**Computer Engineering Technology Program**

**Project I, ENG4001**

Project Requirements Analysis Report for:

**Mielke**

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# Introduction

The goal of our project is to develop a radio podcast website that completely transforms how audio content is consumed by listeners. We are creating a digital paradise where everyone can easily find and enjoy podcasts by putting accessibility, dependability, and intuitive design first. The purpose of this website is to streamline the listening experience for users by providing an elegant interface with easily accessible and captivating information. We bring users into a world of audio exploration that enhances everyday life by carefully balancing customisation with user-friendly design, making every moment an opportunity for connection and discovery.

Technology and the ageless art of storytelling are fundamental to our aim, making our platform more than just a website but rather a portal to an infinite universe of ideas, tales, and music that can be accessed on any device, from any location. Our objective is a place where listening naturally becomes a part of daily life, turning ordinary moments into remarkable ones. We provide more than simply a podcast with every click; we also open doors to different viewpoints, connect us to other realms, and become a travelling companion.

## Functional and Non-functional Requirements

**Functional Requirements:**

1. As a podcast listener, I want to be able to search the podcasters based on Postal code, so I can new content relevant to my location.
2. As a podcast creator, I want to have a step-by-step guide for creating a podcast account on \_\_\_\_ platform, so I can start my own podcast channel.
3. As a podcast creator, I want step-by-step guide to upload a podcast, so I can upload by podcast on \_\_\_\_\_ platform easily.
4. As a podcast listener, I want the websites to provide up-to-date meta-data (podcaster’s details) for each podcast account listed, so I can decide which account to open.
5. As a podcast listener, I want to be able to go directly to their respect page on button click so that I can easily navigate to their page on the platform.
6. As a podcast listener, I want to be able to sort list of podcasters based on the tags/categories, so that I can filter out what I want to listen to.
7. As a podcast listener, I want to be able to see which category each podcaster is in so that I can pick what I am interested in.
8. As a podcast listener, I want to be able to create an account, so that I can access my profile later.
9. As a podcast listener, I want to be able to save my favourite podcasters, so that I can directly go their account easily.
10. As a podcast listener, I want to be able to search for the podcaster based on their name, so that I don’t have to look for their postal code.
11. As a podcast listener, I want to be able to share the podcasters profile, so that I can promote the podcasters within my contacts.
12. As a user, I want the Website UI to be smooth and understandable, so that I don’t have hard time working through it.
13. As a podcast creator, I want to have a step-by step guide for deleting an uploaded podcast, so that I can delete a podcast uploaded by mistake.
14. As a podcast creator, I want to have a menu Item for each topic (Such as update profile, create account, upload podcast), so that I can easily open the topics I want.
15. As a podcast creator, I would like to have screenshots for each step (if possible), so that I can use it as a reference if I get lost.

**Non-Functional Requirements:**

1. As a user, I want the Website UI to be smooth and understandable, so that I don’t have hard time working through it.
2. As a user, I want user passwords to be secured before storage in the database, so that I get protection against possible data breach.
3. As a user, I want the system to optimize resource usage to minimize page load times, so that I can access content quickly and efficiently.
4. As a user, I want the website UI to be responsive and mobile-friendly, so that I can access the platform seamlessly from any device.
5. As a user, I want the UI to provide success and error feedback, so that I know when I’m doing something wrong.

## Scope

* Design and development of a web application for podcast management.
* Implementation of a step-by-step guide for creating and deleting user accounts.
* Integration with a database to store podcaster’s metadata and user profiles.
* Development of a user interface for browsing and searching podcasters.
* Implementation of functionality to save and manage favourite podcasters.
* Integration with external APIs for obtaining and updating podcast metadata.
* Development of sorting and filtering features for podcasters based on categories.
* Implementation of redirection functionality to direct users to podcasters’ respective pages.
* Design of a menu system for easy navigation within the application.
* Testing and debugging of the application to ensure functionality and usability.
* Documentation of the project including user guides and technical documentation.
* Consideration of scalability and potential future enhancements.

## Specifications

This website will be developed utilizing a combination of frontend and backend technologies to ensure efficient functionality and user experience.

For the frontend, the website will be built on the Wix (Version: v4) framework, utilizing HTML5 and CSS3 for design and layout. This choice is made to leverage Wix's user-friendly interface and customization options.

On the backend, Node.js (Version/Build Node.js 20) will serve as the primary runtime environment, with the option of Angular 14 or ReactJS for API development, depending on project requirements.

The database infrastructure will be powered by Firebase, offering scalability and real-time data synchronization.

Key features of the website include comprehensive podcaster listings, user profile management, robust search and filtering capabilities, interactive user interactions such as ratings and reviews, and ensuring a responsive design to cater to users across various devices and screen sizes.

## Assumptions

The team assumes the client will provide (buy) a domain name and a subscription to Wix web services to continue to keep the site running. We will also assume the client will provide us with all their radio, podcasts and/or websites relating to their radio station to link it to the website.

