C# to JS

A journey about self-improvement and adding value to one’s career.

Intros…

- Anibal Velarde
  - I'm on LinkedIn
  - Twitter
  - Love my family & Sailing on Lake Superior
  - Work as Principal Consultant/Technical Architect at Daugherty

TEAM Daugherty Est. 1985

WE ARE HIRING!

Something funny happened on the way to a consulting gig?

- The best laid out plans, sometimes, change
- Big turn of events caused the team to pivot
- That C# gig… well…
- But there are lots of JavaScript gigs

- But…
  - Why
    - Bother?

Why bother?

- More Knowledge
- More Opportunity
- More Reward
- More Fun

Stay Relevant

Back to the gig…

- Learn
  - New
    - Things…

- JavaScript
- Node.js
- React.js
- Jest
- Redux
- OSX
- And many more…

The Roadmap: "You Are Here"

- What do I know now that can help me?

- Architectural Patterns
- S.O.L.I.D.
- Clean Code
- Git
- CI/CD
- Unit Testing
- Integration Testing
- Object-Oriented A&D
- Agile / Scrum
- UML
- Public Speaking
- White-boarding
- APIs
- Security (SSO / OAuth / AuthN / AuthR)

The Roadmap: “Your Destination”

- What do I need to know to be successful?

- JavaScript
- Node.js
- HTML 5 / CSS
- React.js
- Redux
- NPM
- Terminal / Console / OSX
- Mac Proficiency
- Jest
- Chrome Debugger
- Practice… Practice… Practice
- A fellowship

The First Step

- Must Determine
  - Be confident in what you know
  - When in doubt, enumerate your technical arsenal
  - What you know well
  - What you need to refresh
  - What you don’t know
- Know Thy Self

An Exercise…

- Let’s collaborate
- Discuss what we know about the following concepts
- Participate
- Help each other out

- Ready?

Go!

