

# Ifá Daily - Yoruba Sound & Wisdom App Guide

This guide helps you set up, test, and prepare the Ifá Daily web app on Replit before pushing to mobile platforms. It includes instructions, a to-do checklist, and deployment notes.

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## ■ 1. Project Overview

**\*\*Ifá Daily\*\*** delivers authentic Yoruba spiritual experience:

- Daily Ifá Odu and divination logic
- Accurate Yoruba pronunciation (currently disabled pending authentic recordings)
- Oríkì playback and ambient soundscapes
- Bilingual explanations and cultural context
- AI-powered rhythm recommendations with Batá drum patterns
- Personalized ancestral connection pathways

**\*\*Core Features\*\***:

- **\*\*Daily Ifá Readings\*\***: Authentic Odu verses with automated daily selection
- **\*\*Yoruba Pronunciation Module\*\***: Interactive text with pronunciation guides (currently disabled pending authentic recordings)
- **\*\*Orisha Calendar System\*\***: Traditional 4-day sacred cycle with daily guidance
- **\*\*Bilingual Interface\*\***: Full English/Yoruba language support
- **\*\*Ancestral Connection Pathway\*\***: Personalized spiritual guidance system
- **\*\*Wisdom Archive\*\***: Searchable repository of past readings and insights
- **\*\*AI-Powered Rhythm Recommendations\*\***: Personalized Batá drum patterns
- **\*\*Mobile-First Design\*\***: Optimized for smartphone spiritual practice

**\*\*Current Status\*\***: Audio pronunciation system intentionally disabled due to quality standards - awaiting authentic native speaker recordings.

## ■ 2. Setup Instructions

### Environment Setup

```
npm run dev # Starts both backend and frontend on port 5000
```

```
pip install flask
```

```
python main.py # Runs Flask app on port 5001
```

```
python pronunciation_demo_app.py # Standalone demo on port 5001
```

### Project Architecture

- **\*\*Main App\*\***: React/TypeScript frontend with Node.js/Express backend
- **\*\*Database\*\***: PostgreSQL with Drizzle ORM
- **\*\*Flask Components\*\***: Standalone pronunciation demos and utilities
- **\*\*Styling\*\***: Tailwind CSS with sacred color palette (amber, emerald, spiritual blue)
- **\*\*Audio\*\***: Static file serving with HTML5 audio controls

### Folder Structure

```
/client/src/ # React frontend
```

```
■■■ components/ # UI components
```

■■■ pages/	# Route pages
■■■ contexts/	# React contexts
/server/	# Node.js backend
■■■ routes.ts	# API endpoints
■■■ storage.ts	# Database layer
■■■ index.ts	# Server entry
/static/audio/	# Audio files
■■■ pronunciation/	# Yoruba word pronunciations (33 files)
■■■ ambient/	# Spiritual soundscapes
/shared/schema.ts	# Database models
/templates/	# Jinja2 templates (Flask components)
/scripts/	# Utility scripts

## Audio File Requirements

- **Format**: MP3, 22050Hz sample rate, mono channel
- **Size**: Minimum 10KB for authentic recordings
- **Naming**: ASCII-safe filenames (e.g., `sango.mp3` for `ṣàngó`)
- **Quality**: Native speaker recordings only - no synthetic audio

## 3. Components Overview

### Core Application Files

- `server/index.ts`: Express server and API routing
- `client/src/App.tsx`: Main React application entry point
- `server/routes.ts`: Backend API endpoints for readings, Odus, prayers
- `shared/schema.ts`: Database schema and TypeScript types
- `server/storage.ts`: Database interaction layer

### Flask Components

- `pronunciation_demo_app.py`: Standalone pronunciation testing (port 5001)
- `enhanced_pronunciation_server.py`: Advanced pronunciation features
- `app.py`: Legacy Flask application with SQLite backend

### Frontend Components

- `daily-reading.tsx`: Main reading display with Odu interpretation
- `interactive-yoruba-text.tsx`: Yoruba word detection and pronunciation (disabled)
- `yoruba-pronunciation-demo.tsx`: Pronunciation testing interface (disabled)
- `rhythm-visualizer.tsx`: Batá drum pattern visualization
- `orisha-calendar.tsx`: Traditional 4-day sacred cycle display

### Audio System

- `static/audio/pronunciation/`: Yoruba word pronunciations
- Current files: 33 audio files including ase.mp3, orisa.mp3, sango.mp3, etc.
- Status: Disabled pending authentic recordings
- `static/audio/ambient/`: Spiritual soundscapes for meditation

### Database Components

- **Odus**: 256 traditional Ifá verses with interpretations
- **Daily Readings**: Automated daily Odu selection and tracking
- **Prayers**: Daily and lunar prayer cycles
- **User Data**: Reading history and practice tracking

## 4. Audio Checklist

## Current Audio Status

**\*\*■ DISABLED\*\***: All pronunciation features are intentionally disabled due to quality standards.

## Pronunciation Audio Requirements

- **\*\*Native Speaker Recordings\*\***: Only authentic Yoruba speakers from Nigeria/Benin/Togo
- **\*\*File Naming\*\***: ASCII-safe names matching map.json entries
- **\*\*Quality Standards\*\***: Clear enunciation with proper tonal patterns
- **\*\*Cultural Context\*\***: Speakers who understand spiritual terminology
- **\*\*Format\*\***: MP3, 22050Hz, mono, minimum 10KB file size
- **\*\*No Synthetic Audio\*\***: Absolutely no Google TTS or generated voices

