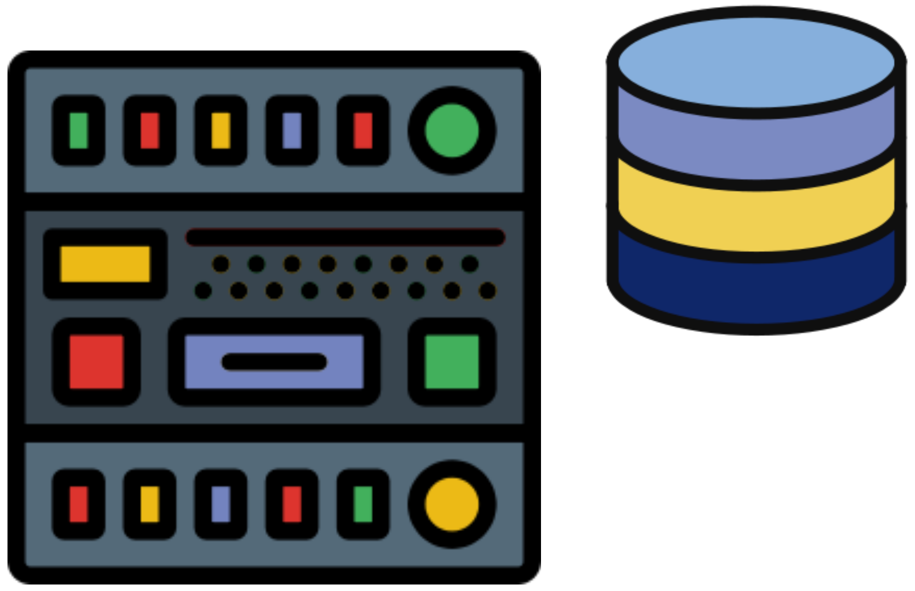
BACK-END



Request

Response

Streams



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Early 2000s - Toolset

FRONT-END

- HTML
- CSS
- JavaScript
- Images
- Flash/Java
- Videos/Audio
- AJAX

BACK-END

- Windows, Linux
- IIS, Apache
- PHP, Perl, ASP, Java
- MS Access, SQL Server,
  MySQL, SQL Lite
- APIs

NEW!

Sidebar!

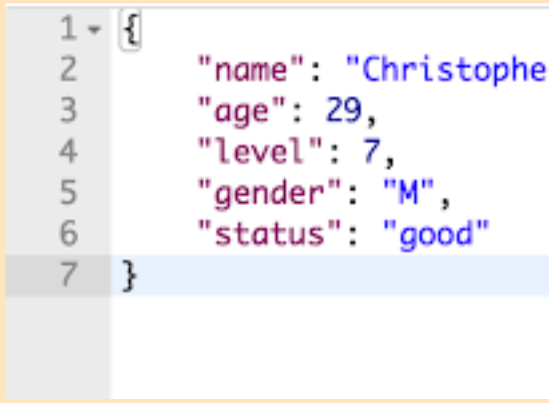
Asynchronous JavaScript and XML (AJAX)

- Allows client to send and receive data without a full page refresh
- Creates a faster, smoother, user experience
- Front-end uses AJAX to call an API on the Back-end

Sidebar!

Application Programming Interface (API)

