

SWENG 861 Individual Course Project

NCAA Basketball Tenable

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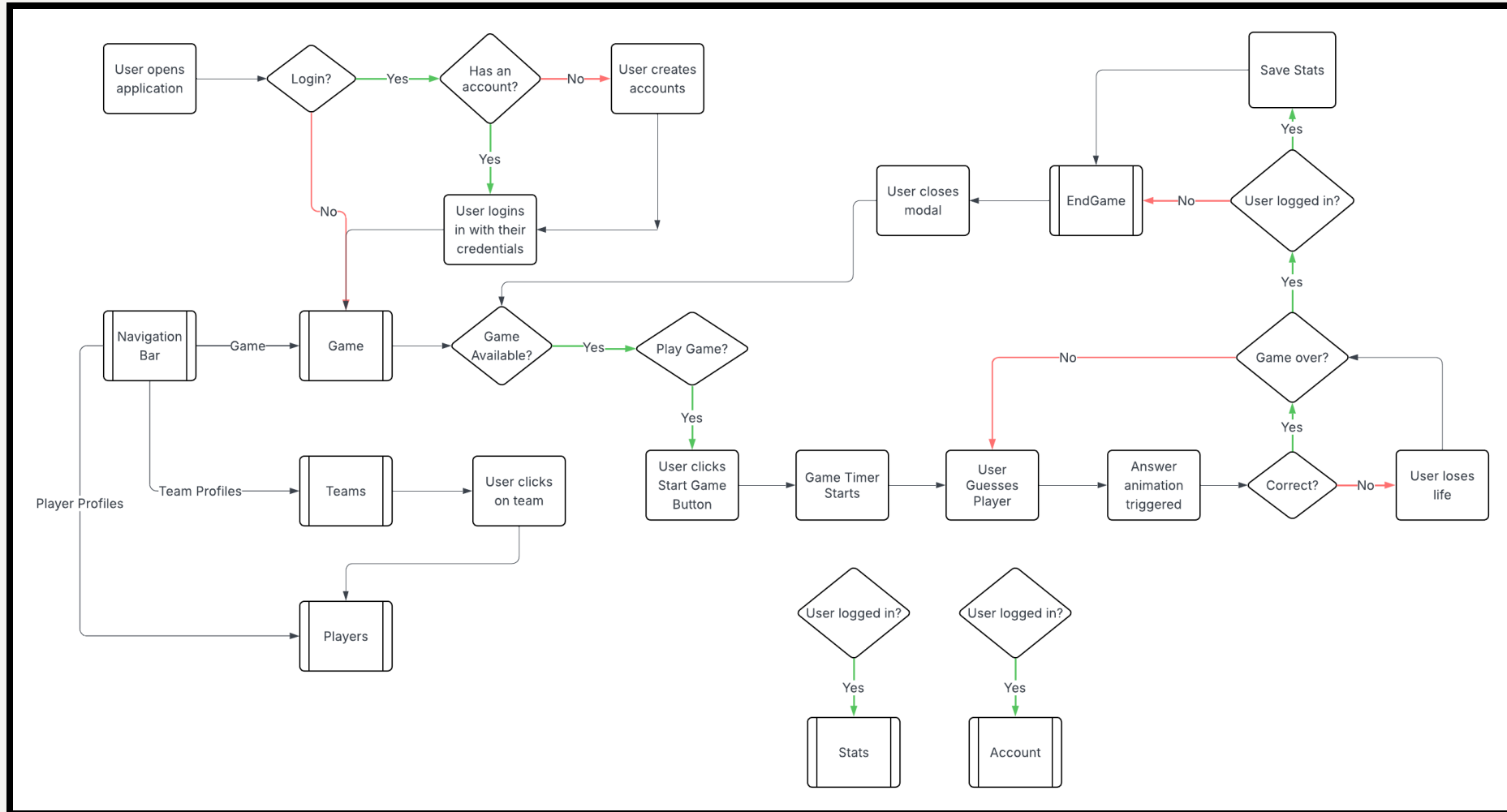
Summary + Requirements

- Project Summary: Create a web application where users can learn about the various teams, players, and statistics of the 2024-2025 season of Big Ten Men's Basketball. Users will be able to play Big Ten Basketball themed games inspired by the British game show "Tenable", as well as view meta data on teams and players.
- Requirements / Success Criteria:
 - Create functioning games:
 - Users should see a prompt, ten answer slots, and a typable dropdown menu of answers to guess.
 - Users should be able to guess an answer, see the checking animation, and appropriately lose lives if incorrect.
 - Game should end if all correct answers found or the user runs out of guesses.
 - Login functionality
 - Users can create accounts and log in with their credentials
 - If logged in, users can see the stats of previous games they have played
 - Teams and Players Profiles
 - Users can visit the teams and players profiles to learn more information about each team and player

Architecture + Design Diagram

- Front End: Vue.JS
 - Lightweight, Two-way binding, Previous experience
- Back End: Node.JS + Express
 - Easy routing + API definitions
- Testing
 - Front-End: vue-jest
 - Back-End: jest
- DevOps
 - Monolithic Deployment: Microsoft Azure
 - GitHub Actions CI/CD Pipeline – triggers on push to master branch
- Design Diagram (Next Slide)

Design Diagram



Challenges + Opportunities to Scale

- Challenges
 - URL configuration for localhost, production environment, and testing environment
 - Setting up unit testing
 - Testing coverage report inaccuracies
 - Designing before coding
- Opportunities to Scale
 - Creating more quizzes
 - Expanding quizzes functionality to more than just players answer set
 - Expanding databases to more than just the 2024-2025 season
 - New Games:
 - Wordle-Like player of the day game
 - More in-depth learning sections

DEMO

- Host URL: <https://sweng861-ncaab-tenable-ddduefhzbwcxgpc4.eastus2-01.azurewebsites.net/#/>
- Testing / Demo Credentials:
 - Email: test@test.com
 - Password: test

Final Remarks

- This has been a project I have always wanted to implement!
- I have learned so much in SWENG 861...
 - Software Architecture
 - Front End / Back End Technologies
 - Testing + Logging
 - DevOps practices
- Thank you!