

Design Review 2

Project sponsor: Barbara Jenkins **Team mentor:** Ana Paula C. Steinmacher



Vincent Messenger Project Lead
Anderson Moyers
Andy Salazar
Nathan Franklin



Problem Statement

Alzheimer's Disease

Neurodegenerative disease, years to progress,
cognitive decline finally results in organ failure

30 million deaths worldwide / year

\$259 billion American healthcare, \$1 trillion 2050

Mental/social stimulation may prevent onset of AD

Existing platforms don't offer social components



Problem Statement

WordScuffle™

Multiplayer word game created by Barbara Jenkins

Supports cognitive and social brain flexing

13-Letter tile set generated for each round

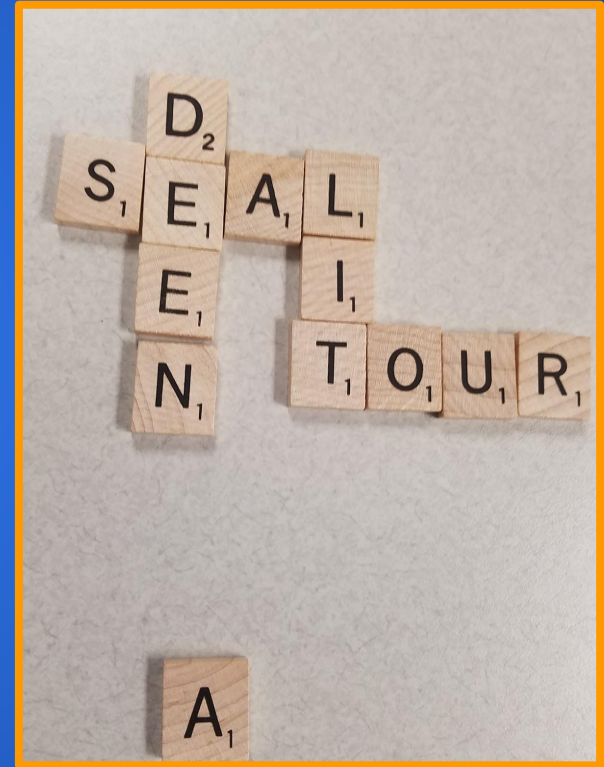
Players have three minutes to form word combos