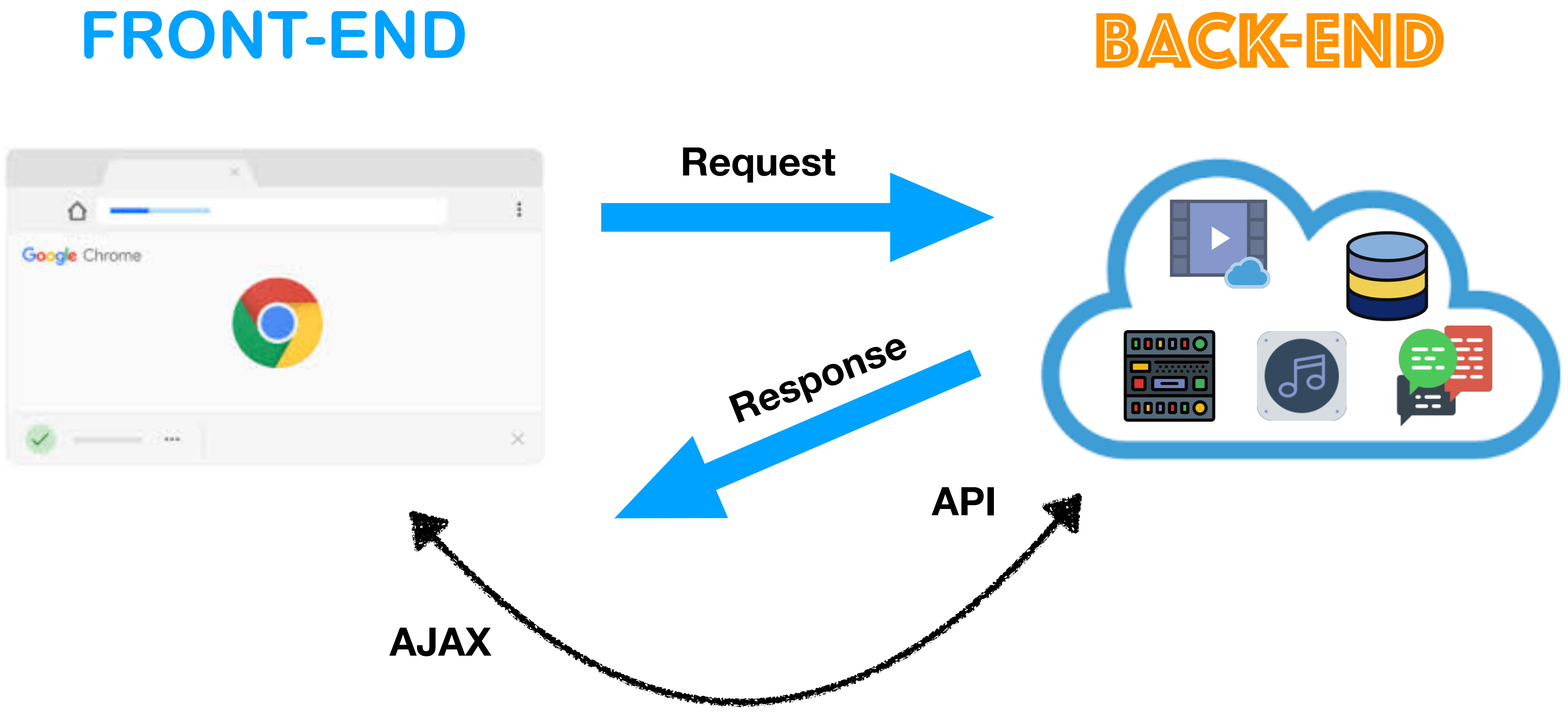
- How an app can “talk” to another app
- Request to https://app.com/api/user/12345
- Receive data about User #12345



```
{
    "name": "Christophe
    "age": 29,
    "level": 7,
    "gender": "M",
    "status": "good"
}
```

- No page refresh, HTML, or CSS involved

2007 - Request/Response



2007 - Front-End Framework

Front-End

- Easier to use JavaScript across browsers

- Reduced JavaScript learning curve

- Empowered AJAX

2007 - Back-End Frameworks

RAILS

django

WordPress

BACK-END

- Web servers with instant features
- Security built-in
- Simplified APIs

2007 - The Smartphone

Front-End

- iPhone has front-end and back-end properties
- User expectations rise drastically
- Blocks Flash

2007 - Amazon Web Services

BACK-END

amazon web services™

- Easier to setup servers and databases
- One person can accomplish the work of a team
- Pay for what you use

2007 - Toolset

FRONT-END

- HTML, CSS, JavaScript

Frameworks

- jQuery
- Angular
- Single Page Apps

Mobile Apps

- iOS Obj C
- Android Java
- PhoneGap

WHAT?!?

