

Veeery Accessible Audiobook Product Requirements Document



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1. Introduction

1.1 Document Objective

The Product Requirements Document (PRD) provides a complete requirements definition for the Veeery Accessible Audiobook platform, which combines accessible audiobooks with a virtual classroom experience for visually impaired students.

1.2 Market Problem

In 2019, there were approximately 285 million visually impaired people worldwide, including 39 million who were blind and 246 million with low vision. Many visually impaired students face challenges accessing traditional educational materials and classroom experiences. Standard audiobook platforms often lack interactive features and fail to replicate the engaging environment of a physical classroom, resulting in an education gap where visually impaired students cannot receive the same quality of education as their peers.

1.3 Market Opportunity

Given the 285 million visually impaired individuals globally, many of whom are students in need of accessible educational materials, there is a substantial market opportunity. Schools and colleges are seeking innovative solutions to support visually impaired students and provide a comprehensive learning environment. By combining accessible audiobooks with a virtual classroom experience, Veeery can address this underserved market and become a key player by providing an immersive and accessible learning experience.

1.4 Product Concept

Veeery Audiobook is an audiobook platform tailored for visually impaired students in educational institutions. It combines accessible audiobooks with a virtual classroom experience, allowing teachers to deliver lessons in an engaging manner that simulates the atmosphere of a physical classroom. The platform features an intuitive, accessible interface with screen reader support, customizable accessibility settings, and interactive learning tools.

1.5 Unique Selling Proposition

Veeery Audiobook's unique selling proposition lies in its focus on providing an immersive and inclusive learning experience for visually impaired students. Unlike traditional audiobook platforms, Veeery Audiobook offers a virtual classroom environment that replicates the engaging and interactive nature of a physical classroom, along with accessible audiobook content.

2. Product Project Overview

2.1 Section Objective

To outline the project scope, target market, and customer description.

2.2 Target Market Description

The primary target market for Veeery Audiobook includes visually impaired students in schools and colleges, as well as the educational institutions that support them. This market comprises students at various educational levels who face challenges with traditional educational audiobook platforms and lack access to an engaging classroom experience.

2.3 Target Customer Description

Students: Visually impaired students in primary, secondary, and higher education needing accessible audiobooks and an interactive learning environment.

Educational Institutions: Schools, colleges, and universities looking to provide accessible learning resources and engaging classroom experiences for their visually impaired students.

Educators: Teachers and professors seeking accessible audiobook content and tools to deliver interactive lessons to visually impaired students.

3. **Product Environment**

3.1 Section Objective

To define the environment in which the product will operate, including constraints and dependencies.

3.2 General Constraints

Platform Compatibility: Must support multiple operating systems (iOS, Android, Windows, macOS).

Internet Access: Requires internet access for streaming audiobooks and participating in virtual classroom sessions.

Accessibility Standards: Must adhere to WCAG 2.1 Level AA standards.

3.3 Assumption and Dependencies

Assumptions:

- Users have basic familiarity with using digital devices.
- Internet connectivity will be available for streaming audiobooks and virtual classroom sessions.
- Educational institutions will support the implementation and use of the platform.

Dependencies:

- Reliance on third-party screen readers and accessibility tools.
- Content providers must supply accessible audiobook formats.
- Availability of qualified educators to conduct virtual classroom sessions.

4. **Product Requirements**

4.1 Section Objective

This section outlines the core product requirements for the Veeery Accessible Audiobook platform, focusing on delivering an immersive and inclusive learning experience through accessible audiobooks and a virtual classroom environment tailored for visually impaired students.

4.2 Functional Requirement

4.2.1 User Experience and Accessibility

Requirement	Description
PR Identifier	VEEERY.PR001
Directive	Product shall provide an intuitive, accessible user interface optimized for visually impaired users, with support for screen readers, keyboard navigation, and high contrast modes.
Constraints	Ensure adherence to WCAG 2.1 Level AA accessibility standards across all platforms (web, mobile web, Android, and iOS).
MR Identifier	MRD001

Requirement	Description
PR Identifier	VEEERY.PR002
Directive	Product shall offer customizable audio settings, including playback speed control, pitch adjustment, and voice preferences (e.g., male/female, accent).
Constraints	Ensure consistent audio quality and synchronization across different settings on all platforms.
MR Identifier	MRD001

4.2.2 Audiobook Library and Management

Requirement	Description
PR Identifier	VEEERY.PR003
Directive	Product shall provide a comprehensive library of accessible audiobooks spanning various subjects, genres, and educational levels.
Constraints	Ensure proper categorization, search, and filtering capabilities for easy content discovery on all platforms.
MR Identifier	MRD002

Requirement	Description
PR Identifier	VEEERY.PR004
Directive	Product shall allow users to stream or download audiobooks for offline access, with support for bookmarking and note-taking capabilities.
Constraints	Implement DRM (Digital Rights Management) to prevent unauthorized distribution. Ensure synchronization of bookmarks and notes across devices.
MR Identifier	MRD002

