# AdeptVTT

A Virtual Tabletop Web Application with Feature Rich Support for Multiple Tabletop Roleplaying Game Systems

By Jasper Yeung | Fall 2025

# A Virtual Tabletop (VTT) Web Application

- Tabletop Roleplaying Games (TTRPG) provide a system of rules for Players and Game Masters (GM) to play a game and experience a narrative

- Game Masters (GM):
  - Control the TTRPG narrative
  - Oversee TTRPG Rules
  - Provide Players with a Fun Roleplaying Experience

- VTTs Empower GMs:
  - To Create Visual Representations of Scenes
  - With Tools Assisting in Arbitrating TTRPG Rules

# Project Context

- Current VTTs are either:
  - Feature Rich - One TTRPG System
  - Feature Poor - Multiple TTRPG Systems
- GMs want features that help arbitrate rules easier and faster
  - Requires Tailored Features to a TTRPG System's Rules
- GMs want a VTT that is easily accessed and simple to use
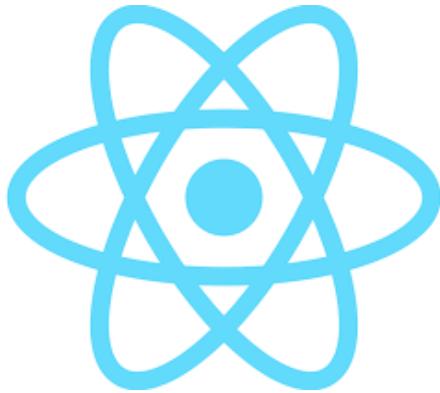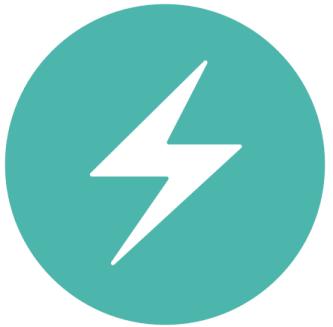
# Project Goals

▶ Create a web application that does not require GM to download an application and can be quickly accessed

▶ Provide an Intuitive User Experience for GMs to Manage their Campaigns

▶ A Software Architecture that is:

   ▶ Modular to Support Multiple TTRPG Systems

   ▶ Maintainable for Development of TTRPG System Specific Features
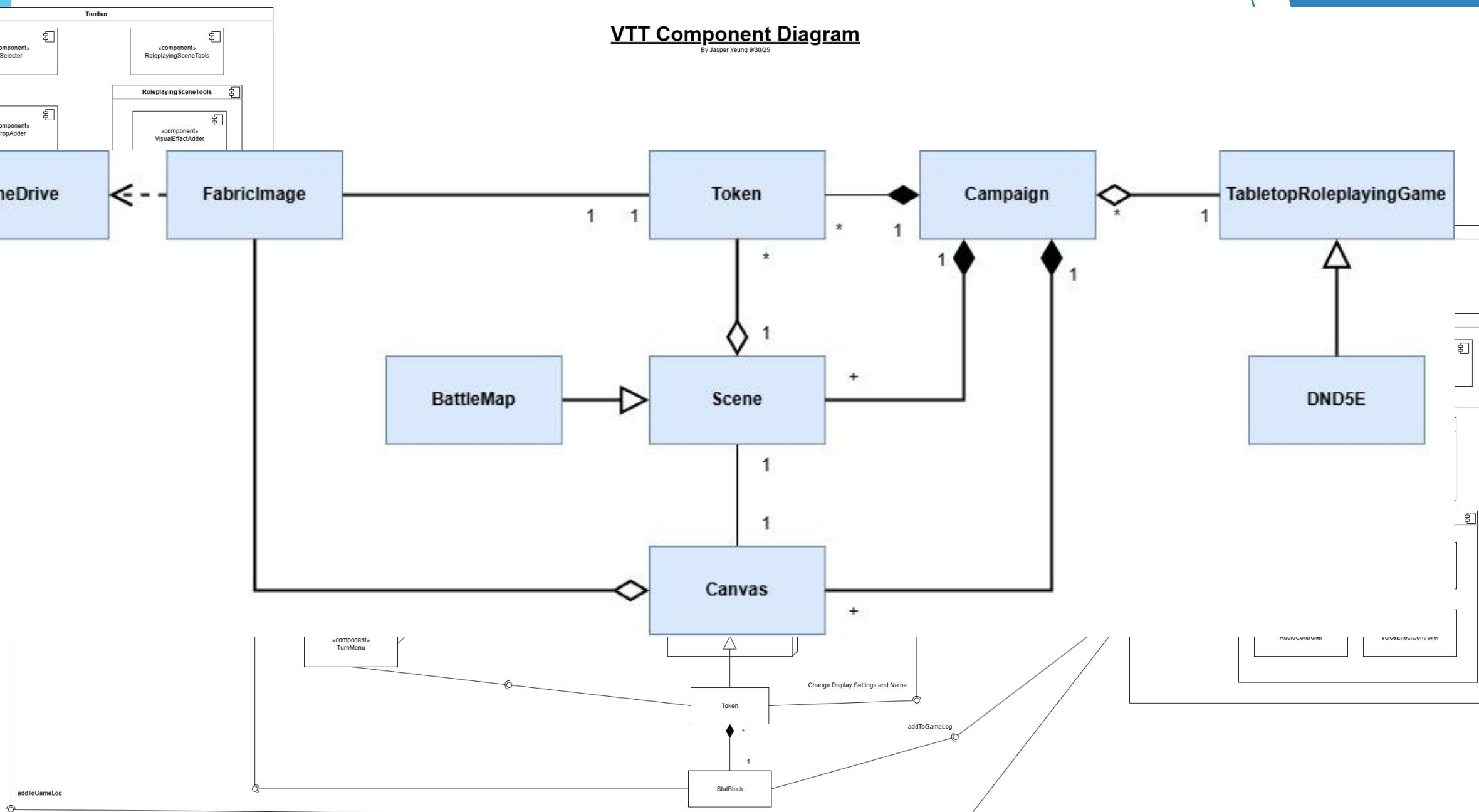
# Tools



- React: Industry Standard
- TypeScript:
    - Object-Oriented Focus
    - Static Typing
    - Error at Compile Time
- Fabric.js: Feature-Rich Canvas API
- Chakra UI: Adaptable UI Components

# VTT Component Diagram

By Jasper Yeung 9/30/25

# Features

- Tokens: Images Representing Characters Placed on a Scene
  - Context Menu Visual Adjustments
  - Stat Blocks
- Battle Map: Scene used Primarily for Combat
  - Areas of Effects
  - Grid Setting
- Scene Switching
- Campaign Saving

# Create New Campaign

Campaign Name

Enter a the Campaign's Name

Select TTRPG System

Type to search

Create Campaign

# Resume Campaign

⬆ Upload Campaign File

# Challenges

**Scope Reduction:**

Planning:
65 Functional Requirements
Completed:
21 Functional Requirements

**Image Embedding with Fabric.js**

Google Drive: <iframe>
OneDrive: <img>

**Browser Support:**

Edge, Chrome, and FireFox

# Next Steps

**Implement GM and Streaming Modes:**
Cross-Tab Communication
Hide Some Elements from Players

**Audio Controller**

**Integrate Image Uploading with OneDrive API**

**Game Log and Dice Rolling**

# Courses

CSS 343: Data Structures, Algorithims, and Discrete Mathematics

CSS 301: Technical Writing

CSS 370: Analysis and Design

CSS 481: Web Programming and Applications

# Acknowledgements

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