BACK-END

Frameworks

- Wordpress/Drupal
- Node
- Django/Rails

Databases

- SQL Server
- MySQL
- PostgreSQL
- SQLite
- MongoDB

DEV-OPS

Infrastructure

- Deployment
- Servers
- Networking
- Caching
- Security
- Cloud Hosting

Sidebar!

Single Page Apps (SPAs)

- jQuery turns into “spaghetti”
- JavaScript renders the HTML and CSS
- Faster experience, no refresh
- More like mobile apps

2019 - Toolset

FRONT-END

App Frameworks

- HTML, CSS, JavaScript
- React, Vue, Angular
- Too many others

Mobile Apps

- iOS Swift
- Android Java
- React Native
- Flutter
- Cordova

BACK-END

Server Frameworks

- Express, Java,.NET
- Wordpress
- Rails, Laravel, Django
- REST and GraphQL API

Databases

- SQL Server, MySQL, Postgres
- MongoDB
- DynamoDB, Firestore

DEV-OPS

Cloud Platforms

- AWS
- Heroku
- Google Cloud
- Firebase
- Azure
- Digital Ocean
- Netlify
- WPEngine

Application Examples

Static Website (Front-end Heavy)

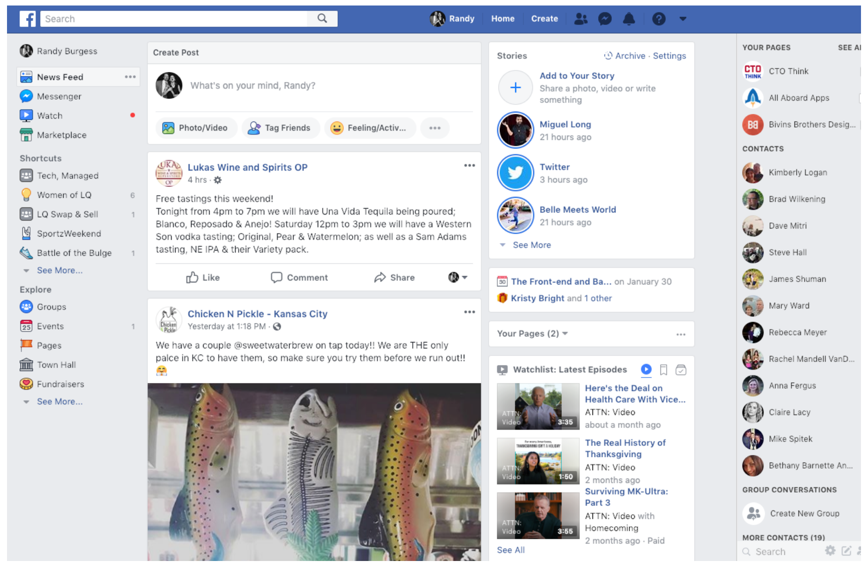
FRONT-END

BACK-END

netlify

Facebook Breakdown (Balanced)

FRONT-END


Search
Randy
Home
Create

Randy Burgess
News Feed
Messenger
Watch
Marketplace

Shortcuts
Tech, Managed
Women of LQ 6
LQ Swap & Sell 1
SportzWeekend
Battle of the Bulge 1
See More...

Explore
Groups
Events 1
Pages
Town Hall
Fundraisers
See More...

Create Post
What's on your mind, Randy?
Photo/Video
Tag Friends
Feeling/Activ...

Lukas Wine and Spirits OP
4 hrs ·
Free tastings this weekend!
Tonight from 4pm to 7pm we will have Una Vida Tequila being poured; Blanco, Reposado & Anejo! Saturday 12pm to 3pm we will have a Western Son vodka tasting; Original, Pear & Watermelon; as well as a Sam Adams tasting, NE IPA & their Variety pack.
Like
Comment
Share

Chicken N Pickle - Kansas City
Yesterday at 1:18 PM ·
We have a couple @sweetwaterbrew on tap today!! We are THE only palce in KC to have them, so make sure you try them before we run out!!

