### Create a mobile app using the Flutter cross-platform framework to support both Android and iOS.

### Important Notes for Code Provision:

### I am a beginner developer, so ensure that all explanations and steps are clear, detailed, and beginner-friendly.

### Provide text-based explanations for each question or requirement during our discussion so that I can understand the logic and flow of the code as we progress. Let me know how the code for each feature will be implemented.

### This will help me gain clarity and confidence as we develop the app together!

### **Implementation Plan**

1. Use **Flutter's native splash screen** (via flutter\_native\_splash package) to display the **graphic intro**.
2. Set a **5-second timer** before navigating to the next screen.
3. Ensure a **smooth transition** from the splash screen to the login or home screen.

* If the user **opens the app for the first time**, they will be **redirected to the Registration Page**.
* If the user **is not logged in**, they will be sent to the **Login Page**.
* If the user **is already logged in**, they will go **directly to the Home Page**.

### **Registration page:**

* **App Language** → Fixed as **English** (cannot be changed).
* **Content Language** → Dropdown menu (user selects from provided options).
* Content Language Data (csv format)! Assamese,Bengali (Bangla),Devanagari ,Gujarati ,Kannada,Malayalam,Oriya (Odia),Punjabi (Gurmukhi),Roman itrans,Tamil,Telugu,Urdu,Arabic Avestan,Bhaiksuki,Brahmi,Burmese (Myanmar),Cyrillic (Russian),Grantha,Hebrew,Hebrew (Judeo-Arabic),Imperial Aramaic,Japanese (Hiragana, Japanese (Katakana), Javanese,Kharoshthi,Khmer (Cambodian),Lao,Meetei Mayek (Manipuri, Mongolian,Newa (Nepal Bhasa),Old Persian,Old South Arabian,Persian,Phoenician,Psalter,Pahlavi,Ranjana (Lantsa),Samaritan,Santali (Ol Chiki),Sharada,Siddham,Sinhala,Sogdian,Soyombo,Syriac (Eastern),Syriac (Estrangela),Syriac (Western),Tamil Brahmi,Thaana (Dhivehi),Thai,Tibetan,

The **Content Language dropdown** will maintain the exact order as I provided.

* **Country Dropdown** (Pre-loaded, default: **India**).
* **Full Name Input** (Mandatory).
* **Mobile Number Input** (Auto-load **country code**, **OTP verification required**), (Mandatory).
* **Email Input** (Mandatory).
* **Password input** (Mandatory). must have a **minimum of 8 characters**
* **Pin code Input** (Mandatory).
* **City field** will be **non-editable**.
* **State field** will be **non-editable**when the user enters a **Pincode**, the app will **automatically fetch and display** the **City and State** from the provided data. (I’ll provide excel file later as pincode.xlsx)
* **Register Button** → on success, show a **success message** and **redirect to Home Page**.

User stays **logged in until they manually log out**.

###### \*\*Important\*\*

###### File Details:

###### Total Files and Folder Structure:

###### The database will store 144,000 files, organized into 12 folders. Each folder will contain 12,000 files.

###### These folders represent files in 51 languages, with 12 primary languages as individual folder names. The folder names will correspond to the content language of the files, such as Assamese, Bengali, Devanagari (Main folder), Gujarati, Kannada, Malayalam, Oriya, Punjabi, English, Tamil, Telugu, and Urdu.

###### File Serving Logic:

###### When a user accesses the files for these 12 primary languages, the files will be served directly from the corresponding language folder, based on the app content language selected in the user's profile section.

###### For users requesting files in the remaining 39 languages, the app will:

###### Convert files in real-time using the Aksharamukha software to match the selected app content language.

###### These conversions will use the Devanagari folder as the source for file retrieval and transformation.

###### File Search Functionality:

###### For the 12 primary language users: File names in the search results will be retrieved exclusively from their respective language folders.

###### For the remaining 39-language users: File names will appear from the Devanagari folder. However, when a file is requested, it will be converted to the selected app content language before being served. Only one file request can be processed at a time in this manner.

###### Content & Naming Format:

###### File content will be stored in Unicode format, ensuring compatibility across languages.

###### File names will remain in English for consistency and easier lookup.

###### Summary:

###### 12 languages have dedicated folders, and files for these languages are served directly without conversion.

###### 39 languages require on-demand conversion using the Devanagari folder as a source.

###### The app content language selected in the profile determines whether a file is served directly or converted before serving.

###### All file content is in Unicode, while file names remain in English for universal access.

**Login Page:**

* + Users can log in using **either Mobile Number or Email** with their **password**.
  + They can also log in via **Google or Facebook**.
  + If they **forget their password**, they can reset it via the **Forgot/Reset Password link**.
  + Register button for new users (redirects to **Registration page**)

**Forgot/Reset Password Page:**

* + Users enter their **Mobile Number or Email**.
  + If they enter either mobile **number** or **email**, they will verify via **Email OTP**.
  + After OTP verification, they enter a **new password**.
  + On success, show a **success message** and **redirect to Home Page** (keeping them logged in).

**Profile Page (Left Side Menu):**

**Profile Page (Side Menu)** will include below all features exactly as specified.

* User icon: (image) at top left corner :(if user logged in via mobile/email.. allow user to upload, change, and delete(max file size: 512kb, file type: jpg or png) and show it here, if user logged in via google or facebook... fetch from the same website (non changeable
* Logout Button: at top right corner: on click redirect to login page,
* App Language: English(fixed)
* Content Language: (allow user to change) the app content will be shown in this language only out 51 languages,
* Country: user’s country(allow user to change through drop down menu)
* Name: user's name(allow user to change)
* Country code and Mobile Number: user’s country code and mobile number(allow user to change) verify email OTP
* eMail: user’s eMail(allow user to change)
* password: user’s password - hidden(allow user to change)
* Pin code: user’s Pin code (allow user to change)
* City: user’s city (non editable)
* State: user’s state (non editable)
* when the user enters a **Pincode**, the app will **automatically fetch and display** the **City and State** from the provided data.
* Save button: on success, show success message and close side menu

**Favorites Page (Right Side Menu):**

When a user marks a Stotra as **favorite on the viewer page**, it should be added to this list **and stored locally**.

