README - QR-Based Voice Assistant System

# 1. Introduction

This project is a QR-Based Voice Assistant System designed to enhance campus navigation and accessibility. It provides real-time facility updates, voice interaction, and easy access to location-specific information via QR codes scanned through a web interface.

# 2. Key Features

- QR Code based location access

- Voice assistant for hands-free interaction

- Real-time updates and notifications

- Admin dashboard for data management

- Multilingual voice support

- Mobile-friendly web interface

# 3. Technologies Used

- Frontend: HTML, CSS, JavaScript

- Backend: Python (Flask)

- QR Code: Python qrcode library

- Voice APIs: SpeechRecognition, Text-to-Speech (TTS), Web Speech API

- Database: SQLite or any preferred backend DB

# 4. Modules

1. QR Code Management Module

2. Voice Assistant Module

3. Real-Time Update and Notification Module

4. Admin Management Module

5. Web Interface and Navigation Module

# 5. Usage

Scan the QR code placed at various campus checkpoints to access facility information. Use voice commands to ask questions about facility locations or timings. Admins can update data via the admin dashboard, and changes are reflected in real-time.

# 6. Conclusion

This system simplifies campus navigation, enhances accessibility for all users, and ensures accurate and updated facility information through an efficient and scalable platform.