Scores/results manually kept and compared

Manual scoring: error prone

Word validation

Rule enforcement: seeing answers and time limits



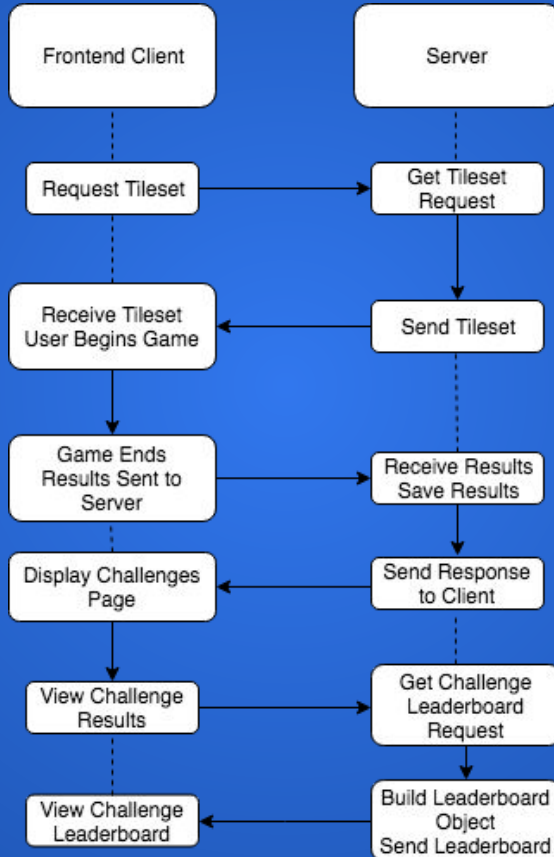
Solution Overview

WordScuffle™

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Solution Overview



Solution Overview

WordScuffle™

Daily Challenges Vince Messenger

Today's Challenges ▾ ⓘ

Challenge 1 ✓
Score: 50

Challenge 2 ✓
Score: 17

Challenge 3 ✓
Score: -1

Challenge 4 ✓
Score: 52

Challenge 5 ✓
Score: 24

Challenge 6 🔒
Score: 0

Challenge 7 🔒
Score: 0

WordScuffle™

Daily Challenges Vince Messenger

Score: 24

Vince Messenger



M₃
D₃ R₂ U₃ M₃
S₂ O₁ U₃
R₂
F₄ A₁

Z₁₀ H₃

Solution Overview

Daily Challenges Vince Messenger

Vince Messenger



| | |
|-----------------|----|
| Andy Salazar | 25 |
| Vince Messenger | 24 |
| Wayne Gretzky | 14 |