* **Back Button** (to return to the previous screen).
* **Show all saved favorite Stotra files**.
* **Allow users to delete:**
  + **Single file** (remove from favorites).
  + **All files at once** (clear all favorites).
* **Offline Access:** Favorites files will be **saved locally** on the device for offline viewing.

**Notifications Page:**

* **Top Bar:**
  + **Same as Home Page** but replace the **notifications icon** with a **back button** to return to the previous screen.
* **Notifications List:**
  + Display **all received push notifications** in **date order (new to old)**.
  + Each notification should include **Title, Message, and Timestamp**.
* **Delete Options:**
  + **Allow users to delete** a **single notification**.
  + **Allow users to delete all notifications at once**.
* **Bottom Bar:**
  + **Same as Home Page** (for consistent navigation).

### **✔ Notes:**

* **Swipe Gestures:** Left & right swipe for opening **Profile & Favorites**.
* **Carousel & Thumbnails:** For a rich UI experience.
* **Search Feature:** Smart search with file name matching logic.

implement smooth page transitions and animations where needed. Some key animations:

* **Splash Screen Fade In & Out** → Smooth transition from the splash screen to the next page.
* **Page Transitions** → Slide or fade transitions when navigating between pages.
* **Button Press Animations** → Subtle scaling effects when buttons are pressed.
* **Search Suggestions Animation** → Smooth drop-down appearance for search suggestions.
* **Favorites & Notifications Animations** → Soft fade-in when adding/removing items.
* **Side Menu Opening Animation** → Slide-in effect when opening the profile or favorites menu.
* **Carousel Smooth Sliding Effect** → A smooth scrolling effect for the home page carousel.

Please ensure these animations are lightweight and don’t affect performance.

Design the app with **rich Hindu traditional colors and graphics** to create a spiritual and devotional feel. Here’s how I feel it:

### **Color Scheme (Traditional Hindu Aesthetics)**

* **Saffron & Gold** → Represents spirituality, devotion, and auspiciousness.
* **Deep Red & Maroon** → Symbolizes power, energy, and divinity.
* **Peacock Blue & Green** → Inspired by traditional temple artwork and nature.
* **Ivory/Beige** → Gives a parchment-like look for a scripture-reading experience.
* **Dark Brown/Wood Textures** → Resembles temple doors and ancient manuscripts.

### **Graphics & Design Elements**

* **Traditional Hindu Temple Motifs** → Subtle temple carvings, Kalash (sacred pot), Om symbol, etc.
* **Sanskrit Calligraphy Accents** → Used for section headings or decorative elements.
* **Pooja Thali & Diyas (Oil Lamps)** → For UI icons or buttons to enhance the devotional vibe.
* **Lotus & Mandala Patterns** → Background textures or separators for an authentic Hindu look.
* **Copper & Gold Embellishments** → To highlight key buttons or text.
* **Spiritual Backgrounds** → Temple silhouettes, ancient palm-leaf manuscript textures, etc.

### **Animations & Effects**

* **Subtle Glow on Important Icons** → Inspired by diya lighting effects.
* **Smooth Slide & Fade Transitions** → To give a peaceful and divine experience.
* **Shimmer Effects on Sacred Texts** → For highlighting Sanskrit verses in the viewer.

Please ensure the entire app feels like a **virtual temple experience**, making users feel spiritually connected while using it

i'm giving you the full freedom to create the app ui & ux and graphics but it should be unique.

Please ensure the **UI, UX, and graphics** are **unique, immersive, and deeply connected to Hindu tradition.**

Blend **traditional Hindu aesthetics** with **modern smooth UI/UX** for a **rich devotional experience.**

**I** Expect:  
**Handcrafted UI elements** inspired by temple art, scriptures, and cultural motifs.  
**Elegant animations** that feel divine yet smooth.  
**A color palette that feels like a temple experience.**  
**Unique traditional fonts** for headings and sacred texts.  
**A visually stunning yet lightweight UI for smooth performance.**

Make sure **every screen feels like an extension of a spiritual journey.**

Fully design based on **authentic Hindu themes.**

### **Security Concerns to be considered**

* Prevent **hacking and file theft**.
* Secure **API calls & database**.
* Protect **user authentication & stored data**.

Make sure my **Flutter Code Document** will include:

**Step-by-step guide** – How to set up and develop my Flutter app.  
**Full Flutter code** – Complete frontend implementation for my app.  
**Server-side & backend code** – APIs, authentication, database handling, file management, and real-time conversion integration.

* **Frontend**: Flutter UI, animations, page transitions, and navigation.
* **Backend**: User authentication, file storage, database, API handling.
* **Server-side**: Handling real-time file conversion, serving text files, and managing requests efficiently.

Hope I get a complete **end-to-end solution** in one document as **Flutter Code Document** with a complete step-by-step guide and full code, including frontend, backend, and server-side implementation.

Some more features to include

### **1 User Experience (UX) Enhancements:**

**Pull-to-Refresh in Viewer Page:** Helps reload the content if needed.  
**Smooth Page Transitions & Animations:** Improve navigation feel.  
**Loading Indicators:** Show progress bars when fetching files or converting languages.  
**Multi-Tab View in Viewer Page:** Allow users to open multiple Stotra files in different tabs.  
**Bookmark Support in Viewer Page:** Users can save their last-read position.