Stories
Archive · Settings
Add to Your Story
Share a photo, video or write something
Miguel Long
21 hours ago
Twitter
3 hours ago
Belle Meets World
21 hours ago
See More

The Front-end and Ba... on January 30
Kristy Bright and 1 other

Your Pages (2)

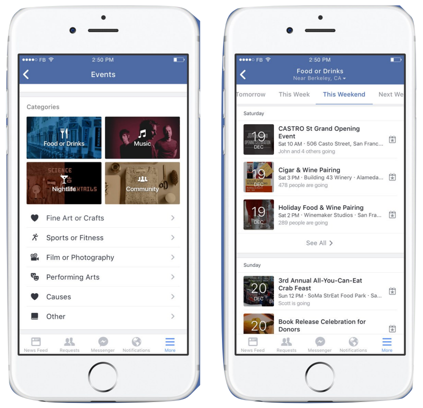
Watchlist: Latest Episodes
Here's the Deal on Health Care With Vice...
ATTN: Video
about a month ago
The Real History of Thanksgiving
ATTN: Video
2 months ago
Surviving MK-Ultra: Part 3
ATTN: Video with Homecoming
2 months ago · Paid
See All

YOUR PAGES
SEE AL
CTO Think
All Aboard Apps
Bivins Brothers Desig...

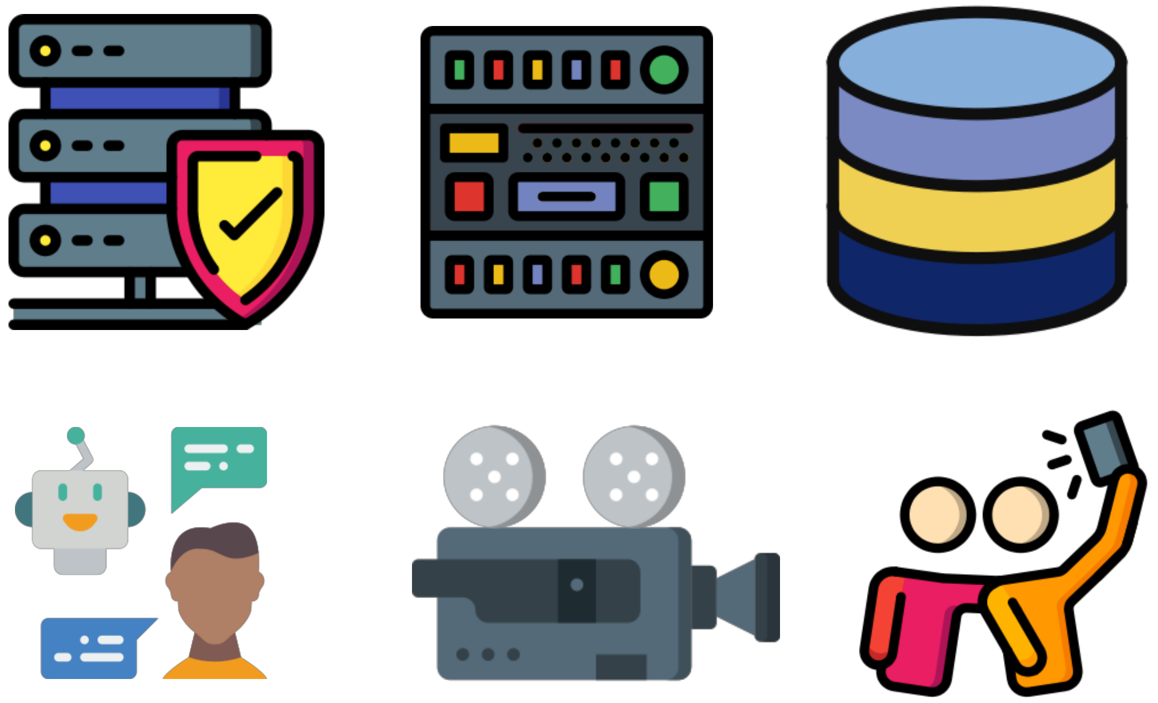
CONTACTS
Kimberly Logan
Brad Wilkening
Dave Mitri
Steve Hall
James Shuman
Mary Ward
Rebecca Meyer
Rachel Mandell VanD...
Anna Fergus
Claire Lacy
Mike Spitek
Bethany Barnette An...