# Schedule

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Task Description** | **Task Duration** | **Due Date** |
| 1. Research | Research radios in the Ottawa area and what platforms they use for broadcasting | 1 week | March 18, 2024 |
| 1. Create / Decide on Website | Decide which website platform we will use for the project | 1 week | March 25, 2024 |
| 1. Plan | Start planning what pages we might need for the website and their layouts | 2 weeks | April 1st 2024 |
| 1. Implement | Work on implementing the podcast search functionality with a few Ottawa podcasts (notably Sue’s podcasts) | 2 weeks | April 8th 2024 |
| 1. Review & Document | Review website page and document processes as needed | 1 month | April 12th, 2024 |
| 1. Work on next pages of the website | We will work on the rest of the web pages required for the website such as a description box for each radio podcast | 1month | May 20th, 2024 |
| 1. Link web pages with API’s | The implementation on API’s will allow us to scrape relevant data to link the data to the site | 3 weeks | June 10th , 2024 |
| 1. Review and edit descriptions | Review all webpages for spelling errors and accurate descriptions | 3 weeks | July 8th , 2024 |
| 1. Update documentation | Update the final documentation for the client | 3 weeks | July 31st , 2024 |

# Resources

After thorough research, we’ve concluded that we’ll need a monthly subscription for Wix Builder since we’ve decided to use it as our environment. It will cost us 21.99 CAD per month. Alternatively, we might consider using Bootstrap Studio if the need arises, which is another website building platform at the cost of 59 CAD for lifetime.

Additionally, we will need a domain name which is yet to be decided based on the client’s budget.

# Communication Plan

The team will engage in regular communication with the Technical Lead, Professor Leanne, on a weekly basis via Zoom meetings scheduled for Wednesdays. Additionally, biweekly reports and detailed progress updates will be conveyed to the client through email correspondence. Team meetings are slated for every Thursday, either in-person or via Zoom, to discuss project developments and strategies. Furthermore, daily scrum meetings will be conducted online using Discord to ensure efficient coordination and alignment of tasks.

# Risks

# During the development and operation of our website, several risks have been identified that could potentially impact the project's success. One significant risk is the accuracy and completeness of the data we present. The podcast and radio landscape is dynamic, with new content being created regularly. To mitigate this, we plan to implement a systematic review process, ensuring that our website remains up-to-date and accurate.

# Another area of concern is our reliance on third-party APIs for data scraping and integration. Changes to these APIs' terms, costs, or technical specifications could disrupt our service. We intend to address this by exploring multiple data sources and maintaining a flexible site architecture, allowing us to adapt to such changes with minimal impact.

# Intellectual property disputes pose a risk, as our content will feature information from various content creators. We are committed to securing the necessary permissions and adhering to copyright laws to avoid any legal issues.

# Privacy and data protection are also paramount, given the potential collection of user data. We will ensure compliance with all relevant privacy laws and implement state-of-the-art data protection measures.

# Lastly, engaging and retaining a significant audience is crucial. We plan to develop a robust marketing strategy and continuously refine our user experience based on user feedback.

# Manufacturing and/or Test/Evaluation

The team will adopt Agile principles for testing and debugging the website application. Testing procedures will be integrated alongside feature development to ensure overall product stability. Unit testing will be primarily conducted towards the latter stages of sprints, with an initial focus on feature development.

Regarding project requirements, it has been noted that users highly prioritize access to podcasters' profiles based on city. Therefore, our testing and evaluation strategies will predominantly revolve around simulating user interactions within this context. A potential measure of success could involve soliciting feedback from a sample of users, including friends and our client, to assess the effectiveness of the city-based podcaster listings. Furthermore, we will evaluate the website's impact by gauging users' satisfaction through their interaction with the platform and the relevance of the content presented.

For testing purposes, success criteria will be determined based on positive user feedback and accurate location based listings. Specifically, the team will assess the effectiveness of the website in facilitating user discovery and engagement with podcasters based on city. Feedback from users regarding the ease of navigation, relevance of information, and overall satisfaction with the website experience will inform our testing outcomes.

In addition to regular testing and evaluation, the team will maintain periodic communication with the client to review progress and gather feedback. The frequency and timing of these meetings will be coordinated with the client to ensure alignment with project milestones and objectives.

# Procurement

We will require a domain name from a domain provider, the cheapest domain provider found as nameheap.com offering the domain findottawaradio.ca for C$16.26 / year.

We will also require a subscription to the web hosting service wix, offering monthly subscriptions at $22.00 / month.

Bringing the total procurement cost to $22.35 a month.

# Intellectual Property

Intellectual property rights are a cornerstone of our project, especially given the diverse sources of content we intend to feature. We will diligently ensure that all used content, including texts, images, and audio clips, is used with proper permission and attributed correctly.

We recognize the importance of trademarks and will ensure that any logos or names used on our site have the right clearance. In cases where content licensing is necessary, we will enter into agreements that clearly outline the terms of use for both parties.

For any user-generated content, our terms of use will explicitly state copyright ownership and usage rights to prevent any intellectual property disputes.

Additionally, any proprietary technology developed during this project, such as unique software or algorithms, will be considered for patent protection or maintained as trade secrets, depending on our strategy for commercialization or contribution to open-source communities.

# Safety

This project is free from risks or hazards, eliminating the need for safety measures. Its inherently safe nature assures seamless integration into any setting, embodying a blend of professional excellence and aesthetic grace.