### **2 Performance Improvements:**

**Lazy Loading for Search & Viewer Page:** Load content only when needed to reduce memory usage.  
**Efficient Image Handling:** Use compressed images to optimize performance.  
**Background Sync for Notifications & Favorites:** Improve app speed by syncing data in the background.

### **3 Security Enhancements:**

**End-to-End Encryption for User Data:** Secure login, profile, and favorites.  
**Rate Limiting for API Calls:** Prevent abuse (e.g., too many OTP requests).  
**Offline Mode for Favorite Files:** Allow users to access saved Stotras without the internet.

### **4 Additional Features (Optional but Useful):**

**Daily Stotra Recommendation:** Suggest a random Stotra for daily reading.  
**Donation Page:** Allow users to donate for app maintenance.

### **5 Possible Additions:**

**Auto-Backup for User Data** – Sync user preferences & favorites to the server for easy recovery on reinstallation.  
**App Tour / On boarding Screens** – A short guide for first-time users explaining key features.  
**Smart Search Enhancements** – Show recently searched items, trending files, or AI-based suggestions.  
**Adaptive UI for Tablets** – Optimize UI for larger screens (if targeting tablets).  
**Advanced Logging & Crash Analytics** – Use Firebase Crashlytics or Sentry for debugging.

**Handling large text files efficiently** – Ensuring smooth scrolling and loading, especially for large stotra texts.  
**Handling slow or no internet connection** – the app work well offline for favorited files  
**Multi-device login** –allow login from multiple devices at once  
**Error messages & validation** – Clear messages if something goes wrong (wrong OTP, file not found, etc.).  
**Performance optimization** – Making sure animations and page transitions don’t slow down the app.

At the **Registration Page**, all three checkboxes will be **mandatory**:

* ✅ "I agree to the Terms of Service"
* ✅ "I have read and understood the Privacy Policy"
* ✅ "I accept the End User License Agreement (EULA)"

If the user tries to register without checking all three, show an error:  
 **"You must accept the Terms of Service, Privacy Policy, and EULA to continue."**

The terms will open in a **new page** when clicked.

### 6 **Security & Account Management**

1. **Account Deletion Option** (Under Profile Page) – Allow users to delete their account permanently.
2. **Failed Login Attempt Lock** – If a user enters the wrong password 5 times, temporarily block login for 5 minutes.
3. **Re-authentication for Sensitive Changes** – When changing email, mobile number, or password, require **current password only (no need of otp)**.

### 7 **Performance & Optimization**

1. **Database Indexing for Fast Search** – Since there are **1,44,000 text files**, indexing will make search results much faster.
2. **Pagination for Search Results** – If a search returns many results, load them in pages instead of all at once.
3. **Preload Next & Previous Files in Viewer Page** – To make navigation between files smoother.

### 8 **User Experience & Features**

1. **Sort & Filter for Favorites Page** – Allow users to sort favorite files by **date added, name, or language**.
2. **Multi-Select Delete for Notifications & Favorites** – Users can select **multiple items** and delete at once.
3. **Recent Searches & Search History in Home Page** – Show recently searched terms when the user taps on the search bar.

### 9 **Content & Language Features**

1. **Offline Search Support for Favorite Files** – If the user is offline, they can still search within **favorited** files.
2. **Language-based Content Recommendations** – Show suggested files based on the user's **selected content language**.

Please ensure that all error messages, success messages, and confirmation prompts are clear and user-friendly in every aspect.

### **10 Mobile Number Validation:**

* Ensure only digits are entered.
* Restrict the number length based on the selected country code.
* Prevent starting with invalid numbers (e.g., in India, numbers should start with 6-9).
* Show an error message if the entered number is invalid.

### **11 Email Validation:**

* Ensure the email format is correct (e.g., example@domain.com).
* Prevent invalid characters or incomplete domains.
* Show an error message if the entered email is incorrect.

These validations will be implemented in both **registration** and **profile update** pages.

Add a **"Report Content"** feature in the **Viewer Page** to allow users to report incorrect content to the admin.

### **12 Report Content Feature**

* Users can **report incorrect content** from the **Viewer Page**.
* A **popup form** appears with:
  + **Reason for Report** (Dropdown: "Incorrect Content", "Spelling Mistake", "Formatting Issue", "Other").
  + **Additional Comments** (Optional).
  + **Submit Button** → On click:
    - A **success message** appears: "Your report has been submitted successfully."
    - **Email sent to the admin** with:
      * **User’s Name & Email**
      * **User’s Mobile Number**
      * **Reported File Name**
      * **Reason for Report**
      * **Additional Comments** (if provided)
      * **Date & Time of Report**
    - **Mark the file as reported for this user** (locally stored).
* **If the user tries to report the same file again:**
  + **Popup message**: "You have already reported this file."
  + **Report button will be disabled** for this file.

### **13 Google Play Store Rating Feature** (One-Time Prompt)

#### **Implementation Details:**

* **Where?** → Show the rating prompt **on the Home Page** after the user has opened the app **5 times**.
* **How?**
  + A popup appears with:
    - **Title:** ⭐ Enjoying the App?
    - **Message:** Rate us on Google Play and share your feedback!
    - **Buttons:**  
      1 **"Rate Now"** → Redirects to Google Play Store app page.  
      2 **"Later"** → Dismisses the popup, shows again after 5 more app opens.  
      3 **"Never"** → Dismisses permanently, never shown again.
* **Once the user rates the app**, the popup **will never appear again**.
* **If the user clicks "Later"**, the popup **will reappear after 5 more app opens**.
* **If the user clicks "Never"**, it **will not appear again**.