GROUP CONVERSATIONS
Create New Group

MORE CONTACTS (19)
Search



BACK-END



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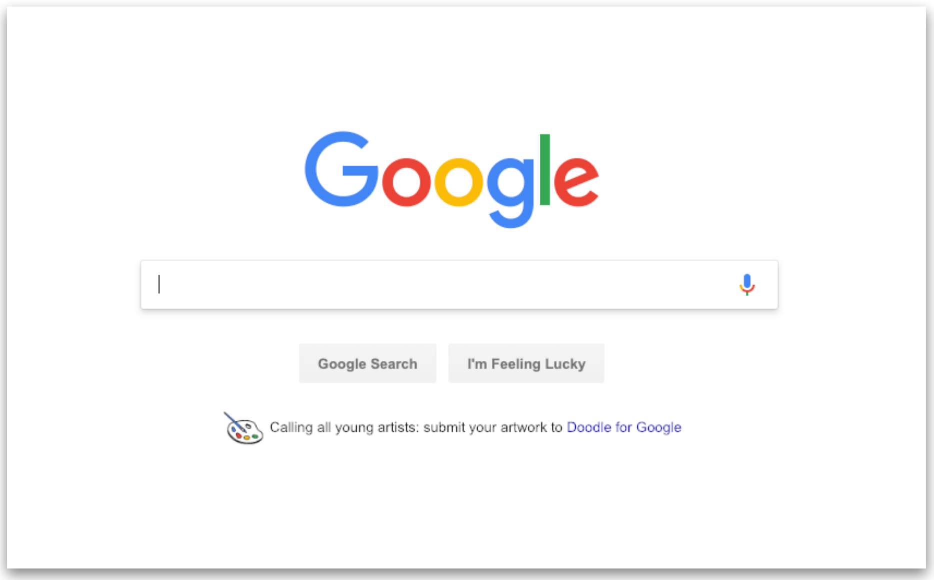
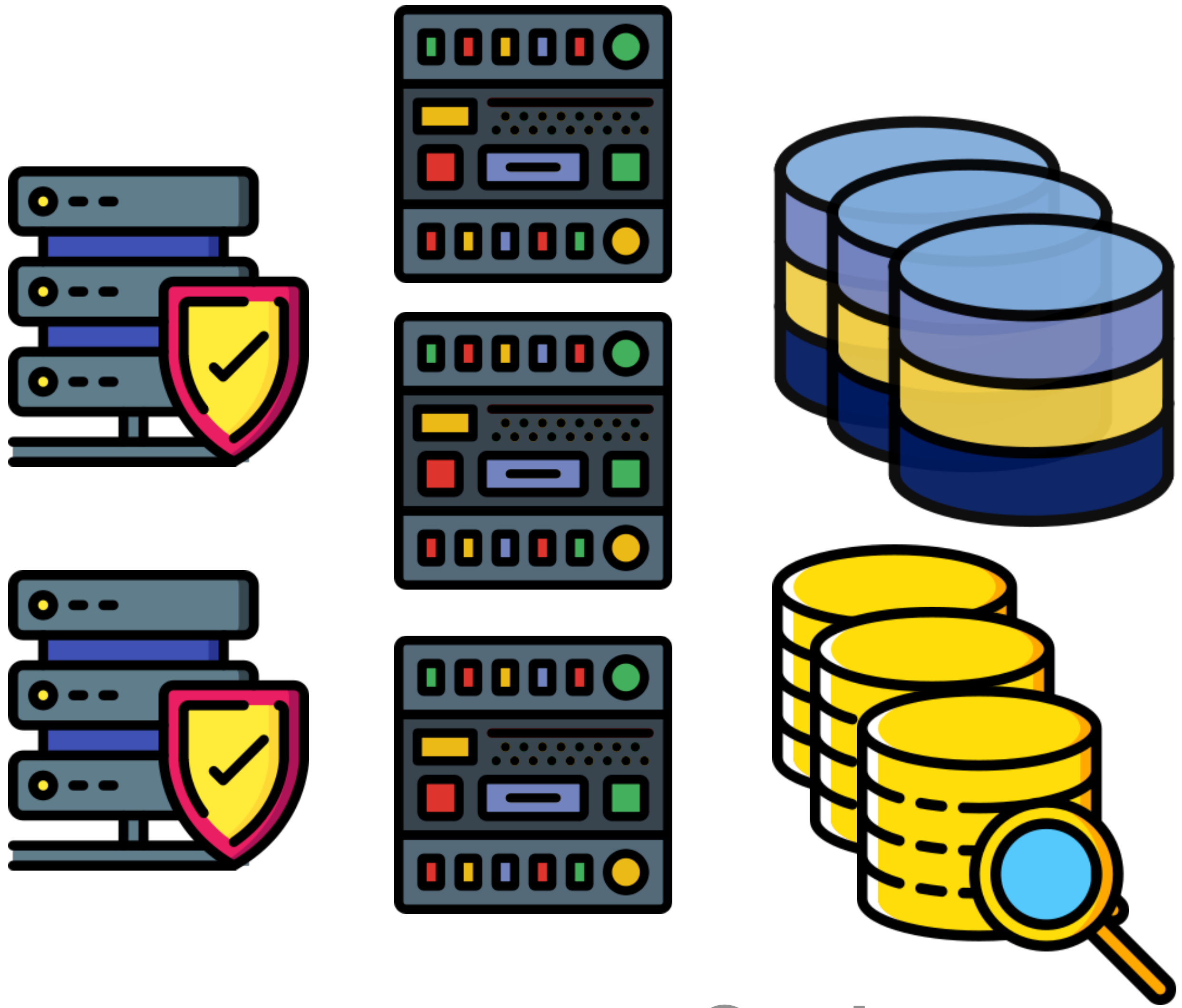
Google Home Page (Back-end Heavy)