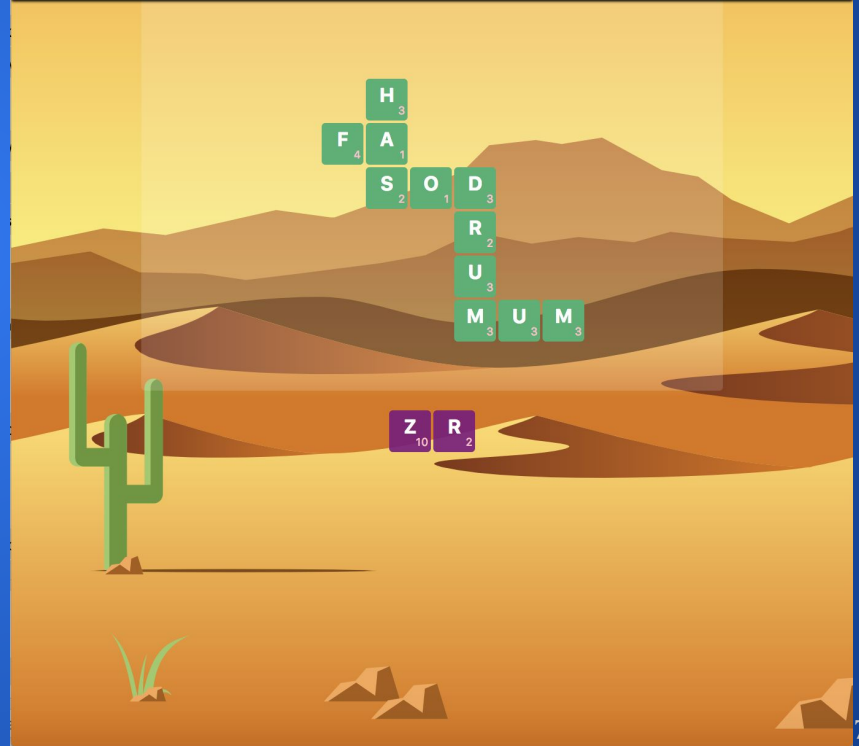


WordScuffle™

Daily Challenges Vince Messenger

Score: 25

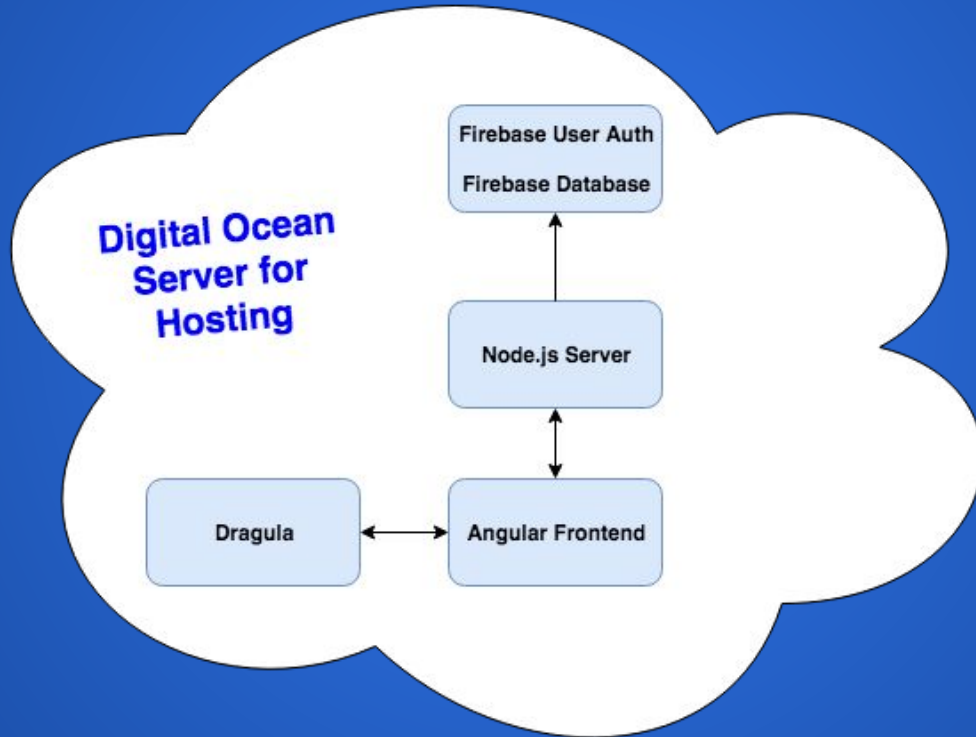
Andy Salazar



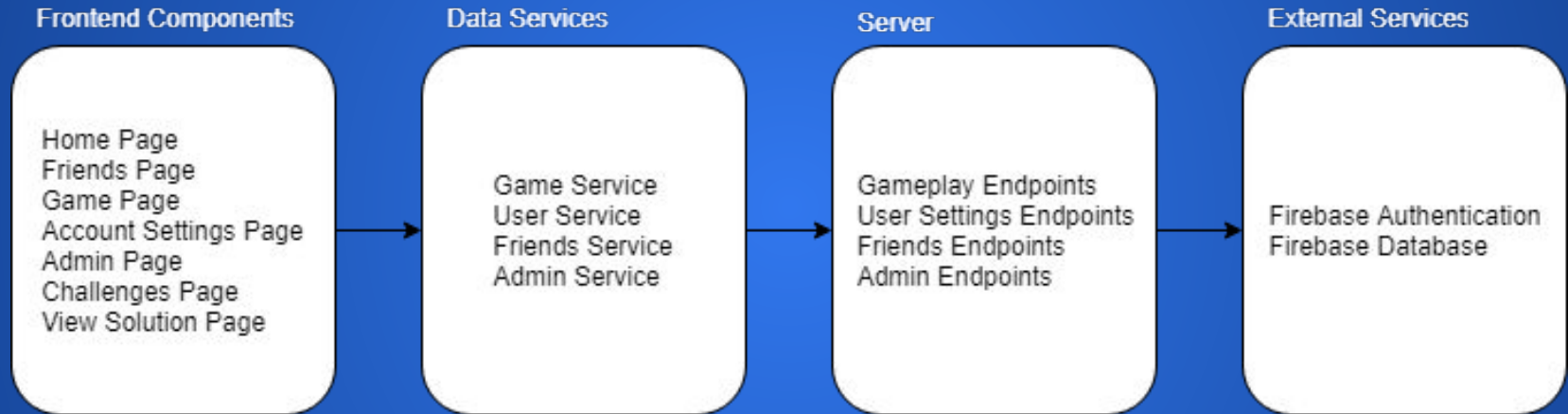
Implementation Overview

- Implement WordScuffle Gameplay
- Instantaneous word grid validation
- Provide daily challenges for Users
- Allow users to add friends
- Provide challenge leaderboard based on Friend's list.