### **14 Deep Linking for Notifications** (Redirect to Specific App Page)

#### **How It Works?**

* When a **user clicks on a notification**, they should be redirected to the **relevant page** inside the app instead of just the Home Page.
* Each notification will contain a **payload** (data) that specifies **which page** to open.
* If the app is **closed**, clicking the notification will **open the app and navigate to the correct page**.
* If the app is **already open**, clicking the notification will **directly switch to the relevant page** without restarting the app.

#### **Examples of Notification Actions:**

| **Notification Type** | **Redirects to Page** |
| --- | --- |
| New Stotra Recommendation | Viewer Page (with the file loaded) |
| Favorite File Updated | Favorites Page |
| New Temple Added | Temples Page |
| New Chat/Message | Connect Page |
| Booking Confirmation | Bookings Page |
| General Announcement | Home Page |

### 15 **User Experience & Engagement Enhancements**

**Personalized Content Feed** – Based on user preferences, show recommended Stotras, trending content, or popular searches.  
**Daily Quote or Stotra** – A motivational Sanskrit verse or Stotra snippet on the home page.  
**In-App Feedback Form** – Users can submit suggestions or report issues directly in the app instead of email.  
**Smart Caching for Offline Mode** – Preload frequently accessed content for seamless offline access.

### 16 Security & Performance Improvements

**Session Restoration** – If the app is force-closed, restore the last viewed page when reopened.  
**Local Search Indexing** – For favorited files, store metadata locally to speed up offline search.  
**Low-Bandwidth Mode** – Reduce image sizes & disable background sync for slow network conditions.

### 17 **Additional Monetization & Community Features**

**Donation Support via UPI/Stripe** – Allow users to contribute if they wish to support the app.  
**Community Forum (Future Update)** – Users can discuss Stotras, share insights, and ask questions.

Here are some additional ideas to include in the app:

### **User Engagement & Personalization**

**Voice Search for Stotras** – Allow users to search for Stotras by speaking instead of typing.  
**AI-Based Stotra Recommendations** – Suggest Stotras based on user history and preferences.  
**Personalized Daily Reminders** – Let users set reminders to recite specific Stotras daily.  
**Bookmark Categories** – Allow users to organize their favorite Stotras into categories.  
**Trending Stotras Section** – Show the most popular or frequently accessed Stotras.  
**Stotra Completion Tracker** – Help users track their progress in completing long Stotras.

### **Performance & Optimization**

**Smart Caching for Offline Mode** – Preload frequently accessed content for seamless offline access.  
**Session Restoration** – Restore the last viewed page if the app is force-closed.  
**Local Search Indexing** – Store metadata for favorited files locally to speed up offline search.  
**Low-Bandwidth Mode** – Reduce image sizes & disable background sync for slow network conditions.

### **Security & Privacy**

**Failed Login Attempt Lock** – Block login for 5 minutes after 5 failed attempts.  
**Require Current Password for Sensitive Changes** – Before changing email, mobile number, or password.  
**Database Indexing for Faster Search** – Ensure efficient retrieval of search results.

### **Community & Social Features**

**In-App Feedback Form** – Users can submit suggestions or report issues directly in the app.

### **Monetization & Support**

**Donation Support via UPI/Stripe** – Allow users to contribute to support the app.  
**Subscription Model for Premium Features** (Future Scope) – Example: Ad-free experience, exclusive Stotras.

### **User Experience & Engagement**

**User Activity Insights** – Show users a summary of their reading habits, favorite Stotras, and daily streaks.  
**Gamification Elements** – Introduce badges or rewards for daily recitation, completing Stotras, or engaging with the app.  
**Interactive Push Notifications** – Allow users to interact with notifications (e.g., mark as read, remind later).  
**App Intro & Tutorials** – A guided onboarding experience to explain app features

### **Content Enhancements**

**Personalized Stotra Feed** – Based on reading history and preferences, suggest relevant Stotras.  
**Daily Quote or Stotra Snippet** – Display a motivational Sanskrit verse or a short Stotra snippet.  
**Multi-Select Actions in Favorites & Notifications** – Let users select multiple items for deletion or management.  
**Offline Search Support** – Enhance offline mode by enabling search for downloaded files.  
**Trending Stotras** – Highlight the most-read or most-favorited Stotras.

### **Security & Performance**

**Advanced Logging & Crash Analytics** – Improve debugging and app stability.  
**Efficient handling of large text files** – Ensure smooth scrolling and loading.  
**Background Sync for Notifications & Favorites** – Auto-sync content when online.  
**End-to-End Encryption for User Data** – Keep user data secure.  
**Rate Limiting for API Calls** – Prevent misuse and ensure app efficiency.  
**Auto-Backup for User Data** – Sync preferences, favorites, and settings to the cloud.

### **Performance & Security Enhancements**

**Database Indexing for Faster Search** – Improve search speed for large text files.  
**Pagination for Search Results** – Load search results in pages to optimize performance.  
**Preload Next & Previous Files in Viewer Page** – Reduce load time for seamless reading.

### **User Experience Enhancements**

**Sort & Filter for Favorites Page** – Allow sorting by **Date Added, Name, or Language**.  
**Multi-Select Delete for Notifications & Favorites** – Let users manage multiple items at once.  
**Recent Searches & Search History** – Show past searches on the home page.  
**Smart Caching for Offline Mode** – Preload frequently accessed content.  
**Session Restoration** – Restore the last viewed page when reopening the app.

### **Security & Account Management**

**Failed Login Attempt Lock** – Block login for 5 minutes after 5 failed attempts.  
**Require Current Password for Sensitive Changes** – When changing email, mobile number, or password.