An Exercise: OO, Patterns & Principles

Architectural

- Layered Architecture
- Micro-services
- CQRS
- Event Sourcing
- Others…

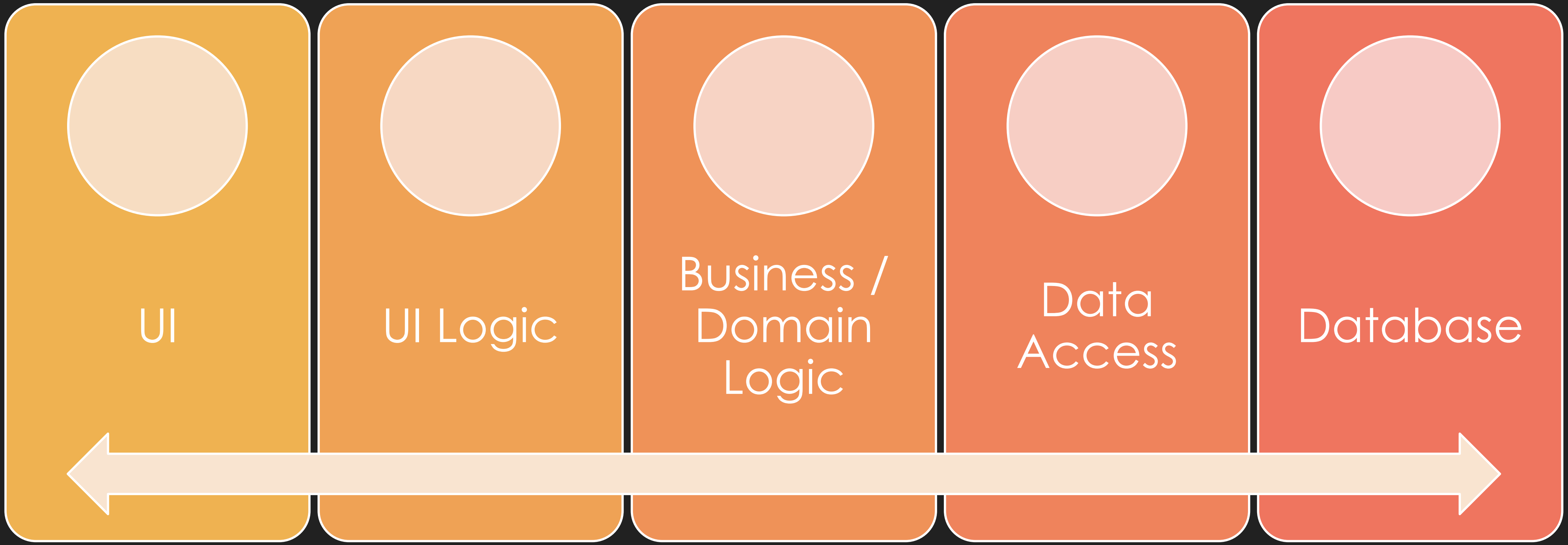
Software

- Singleton
- Observer
- Composite
- Adapter
- Builder

Principles

- Single Resp.
- Open-Closed
- Liskov Substitution
- Interface Seggregation
- Dependency Inversion

Layered Architecture



UI

UI Logic

Business / Domain Logic

Data Access

Database

An Exercise: Security

Terminology

- IAM
- SSO
- AuthN
- AuthR
- Assertions
- Claims

Protocols

- OAuth 2.x
- SAML 2.x
- JWT

Tools / FWs

- Auth0
- Okta
- Ping
- Others

An Exercise: Quality

Source Code

- Branching
- Merging
- Pull Requests
- Forking
- Git Commands
- Code Reviews

Unit Testing

- 3 A’s of UT
- Speed
- Simplicity
- Mocking
- O(n)
- Code Smells

Integration

- Test automation
- Test runners
- Coded UI Tests
- State of Database

An Exercise: APIs

REST

- Representational State Transfer
- HATEOAS
- Dr. Fielding

Conventions

- HTTP Verbs
- HTTP Codes
- Resources
- Methods

Frameworks

- Web API

An Exercise: Others…

Tools

- Public Speaking
- Whiteboard skills

UML

- Use Cases
- System Sequence
- Class Diagrams
- State Diagrams
- Swim-lanes

Agile

- Scrum
- User Stories
- Points Poker
- Jira
- Wikis

The Roadmap: “You Are Here”

Make sure you are comfortable with these concepts in your **current** native programming language

- Architectural Patterns
- S.O.L.I.D.
- Clean Code
- Git (or TFS)
- CI/CD
- Unit Testing
- Integration Testing
- Object-Oriented A&D
- Agile / Scrum
- UML
- Public Speaking
- White-boarding
- APIs
- Security (SSO / OAuth / AuthN / AuthR)

Next Steps: JavaScript & Testing

- ES6
- Array prototype functions
  - reduce()
  - map()
  - foreach()
  - filter()
- assignment

- Boolean expressions
- Arrow functions(lambdas expressions)
- Promises / Async-Await
- Error handling
- Jest

- codepen.io
- Mozilla Developer's Network
- Stack Overflow
- CodeWars.com

Next Steps: HTML 5 / CSS

- Much has changed since 2007
- Web 2.0 and newer
- **<table>** is dead
- It's not Y2K any more

- Grid
- Flex
- Classes
- Less
- And more!

- codepen.io
- Mozilla Developer's Network
- W3C Schools
- Stack Overflow

Next Steps: Node.js / NPM / Yarn

- You know why you would use **Nuget**, then you would know why to use **NPM** or **Yarn**

- Node.js is JavaScript on server-side
- Learn to leverage node.js without any packages
- Understand the node.js event loop

- Take an online course on
  - Pirple
  - Pluralsight
  - Youtube
  - Udemi
- Invest in "you"

Next Steps: Pick a Framework

- Angular
- Aurelia
- React
- Vue
- 100's of others… choose wisely

- In the **Twin Cities Market**, **react.js** is a good bet

- Pick a resource for the FW you choose
- **Dave Ceddia**'s blog is great resource for **react.js**

Next Steps: If "React.js", then…

- Get to know Redux
- Selectors
- Containers
- State management
- Redux Dev Tools Chrome Extension

- React class vs functional component
- React component life-cycle methods
- React hooks (this is new)

- **Dave Ceddia**'s blog is great resource for **react.js**

Next Steps: Other Topics

- Know your way around
  - Terminal
  - Console
  - Unix-type commands
- If you are used to Mac OSx, you'll be OK

- Practice
- Practice
- Practice
- CodeWars.com

- Be part of a fellowship

Reach Your Destinantion…

- Tell others about your journey
- Teach others
- Cement what you learned

Thank You!

Stay Relevant