## Priority Words for Recording

- **`■àngó`** (sango.mp3) - Orisha of thunder
- **`òrì■à`** (orisa.mp3) - Deity/divine force
- **`à■`** (ase.mp3) - Divine power/amen
- **`■■■un`** (osun.mp3) - River goddess
- **`■■rúnmilà`** (orunmila.mp3) - Orisha of wisdom
- **`yem■ja`** (yemoja.mp3) - Ocean mother
- **`ifá`** (ifa.mp3) - Divination system

## Audio Validation

- Files load without errors (Status 200)
- Proper MIME type: `audio/mpeg`
- No synthetic/generated audio
- Cultural authenticity verified by native speakers

## ■ 5. Bug Fix Workflow

### Audio Testing Process

#### 1. **\*\*Manual Browser Testing\*\***

- Open developer tools → Network tab
- Click audio elements and verify Status 200 responses
- Check console for JavaScript errors

#### 2. **\*\*File Validation\*\***

ls -la static/audio/pronunciation/sango.mp3

curl -I http://localhost:5000/static/audio/pronunciation/sango.mp3

#### 3. **\*\*Audio Quality Check\*\***

- Verify playbackRate and volume settings in JavaScript
- Test across different browsers and devices
- Ensure mobile compatibility

#### 4. **\*\*Error Logging\*\***

- Monitor browser console for audio loading errors
- Check network requests for failed file loads
- Validate JSON mapping files

## Common Issues and Solutions

- **\*\*Audio not playing\*\***: Check browser autoplay policies
- **\*\*Files not found\*\***: Verify filename matches map.json entries
- **\*\*Poor quality\*\***: Replace with authentic native speaker recordings

- **Mobile issues**: Test on actual devices, not just browser emulation

## ■ 6. Database Prep (for later mobile sync)

### Current Database Schema

- **odus**: Traditional Ifá verses and interpretations
- **dailyReadings**: Daily reading generation and tracking
- **dailyPrayers**: Weekly prayer cycle
- **ifaLunarPrayers**: Lunar-based spiritual practices
- **divinationLogs**: User reading history
- **eboRecommendations**: Spiritual guidance and offerings

### API Endpoints

GET /api/readings/today      # Today's Odu reading  
GET /api/readings/{date}    # Specific date reading  
GET /api/readings/history    # Reading history  
GET /api/odus                # All Odus  
GET /api/odus/{id}          # Specific Odu details  
GET /api/search?problem={query} # Problem-based Odu search  
GET /api/ebo-recommendations # Spiritual guidance

### Mobile Sync Preparation

- ✓ **JSON Mapping**: Unicode-safe filename mapping complete (`map.json`)
- ✓ **Normalized Audio Names**: Slugified filenames with Unicode-safe naming
- ✓ **API Endpoints**: RESTful design for mobile app consumption
- **Caching Headers**: Static audio files properly cached
- ✓ **Clean Fallback**: Proper handling for missing authentic files

## ■ 7. Ready for Mobile?

### Frontend Requirements

- ✓ **Mobile-Responsive Design**: Tailwind CSS with mobile-first approach
- ✓ **Touch-Friendly Interface**: Large touch targets and intuitive navigation
- ✓ **Fast Loading**: Optimized images and efficient API calls
- ✓ **Offline Capability**: Core functionality works without network

### Audio Integration Status

- **All audio integrated and plays on click**: Currently disabled pending authentic recordings
- ✓ **No Google TTS fallback**: Completely removed synthetic audio
- ✓ **Runs cleanly in mobile browser preview**: React app is mobile-responsive
- ✓ **Clean fallback for missing files**: Proper error handling implemented
- ✓ **UI elements mobile-responsive**: Tailwind CSS mobile-first design

### Performance Optimization

- ✓ **Image Optimization**: SVG icons and optimized backgrounds
- ✓ **API Efficiency**: Minimal database queries and response caching
- ✓ **Bundle Size**: Efficient component loading and code splitting
- ✓ **Progressive Enhancement**: Works without JavaScript for core content

### Testing Checklist

- ✓ **Desktop Browser**: Chrome, Firefox, Safari compatibility
- **Mobile Browser**: iOS Safari and Android Chrome testing
- ✓ **Responsive Design**: All screen sizes from 320px to 1920px

✓ **Accessibility**: Keyboard navigation and screen reader support

## ■ Next Steps for Deployment

### Immediate Actions Required

1. **Obtain Authentic Audio**: Record native Yoruba speakers for pronunciation
2. **Mobile Testing**: Comprehensive testing on actual mobile devices
3. **Performance Audit**: Lighthouse score optimization
4. **Content Review**: Cultural authenticity verification by Yoruba speakers

### Deployment Preparation

- **Environment Variables**: Database URL and API keys configured
- **Static Assets**: Optimized for CDN delivery
- **Database Migration**: Production schema deployment ready
- **Monitoring**: Error tracking and performance monitoring setup

## ■ Development Guidelines

### Code Standards

- **TypeScript**: Strict type checking enabled
- **React**: Functional components with hooks
- **Database**: Drizzle ORM with PostgreSQL
- **Styling**: Tailwind CSS with custom sacred color palette

### Cultural Sensitivity

- **Terminology**: Use authentic Yoruba terms (e.g., "Ìwúre" not "Àdúrà")
- **Content**: All spiritual content verified by cultural experts
- **Audio**: Only native speaker recordings accepted
- **Respect**: Maintain sacred context of Ifá tradition

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> **To contribute or test**, fork this Replit and upload your own verified audio into the correct folders. Make sure filenames match those in the map.json file.

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**Audio Quality Standards**: This application prioritizes cultural authenticity over technical convenience. The audio system remains disabled until genuine native speaker recordings are available, maintaining the spiritual integrity of the Ifá tradition.

**Testing Protocol**: Use DevTools → Network tab to confirm audio loads (Status 200), validate audio MIME type (`audio/mpeg`), and ensure no synthetic/generated audio is used.