Add a **Stotra View Counter**

**Stotra View Counter**

* Display total views in **search results** next to file names.
* Show view count in **Viewer Page** under the filename.
* Automatically **increment the count** when a user opens a Stotra.
* Efficient backend storage and updates.
* Helps track **trending Stotras** based on views.

**Most Viewed Stotras Section**

* **Home Page Feature:** Display a list of the most-viewed Stotras.
* Sort dynamically based on **highest view counts**.
* Updates regularly to reflect **trending content**.
* Clicking on a Stotra redirects to the **Viewer Page**.

**Connect Page**

can become a hub for **devotional and Hindu cultural videos** by embedding YouTube content.

### **How it will work:**

1. **Curated Playlist or Video Links**
   * We can either manually add YouTube video URLs or fetch videos from a dedicated playlist/channel.
   * Optionally, allow an admin to update videos dynamically.
2. **Video Embedding**
   * Show videos as **thumbnails with titles** in a scrollable list/grid.
   * When clicked, the video will **play within the app** (YouTube Player embed).
3. **Categories (Optional)**
   * **Bhajans & Kirtans** 🎵
   * **Spiritual Discourses** 🕉️
   * **Temple Rituals & Aartis** 🛕
   * **Festivals & Celebrations** 🎊
   * **Hindu Mythology & Epics** 📜
4. **Features to Consider**  
   Smooth Scrolling & Lazy Loading  
   Auto-Update from YouTube API (Optional)  
   Share Button for Videos

### **Finalized Features for the Connect Page:**

✔ **Embedded YouTube Videos** (Admin-selected)  
✔ **Scrollable Grid/List View** with thumbnails & titles  
✔ **Click to Play Inside the App** (No need to leave the app)  
✔ **Categories for Easy Browsing**   
✔ **Share Button** to let users share videos with others  
✔ **Auto-Update from YouTube API**  (Admin can update videos without app updates)

#### **Step-by-Step Breakdown:**

### **1. Admin Panel for Video Management**

* A simple **admin panel or** where the admin can **add, edit, or remove YouTube video links**.
* Each entry will have:
  + **YouTube Video URL** (or just the video ID)
  + **Video Title**
  + **Thumbnail URL (Auto-fetched from YouTube API)**
  + **Category (Bhajans, Puranas, Temples, etc.)**
  + **Timestamp when added** (for sorting new videos first)

### **2. App Side (Connect Page)**

* The app fetches the **list of videos** from Firebase or the backend where the admin added them.
* **UI Design:**
  + **Grid/List View:** Shows video thumbnails, titles, and short descriptions.
  + **Click on a Video:** Opens a player **inside the app** (not redirecting to YouTube).
  + **Swipe Down to Refresh:** To get the latest videos added by the admin.

### **3. Video Playback (Embedded YouTube Player)**

* When a user **clicks on a video**, it **opens in an embedded YouTube player** inside the app.
* **No need to leave the app!**
* Uses the **official YouTube Player API** to ensure smooth playback.

### **4. Additional Features**

* **Share Button:** Users can share the video link with others.
* **Like & Bookmark Option (Future Scope):** Users can save videos for later.
* **Auto-Update:** When the admin adds new videos, they instantly appear in the app without requiring an update.

### **Key notes:**

✔ Only the **admin** has control over what videos are displayed.  
✔ No need to upload videos—just **paste YouTube links** into the admin panel.  
✔ Users **stay engaged** with curated devotional & Hindu culture content.  
✔ **No extra hosting costs** since videos are streamed from YouTube.

### **Connect Page – Scrollable List View for Embedded YouTube Videos**

### **Design & Functionality**

1 **List View Layout**

* Display **videos in a vertical list** (scrollable).
* Each video entry will have:
  + **Thumbnail (Auto-fetched from YouTube)**
  + **Title (Bold, 2-line max)**
  + **Short Description (Optional, 1-line)**
  + **Play Button (Click to open embedded player)**

2 **Smooth Scrolling & Lazy Loading**

* Load **only a few videos at a time** to ensure smooth scrolling.
* **Auto-load more videos** when scrolling down.

3 **Tap on Video – Opens Embedded YouTube Player**

* Clicking a video **opens the YouTube player inside the app** (not redirecting to YouTube).
* Uses **YouTube Player API** for smooth playback.
* Option to **play fullscreen** when rotated.

4 **Admin-Managed Content**

* Admin **adds/removes videos** via Firebase or backend.
* Videos **update instantly** in the app without an update.

5 **Additional Features**  
**Search Bar:** Search videos by title.  
**Pull-to-Refresh:** Fetches the latest videos.  
**Sort by Date (Newest First)**  
**Share Button:** Share video links via WhatsApp, etc.  
**Future Scope:** Bookmark videos for later.

**Auto-Load More Videos on Scroll** – Load more videos as the user scrolls instead of pagination

**Key Benefits:**  
**Clean, scrollable UI** for easy browsing.  
**Instant updates** when the admin adds new videos.  
**No need for extra storage** – videos stream from YouTube.  
**Better engagement** with quality devotional content.

**Easier navigation** – Users find relevant content quickly.  
**Better organization** – Videos neatly grouped by topic.  
**Admin flexibility** – Add/remove categories anytime.

implement **Deep Linking**, the link will open **inside our app** (in the embedded YouTube player).

### **Enhancements for Connect Page**

**Trending Videos Section** – Highlight the most-watched or recently popular videos at the top.  
**Recently Watched Videos** – Show a history of videos a user has watched for quick access.  
**Save Videos for Later** – Allow users to mark videos to watch later.  
**Like & Dislike System (Optional)** – Users can upvote or downvote videos to improve recommendations.  
**Video Descriptions & Details** – Show video descriptions, upload date, and duration before opening the video.  
**Related Videos Section** – Suggest other similar videos at the bottom.  
**Admin Video Scheduling** – Admin can schedule future video releases.  
**Share with Timestamp** – Users can share videos with a specific timestamp (e.g., “Watch from 3:45”).  
**Custom Video Categories** – Group videos into specific themes (e.g., Bhajans, Teachings, Festivals, Mythology).