Implementation Overview



Architecture Overview



Challenges & Resolutions

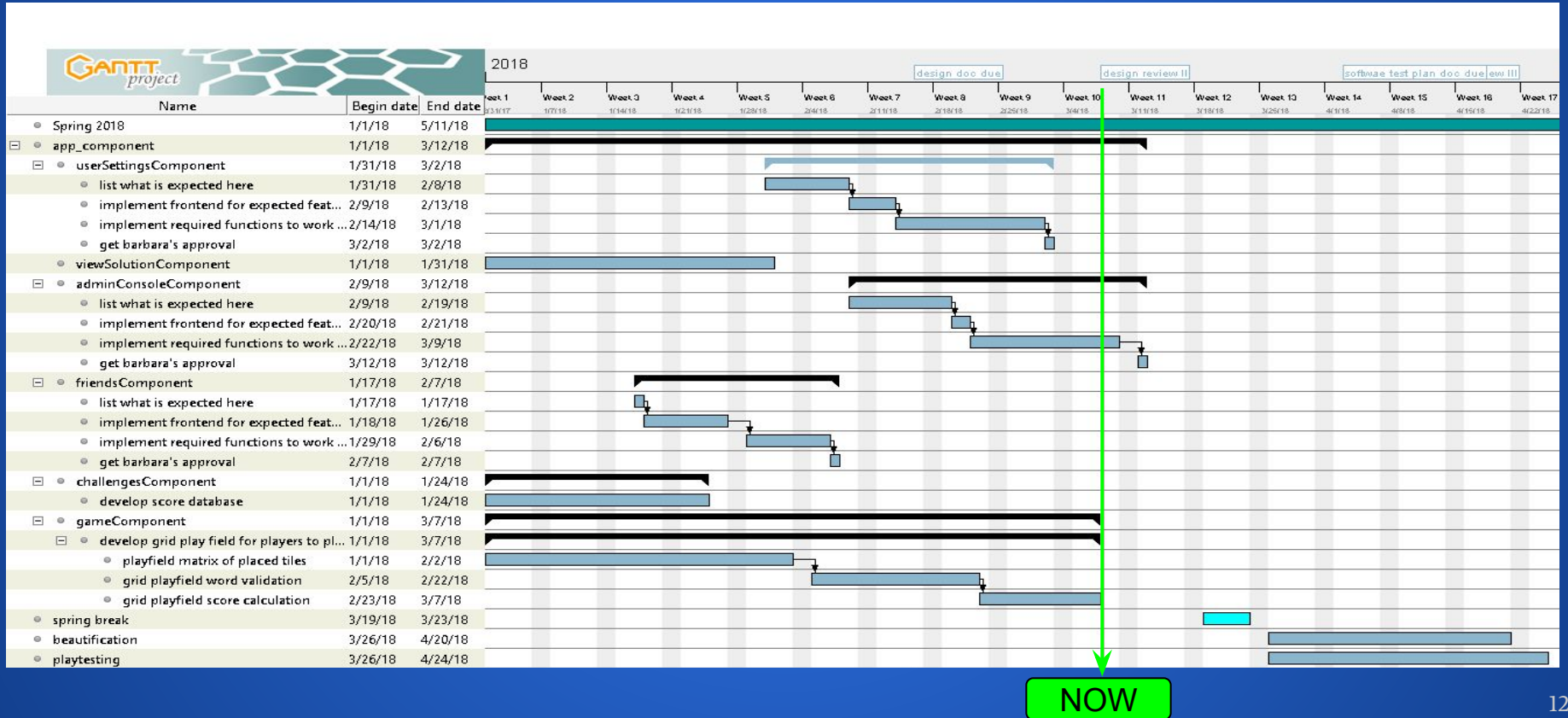
CHALLENGES



RESOLUTIONS

- Loaded tournament word list into server side hash table.
- Manually solved issue with Dragula and game grid.

Schedule



Conclusion

WordScuffle™

provides cognitive and social brain-flexing
prevents onset of Alzheimer's Disease.

Realizing WordScuffle

As a web application

Resolving workflow problems

Addressing social components of AD



WordScuffle™

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Thank you!

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