

ITAS 282

Final Project

Performing Arts Manager

Project Proposal

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Final Project Proposal

1. Elevator Pitch

Performing Arts Manager is a web app for managing your shows. It allows you to keep track of all parts of a performance, including actors, props, costumes, rehearsals, and more, all in a clean and easy to use interface.

2. Needs Analysis

As someone heavily involved in the performing arts, and likes to keep themselves organized, I realized there wasn't a good single piece of software for managing performances and productions. This tool will contain features for directors, stage managers, and performers to ensure everyone is always up-to-date on show info and things run smoothly. As a starting point, my target audience will be community theatre and local schools; although, I hope to later expand to a wider audience.

3. Stakeholders

I was originally approached by Rosanna Jackson at Cowichan Secondary to develop a website for her to track her drama classes. Despite the site now going far beyond that, she is still acting as my client for this project.

4. User Types

President

- Level: Global, Organization
- Abilities: Full access. Can create/delete shows and manage all departments on both organization and show level

Board Member

- Level: Organization (Restricted)
- Abilities: Access to specific **global** departments as decided by the president. No access to show level tools

Director

- Level: Show (Lead)
- Abilities: Full management of a specific show. Can edit schedules, notes, and manage all production teams (Tech/Costumes/Props) for their show(s)

Stage Manager

- Level: Show (Management)
- Abilities: High-level access to show data, schedules, and notes. Manages lower ranked production members and departments

Department Leads (Costumer, Prop Master, Tech Lead)

- Level: Departmental
- Abilities: Full control over their specific inventory and tasks. Can be granted organization level access to their department by the president

Performer / Stagehand

- Level: General User
- Abilities: Access to a personalized dashboard. They can view their schedules, assigned costumes, and props, but cannot edit show data.

5. User Stories

User Story

- As a **president**, I want to create a new show in the system so I can begin assigning team members and managing resources for a specific production

Acceptance Criteria

- System provides a “Create Show” form with fields for Title, Start Date, and End Date.
- Upon submission, the show is saved to the database and appears in the organization dashboard
- Only users with “President” role can see the “Create Show” button

User Story

- As a **director**, I want to add rehearsal dates and times to the schedule so that cast and crew can stay informed

Acceptance Criteria

- A calendar interface allows the selection of specific dates and times
- The entry allows for a description
- The schedule updates in real time for all assigned users.

User Story

- As a **costumer**, I want to upload photos and descriptions of costume pieces so that I can track our inventory

Acceptance Criteria

- The user can upload an image file
- The user can input text for a description
- The user can assign text-based tags
- The entry is searchable via costume dashboard

User Story

- As a **performer**, I want to log in and see only my specific rehearsal times and costume fittings so that I am not overwhelmed by irrelevant data

Acceptance Criteria

- The dashboard filters the master schedule to only show times when the user is tagged
- The user cannot see tools they don't have the ability to use
- The interface should be mobile-friendly for easy access

User Story

- As a **stage manager**, I want to post production notes, so the team knows what adjustments need to be made before the next rehearsal

Acceptance Criteria

- A text editor is available to type and format notes
- Notes can be tagged by department or user
- A publish button sends a notification, email, or text to the relevant team members

User Story

- As a **prop master**, I want to link specific props to specific characters to keep the prop table organized

Acceptance Criteria

- A dropdown menu on the prop-creation page listing all characters in the show
- The system generates a “Prop List” showing who each prop belongs to and where it should be

User Story

- As a **president**, I want to grant a **board member** access to view the costume inventory without giving them access to other departments.

Acceptance Criteria

- A set of “User Permissions” toggles exist within the user management profile
- Changes take effect immediately upon saving
- The board member is blocked from accessing non-permitted pages

User Story

- As a **tech lead**, I want to mark lighting or sound cues as “Ready” or “In Progress” so the **stage manager** knows the status of the tech cues.

Acceptance Criteria

- A status toggle is available next to each cue
- The timestamp of last update is recorded and displayed
- The stage manager view automatically updates when changes occur

6. Tech Stack

I propose the usage of a MERN stack for this project. Including MySQL, Express, React (and React Native), and NodeJS.

- **Database: MySQL/MariaDB.** A relational database is ideal for this project because the data links are complex and highly structures. Sequelize will be used as an ORM for managing the relationships.
- **Backend: Node.js + Express.** This will serve as a RESTful API, handling database logic, user authentication (using JWT), permission checks, and serving data.
- **Web Frontend: React.js.** This will be used for the web-based frontend dashboards that have more complex criteria and should be accessed from a desktop.
- **Mobile Frontend: React Native.** A native mobile app will provide a better experience for team members to do basic tasks like schedules and assigned costumes. Allows for push notifications.

Resources and Costs

- **Hosting:** During development, the site will be hosted on either appdev.itas.ca, or my personal server. Depending on what is easier for me. Upon completion, other hosting services can be considered for a more permanent host.
- **Database:** The database will be hosted on the ITAS Digital Ocean server for ease for access.
- **Cloudflare:** Cloudflare will be used post-development for domain management and security features. Approximately \$12 for a domain + free management plan.

7. Milestones

Sprint 1

- Complete backend API and database structure for show-level management
- Have a basic dev interface in react for calling endpoints

Sprint 2

- Present a functioning show-level front end that allows directors and stage manager to completely manage a show
- Complete a basic react-native front end for performers to view their schedules

Project Fair

- Have a fully functioning and presentable frontend for both web and mobile that includes all show-level features for all roles
- If time allows, work on adding organization level management

8. Limitations

As I am building 2 frontends and a backend solo, time may be an issue for me. I will have to make a list of features to prioritize for the presentation at the project fair, and what I can work on after the end of term. Full functionality of the web-app will be taking priority over most functionality of the react-native app.

9. Resources

<https://www.captitles.com/apps-for-technical-theatre> - Apps for theatre

<https://react.dev/learn> - React Docs

<https://dev.mysql.com/doc/> - MySQL Docs

<https://reactnative.dev/docs/getting-started> - React Native Docs

<https://expressjs.com/> - Express Docs

<https://nodejs.org/docs/latest/api/> - Node Docs

<https://v2.tailwindcss.com/docs> - TailwindCSS Docs

<https://docs.docker.com/> - Docker Docs

<https://www.cloudflare.com/> - Cloudflare

<https://dramamanager.mindplayer.dedyn.io/> - Original Dev Site