### **User Engagement & Experience**

**Watch History Section** – Show recently watched videos for easy access.  
**Like & Dislike System (Optional)** – Users can upvote or downvote videos to improve recommendations.  
**Save Videos for Later** – Users can mark videos to watch later.  
**Related Videos Section** – Suggest other similar videos at the bottom.  
**Video Descriptions & Details** – Show video descriptions, upload date, and duration before opening the video.

### **Admin Control & Customization**

**Admin Video Scheduling** – Admin can schedule future video releases.  
**Trending Videos Section** – Highlight the most-watched or recently popular videos at the top.  
**Custom Video Categories** – Group videos into specific themes (e.g., Bhajans, Teachings, Festivals, Mythology).  
**Share with Timestamp** – Users can share videos with a specific timestamp (e.g., “Watch from 3:45”).  
**Deep Linking for YouTube Videos** – Clicking a shared link opens the video inside the app (if installed).

Implement share a stotra(only one file at a time) feature in viewer page with deep linking.

If the app is **not installed**, the link will show an error message like:  
"Please install the app to view this Stotra." and redirect the user to the **app download page** (Google Play Store).

This ensures that Stotras are strictly accessed **within the app only**.

Entire app should be designed to work exclusively within the app, without any web fallback or website dependency.

### **1 Reduce Flutter App Size**

**Use Proguard & Code Shrinking** – Remove unused code and reduce APK size.  
**Enable Split APKs/AAB** – Generate architecture-specific APKs to prevent unnecessary code bundling.  
**Remove Unused Packages & Dependencies** – Only include essential libraries.  
**Minimize Third-Party Fonts & Icons** – Use only necessary assets instead of loading full libraries.

### **2 Optimize Assets & Images**

**Use SVGs Instead of PNGs** – Vector graphics are lightweight.  
**Compress Image Assets** – Use tools like TinyPNG or WebP format for better compression.  
**Lazy Load Images** – Load assets only when needed to reduce initial app size.  
**Cache Thumbnails Efficiently** – Store resized versions to avoid loading high-resolution images unnecessarily.

### **3 Efficient File Handling (Stotras & Content)**

**Store Text Files on Server** – Avoid bundling **1,44,000 text files** inside the APK.  
**Use Efficient APIs for File Requests** – Stream data instead of full downloads.  
**Implement Lazy Loading for Search & Viewer** – Load only what the user requests.  
**Enable Offline Mode Only for Favorites** – Cache only the most-used files.

### **4 Optimize Security & Background Services**

**Reduce Firebase SDK Usage** – Use only necessary services (Auth, Firestore, Messaging).  
**Implement Smart Caching** – Avoid redundant API calls for frequently accessed data.  
**Background Sync Only When Necessary** – Optimize battery & data usage.  
**Efficient Encryption** – Use lightweight encryption methods for stored user data.

### **5 App Store Optimizations**

**Use Play Store’s Dynamic Delivery** – Users download only what they need.  
**Optimize iOS Build with Bitcode & App Thinning** – Automatically reduces app size per device.  
**Reduce Debugging Code in Production** – Remove logs, crash reports in release builds.

The app will filter content based on the user's selected language in the profile section. If no content is available in that language, the user won't see anything.

##### create an admin panel with functionalities for managing Stotras, YouTube videos, and language-specific push notifications.

Implement role-based access control in the admin panel.

### **Admin Panel User Roles & Permissions**

**Super Admin** – Full access (Manage admins, upload/edit/delete Stotras, post YouTube videos, send notifications).  
**Content Manager** – Can upload, edit, and delete Stotras, post YouTube videos, but **cannot manage admins**.  
**Notification Manager** – Can send push notifications but **cannot modify content**.  
**Viewer** – Read-only access to view content and analytics (if needed).

The admin panel should be built with advanced features to ensure smooth management feature-rich, scalable, and efficient for both current and future app updates

The admin panel should be a complete, self-sufficient system within the app, designed for smooth management without needing a separate backend website. It should include all essential and future-ready features for easy operation.

### **Key Features of the Admin Panel**

### **1 Authentication & Access Control**

**Username & Password Login** – Secure login for admins.  
**Role-Based Access Control (RBAC)** – Assign roles like **Super Admin, Content Manager, Notification Manager, Viewer**, etc.  
**Session Management** – Logout inactive users after a long period.  
**Audit Logs** – Track actions taken by admins (who uploaded, edited, or deleted content).

### **2 Stotra Management**

**Upload Stotras** – Upload text files and categorize them by language.  
**Edit & Delete Stotras** – Modify existing Stotras or remove them.  
**Bulk Upload Support** – Upload multiple Stotras at once.  
**Content Scheduling** – Set Stotras to be published at a future date/time.  
**View Counter Management** – Track how many times a Stotra has been viewed.  
**Reports Handling** – Review reported content and take necessary action.

### **3 YouTube Video Management**

**Post YouTube Videos** – Add videos with titles, descriptions & categories.  
**Edit & Delete Videos** – Modify or remove videos anytime.  
**Custom Video Categories** – Create structured sections like **Bhajans, Teachings, Festivals, Mythology, etc.**  
**Trending Videos Section** – Highlight popular devotional videos.  
**Scheduling Feature** – Admins can schedule videos to go live at a set date/time.