FRONT-END



Calling all young artists: submit your artwork to Doodle for Google

BACK-END



The Developers

Front-End

Hiring Devs

- Which devices are you using?
  Desktop, Tablet, Phone
- Code approach?
  Native iOS, Native Android, JavaScript
- Which front-end framework?
  Angular, React, ReactNative, Vue, Ember
- Which API are you using?
  REST, GraphQL

JavaScript is vital

5 to 7 years experience

Hiring Devs

BACK-END

10+ years of experience

- Which server framework?
  Rails, Laravel, Node Express, Django
- Which database?
  MySQL, Postgres, Mongo, Dynamo, Firestore
- Which platform?
  AWS, Heroku, Google Cloud, Firebase, Azure

What About Fullstack Devs?

- Jack-of-all-trades types
- Specializing is difficult
- Project management, product development, lead devs

Budget Constraints

- Can you only hire one developer?
  Go Fullstack
- Can you hire two developers?
  Aim for Front-end + Fullstack

Front-End

Becoming a Developer

- Start with HTML
- Learn CSS Basics, Flexbox, and CSS Grid
- Learn JavaScript Basics
- Learn Vue or React

Becoming a Developer

BACK-END

- Learn Node Express
- Learn PostgreSQL or MongoDB
- Learn REST or GraphQL APIs
- Learn Firebase or Heroku

Takeaway

FRONT-END

- HTML, CSS, JavaScript
- Focus on Users
- Mobile App Experience
- Progressive Web Apps

NEW!

BACK-END

- Servers and APIS
- Data Management
- Speed and Security
- Transactions

Sidebar!

Progressive Web Apps (PWAs)

- Approach to make websites have same User Experience as a mobile app
- HTML, CSS, JavaScript
- Download from App Stores (Google)
- Icon on Smartphone screen (Android)

The Real-End

Questions?

- Presentation: allaboardapps.com/front-and-back
- Personal Site: www.wrburgess.com
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- Email: randy@allaboardapps.com