Requirement	Description
PR Identifier	VEEERY.PR005
Directive	Product shall enable audio clip sharing, allowing users to share specific segments of audiobooks with others, including educators and peers.
Constraints	Ensure shared audio clips are accessible, properly narrated, and easy to navigate on all platforms.
MR Identifier	MRD002

Requirement	Description
Directive	Product shall offer a virtual classroom environment where educators can conduct live audio lessons synchronized with audiobook content.
Constraints	Ensure seamless integration of audiobook playback with educator audio feed, with low latency and high-quality streaming on all platforms.
MR Identifier	MRD003

Requirement	Description
PR Identifier	VEEERY.PR007
Directive	Product shall support interactive features in the virtual classroom, such as audio/text chat, virtual raised hand, polling, and screen sharing with audio narration.
Constraints	Ensure all interactive features are accessible and user-friendly for visually impaired students on all platforms.
MR Identifier	MRD003

Requirement	Description
PR Identifier	VEEERY.PR008
Directive	Product shall provide interactive quizzes and exercises tailored for audiobook content, allowing educators to assess student comprehension within the virtual classroom.
Constraints	Ensure accessibility and compatibility with various question types and formats on all platforms.
MR Identifier	MRD003

4.2.4 Collaboration and Communication

Requirement	Description
PR Identifier	VEEERY.PR009
Directive	Product shall implement discussion forums for students to engage in content-related discussions and collaborate with peers and educators.
Constraints	Moderate forums to ensure a safe and productive environment. Ensure accessibility of forum content on all platforms.
MR Identifier	MRD004

Requirement	Description
PR Identifier	VEEERY.PR010
Directive	Product shall offer in-app messaging to facilitate direct communication between students and educators, with support for audio messaging.

Requirement	Description
Constraints	Ensure messages are encrypted and private. Provide accessible audio playback and recording capabilities on all platforms.
MR Identifier	MRD004

4.2.5 Performance and Security

Requirement	Description
PR Identifier	VEEERY.PR011
Directive	Product shall ensure all user data is encrypted both in transit and at rest, adhering to industry-standard security practices.
Constraints	Implement robust authentication and authorization mechanisms, regularly update security protocols, and conduct security audits.
MR Identifier	MRD005

Requirement	Description
PR Identifier	VEEERY.PR012
Directive	Product shall optimize audio streaming performance for low latency and high-quality playback during virtual classroom sessions and audiobook streaming.
Constraints	Implement appropriate caching, buffering, and compression techniques to ensure smooth audio streaming on all platforms and network conditions.
MR Identifier	MRD005

Requirement	Description
PR Identifier	VEEERY.PR013
Directive	Product shall comply with WCAG 2.1 Level AA accessibility standards and relevant privacy regulations such as GDPR for data protection.
Constraints	Regularly review and update accessibility features and data privacy measures to maintain compliance across all platforms.
MR Identifier	MRD005

4.2.6 Compliance and Standards

Requirement	Description
PR Identifier	VEEERY.PR014
Directive	Product shall comply with WCAG 2.1 Level AA accessibility standards.
Constraints	Regularly review and update accessibility features to maintain compliance across all platforms.
MR Identifier	MRD006

Requirement	Description
PR Identifier	VEEERY.PR015
Directive	Product shall comply with relevant privacy regulations such as GDPR for data protection.
Constraints	Implement necessary measures to ensure user data privacy across all platforms.
MR Identifier	MRD006

4.3 Development Requirements

Technology Stack:

- Frontend: React Native for cross-platform compatibility.
- Backend: Node.js with Express.js for server-side operations.
- Database: MongoDB for scalable data storage.

APIs:

- Integration with third-party APIs for text-to-speech, voice recognition, and screen reader support.
- Custom APIs for user management, audiobook management, virtual classroom management, and synchronization.

Testing:

- Automated testing for all accessibility features.
- Manual testing with visually impaired users to ensure usability, particularly in educational and virtual classroom settings.

4.4 Compatibility Requirements

- Operating Systems: iOS 12.0+, Android 8.0+, Windows 10, macOS 10.15+.
- Devices: Smartphones, tablets, laptops, and desktops.
- Screen Readers: JAWS, NVDA, VoiceOver, and TalkBack.

5. Supporting Data

5.1 Assumptions

- The market for accessible educational audiobooks and virtual classroom experiences will continue to grow.
- Technological advancements will support the integration of new accessibility features and virtual classroom tools.
- Educational institutions will adopt the platform to better support their visually impaired students and provide an engaging learning environment.

5.2 Research Information

- Market Research: Studies indicate that there were over 285 million visually impaired individuals worldwide in 2019, with a significant portion being students seeking accessible educational content and interactive learning experiences.
- User Feedback: Surveys and interviews with visually impaired students and educators reveal a strong demand for an accessible audiobook platform combined with a virtual classroom environment.
- Competitive Analysis: Current audiobook platforms and virtual classroom solutions offer limited accessibility features and lack a comprehensive solution dedicated to the educational needs of visually impaired students.