### **4 Push Notifications System**

**Send Notifications** – Directly send push notifications to users.  
**Targeted Notifications** – Send notifications **based on user’s selected language**.  
**Scheduled Notifications** – Plan notifications for a later time.  
**Interactive Notifications** – Allow users to act (e.g., "Remind Me Later," "Mark as Read").

### **5 User & Analytics Management**

**User Insights** – See user engagement, daily active users, and most-read Stotras.  
**User Reports & Feedback** – View user-reported issues and content concerns.  
**Search Trends Analytics** – Monitor what users are searching for.  
**Crash & Error Reports** – Identify app crashes or bugs for quick fixes.

### **6 Smart Features for Smooth Management**

**Dark Mode in Admin Panel** – Optional for admin convenience.  
**Advanced Search & Filters** – Quickly find Stotras, videos, or users.  
**Export Data** – Download analytics reports for reference.  
**Multi-Select Actions** – Edit or delete multiple Stotras/Videos/Users at once.

### **7 Future-Proofing & Scalability**

**Scalable Design** – Built to support future app updates.  
**Security-First Approach** – Data encryption & secure API access.  
**Growth Tracking** – Monitor app performance for continuous improvement.

### **Final Thoughts**

The **admin panel should be powerful, beginner-friendly, and fully self-sufficient** within the app—no need for an external backend website. It will streamline content management, user engagement, and future updates with ease.

### **More Advanced Admin Panel Features to include**

### **Smart Content Management for Stotras & Videos**

**AI-Based Stotra Recommendations** – The system suggests related Stotras based on engagement trends.  
**Auto-Tagging & Categorization** – Automatically suggest categories when adding Stotras or videos.  
**Draft Mode for Stotras & Videos** – Save work without publishing immediately.  
**Duplicate Content Check** – Prevent uploading the same Stotra or video twice.  
**Version Control for Stotras** – Keep track of different edits & restore previous versions if needed.  
**Comment Moderation (Future Scope)** – Allow users to comment on Stotras (optional) & moderate them.

### **2 Enhanced Push Notifications System**

**Notification Templates** – Save commonly used messages for quick sending.  
**A/B Testing for Notifications** – Test different message formats to see which gets more engagement.  
**Expiry-Based Notifications** – Auto-remove time-sensitive notifications after a set period.  
**Re-Engagement Notifications** – Auto-send alerts to inactive users (e.g., "You haven't read a Stotra today!").  
**Deep Linking in Notifications** – Clicking a notification opens a **specific app page** instead of just the home screen.

### **3 Advanced User Management & Moderation**

**User Activity Tracking** – See which users are most active, what they read, etc.  
**User Suspension System** – Temporarily block users who violate policies.  
**Predefined User Roles & Custom Roles** – Allow custom admin roles with specific permissions.  
**User Login Device Tracking** – Show how many devices a user is logged in from.  
**Login Attempt Tracking** – Monitor failed login attempts to detect suspicious activity.

### **4 Smart Insights & Reports**

**Popular Stotras & Videos Analytics** – See which Stotras & videos are trending.  
**Retention Analysis** – Find out how many users return daily, weekly, monthly.  
**Top Search Keywords** – Understand what users search for the most.  
**Report Spam Trends** – Track which files are reported the most.  
**Data Export in CSV/PDF** – Allow admins to download reports for analysis.

### **5 Content Approval & Review Workflow (Optional – Future Scope)**

**Multi-Level Approval System** – Content Managers upload, and Admins approve before publishing.  
**Pending Review Section** – Store unapproved content in a separate tab.  
**Rejection Reason Notes** – Provide reasons when rejecting content.

### **6 Security & Reliability Enhancements**

**IP Restriction for Admin Logins** – Only allow logins from certain locations or networks.  
**Two-Factor Authentication (Optional, if needed)** – Extra security for admins.  
**Error Tracking System** – Show errors happening in the app and allow quick debugging.  
**Auto Database Backup & Restore** – Schedule automatic database backups.

### **7 Future-Proofing & Scalability Enhancements**

**Cloud Storage Optimization** – Store Stotra files and video metadata efficiently.  
**Multi-Tier Access Control** – Create sub-admins with different permissions.  
**API Rate Limiting for Security** – Prevent excessive API calls that could slow the system.  
**Real-Time Updates** – Instant synchronization of content updates without requiring a manual refresh.  
**Mobile-Friendly Admin Panel** – Fully optimized for mobile admin access.

### **8 Admin Security & Management**

**Multi-Level Approval System** – Require review & approval for content before publishing.  
**Pending Review Section** – Separate section for content awaiting approval.  
**Rejection Reason Notes** – Allow admins to give feedback on rejected content.  
**IP Restriction for Admin Logins** – Restrict admin panel access to certain IP addresses.  
**Error Tracking System** – Log & track admin panel issues for quick fixes.  
**Auto Database Backup & Restore** – Periodic backups for data safety.  
**Cloud Storage Optimization** – Efficient storage management for Stotras & videos.  
**Multi-Tier Access Control** – Advanced role-based permissions.  
**API Rate Limiting** – Prevent overuse of APIs.  
**Real-Time Updates** – Instantly update data without refresh.  
**Mobile-Friendly Admin Panel** – Ensure the panel works well on mobile devices.

**Popular Stotras & Videos Analytics** – Track which content gets the most engagement.  
**Retention Analysis** – See how often users return to the app.  
**Top Search Keywords** – Find out what users are searching for the most.  
**Report Spam Trends** – Identify frequently reported content.  
**Data Export in CSV/PDF** – Export reports for deeper analysis.

