Product Requirements Document (PRD) that addresses both business and technical aspects of our meeting assistant application. This PRD will incorporate everything we've discussed and finalised, ensuring responsiveness for both mobile and web browsers.

Product Requirements Document: Meeting Assistant Application

1. Executive Summary

The Meeting Assistant Application is a web-based tool designed to enhance meeting productivity through real-time transcription, speaker identification, and Q&A functionality. It aims to streamline meeting documentation, improve accessibility, and provide valuable insights from discussions.

2. Business Objectives

- Improve meeting efficiency and productivity

- Provide accurate, real-time transcription of meetings

- Enhance accessibility for all participants

- Facilitate easy review and searching of meeting content

- Ensure data privacy and security

- Offer a user-friendly experience across devices

3. Target Audience

- Corporate teams

- Educational institutions

- Freelancers and small businesses

- Remote workers

- Individuals with hearing impairments

4. Key Features

4.1 Real-time Transcription

- Live audio capture and transcription during meetings

- Display of transcription in real-time on the user interface

4.2 Speaker Identification

- Automatic speaker diarization

- User voice profile creation and management

- Real-time and post-meeting speaker tagging

4.3 Q&A Functionality

- Integration with OpenAI's GPT-3.5 for answering questions based on meeting content

- User interface for asking questions and viewing answers

4.4 Meeting Management

- Creation and scheduling of meetings

- Meeting history and archive

- Search functionality for past meetings and transcripts

4.5 User Account Management

- Google OAuth for user authentication

- Firebase Google for authentifcation

- User profile management

- Account deletion with complete data removal

4.6 Responsive Design

- Fully functional on both mobile and desktop web browsers

- Adaptive layout for different screen sizes

5. Technical Specifications

5.1 Frontend

- HTML5, CSS3, and vanilla JavaScript

- Responsive design using CSS media queries

- Cross-browser compatibility (Chrome, Firefox, Safari, Edge)

5.2 Backend

- Python with Flask framework

- RESTful API design

5.3 Database

- Amazon RDS with PostgreSQL

- Schema design for user data, meeting metadata, and voice profiles

-Firebase for user login informations

5.4 File Storage

- Amazon S3 for audio files and transcripts

5.5 Authentication

- Google OAuth 2.0

- Google Firebase

5.6 APIs and Services

- Google Speech-to-Text API for transcription and speaker diarization

- OpenAI GPT-3.5 API for Q&A functionality

5.7 Hosting and Deployment

- Google Cloud Run for application hosting

- Docker for containerization

5.8 Security

- HTTPS for all communications

- Encryption for data at rest and in transit

- Regular security audits and updates

6. User Experience

6.1 Onboarding

- User registration and login via Google OAuth

- Optional voice profile creation

6.2 Meeting Creation and Management

- Intuitive interface for starting new meetings

- Easy access to ongoing and past meetings

6.3 During Meeting

- Clear display of real-time transcription

- Simple interface for speaker tagging

- Minimal UI elements to avoid distraction

6.4 Post-Meeting

- Transcript editing and finalization

- Q&A interface for interacting with meeting content

- Options for sharing or exporting meeting data

6.5 Account Management

- User-friendly settings page

- Clear process for account and data deletion

7. Data Privacy and Compliance

- Adherence to GDPR and CCPA regulations

- Transparent data usage and storage policies

- User control over data retention and deletion

8. Performance Requirements

- Transcription latency of less than 2 seconds

- Application load time under 3 seconds on 4G connections

- Ability to handle concurrent meetings (specific number TBD based on initial testing)

9. Scalability Considerations

- Horizontal scaling capabilities through Cloud Run

- Database performance optimization for growing user base

- Monitoring and alerting system for resource usage

10. Future Considerations

- Integration with popular video conferencing platforms

- Advanced analytics on meeting data

- Team collaboration features

- Potential for AI-driven meeting insights and summaries

11. Development Roadmap

Phase 1: Core Functionality

- Basic user authentication and account management

- Real-time transcription and basic speaker identification

- Simple meeting creation and management

Phase 2: Enhanced Features

- Q&A functionality integration

- Advanced speaker identification and voice profiles

- Improved user interface and responsive design

Phase 3: Refinement and Optimization

- Performance optimization

- Enhanced security measures

- User feedback incorporation and bug fixes

Phase 4: Advanced Features (Future)

- AI-driven insights

- Integration with third-party platforms

- Advanced analytics

This PRD covers the key aspects of our meeting assistant application, addressing both business objectives and technical implementation details. It ensures that we're building a responsive application that works across devices and browsers.