**Real-Time Active Users** – See how many users are online at any given time.  
**Push Notification Performance** – Track delivery rates, open rates, and engagement.  
**Content Performance Metrics** – Monitor how many users view and engage with each Stotra and video.  
**User Retention & Engagement Trends** – Insights into daily, weekly, and monthly active users.  
**Error & Crash Reports** – Identify and track app issues in real-time.

**Engagement Drop Alerts** – If user engagement drops significantly in a day, notify the admin.  
**Server Issues & Downtime Alerts** – Detect backend failures and send an instant alert.  
**Push Notification Performance Alerts** – If a notification has an unusually low open rate, alert the team.  
**Unusual Activity Alerts** – Detect unusual spikes in login attempts or reports.  
**Content Performance Alerts** – If a Stotra or video becomes trending or underperforms, notify the admin.

Admins can **customize thresholds** for each alert and receive notifications via **email or push alerts in the panel**.

Include these also

**User Engagement Insights** – Active users, daily streaks, top readers, and drop-off trends.  
**Most Popular Content** – Top Stotras & videos based on views, favorites, and shares.  
**Search Trends** – Top search queries and keywords to understand user interests.  
**Notification Performance** – Open rates, engagement, and best-performing push notifications.  
**Reports & Content Flags** – Summary of reported content and admin actions taken.  
**System Health Check** – Server performance, API errors, and any downtime incidents.  
**Growth Metrics** – New user registrations, app usage trends, and retention rates.

**Download Report as PDF** – For easy sharing and offline access.  
**Automatic Weekly Reports via Email** – The system will generate and send a summary report every week.  
**Custom Email Recipients** – Super Admin can specify which admins receive the reports.  
**Email Format: PDF + CSV Attachments** – Both formats will be included for convenience.  
**Option to Manually Trigger Report** – Admins can generate and send reports anytime if needed.

include key insights

The **Auto-Email Weekly Reports** will include detailed key insights for better analytics.

### **Email Report Content**

The email will contain a **brief summary** in the body, and detailed stats in attached **PDF + CSV** files.

### **Email Content Summary**

* **Subject:** 📊 Weekly Report – [App Name]
* **Body:**
  + **Total Active Users** (last 7 days)
  + **New Users Registered** (last 7 days)
  + **Most Viewed Stotras** (Top 5)
  + **Trending YouTube Videos** (Top 5 based on engagement)
  + **Push Notifications Sent & Open Rate**
  + **Reports & User Feedback Count**
  + **Error & Crash Logs Summary** (if any major issues)
  + **Call-to-Action:** “View Full Report (attached)”

### **Attachments (PDF & CSV)**

1. **User Engagement Report**
   * Daily Active Users
   * Retention Rate
   * Popular Search Terms
   * Most Downloaded/Favorited Stotras
2. **Content Performance Report**
   * Top Stotras & YouTube Videos
   * Most Reported Content
   * User Likes & Shares
3. **Technical & Security Report**
   * API Errors & Downtime (if any)
   * Failed Login Attempts & Security Alerts
4. **Feedback & Reported Content**
   * User Feedback Summary
   * Reported Stotras & Actions Taken

**Admins Can:**  
✔ Choose recipients for the report.  
✔ Manually trigger reports anytime.  
✔ View historical reports from the admin panel.

### **Enhanced Key Insights for the Weekly Report**

#### **1 User Growth & Engagement Insights**

**Total Active Users (Last 7 & 30 days)**  
**New Users Registered** (Comparison with last week/month)  
**User Retention Rate** (How many users return after first use)  
**Most Popular App Features Used** (e.g., Viewer, Search, Favorites)  
**Average Session Duration** (How long users spend in the app)

#### **2 Stotra & Content Performance Metrics**

**Most Viewed Stotras** (Top 10)  
**Most Favorited Stotras** (Users’ favorite selections)  
**Most Searched Keywords** (Helps in content optimization)  
**Trending Stotras** (Stotras with a sudden spike in engagement)  
**Most Downloaded Stotras** (Offline mode usage insights)  
**Recently Added Stotras** (List of newly uploaded content)

#### **3 YouTube Video Performance (Connect Page)**

**Top 5 Most Watched Videos**  
**User Engagement on Videos (Likes, Shares)**  
**Recently Added Videos**  
**Video Completion Rate (How many users watch full video)**

#### **4 Push Notification Insights**

**Total Notifications Sent (Per Language)**  
**Open Rate (How many users clicked notifications)**  
**Most Effective Notification (Based on open rate)**  
**Failed Notifications (If any)**

#### **5 User Feedback & Reports**

**Total Feedback Received** (User suggestions & issues)  
**Most Reported Content** (Which Stotras or videos were flagged)  
**Admin Actions Taken on Reports** (Resolved, Pending, Ignored)  
**App Ratings & Reviews Summary (Google Play Store)**

#### **6 Security & Technical Monitoring**

**Failed Login Attempts (Possible bot activity or password issues)**  
**Blocked Users (If any users were suspended)**  
**API Performance & Errors (Any downtime or slow responses)**  
**Crash Reports & Errors Logged**

### **Additional Features for Admins**

**Historical Report Archive** – View past weekly reports in the admin panel.  
**Custom Date Range Report** – Generate reports for specific periods.  
**Export Reports** – Download reports in PDF/CSV format for analysis.  
**Automatic Backup Log** – Ensure weekly backups are successfully completed.

Implement Language**-Specific Role Management** in the admin panel:

**User A** – Can manage content for **only one language** (e.g., Hindi).  
**User B** – Can manage content for **2-5 selected languages** (e.g., Hindi, Telugu, Tamil, Sanskrit, Kannada).  
**User C** – Has **full access** to manage content for **all languages**.

This will ensure that admins or content managers only handle the languages assigned to them, preventing accidental modifications in other languages.

Please make sure every feature is implemented in the app mentioned here in this document.