Project Proposal: Android Auto-Start Main Menu Application

1. Project Overview

We propose to develop an **Android main menu application** that launches automatically when the phone is powered on. This app will serve as the **central user interface** of the device, managing navigation between apps and modules while also functioning as a **standalone application with its own features**.

The main menu application will allow users to **sign in or sign up**, manage and customize the **layout and sequence of apps**, store this data locally for offline use, and **synchronize it to the cloud** when online. Additionally, it will support **image handling** for icons or backgrounds, provide **lists with search** to find apps quickly, and send **push notifications** related to menu management and updates.

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2. Main Idea

The main idea is to create a **custom auto-start Android menu system** that goes beyond simply launching apps. It will be a **full-featured application** with its own user account system, storage, synchronization, image management, search functionality, and notifications.

This ensures that the main menu is **personalized, portable across devices, and intelligently managed**, while still functioning as the user's entry point into the device.

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3. Objectives

- Develop an **auto-launching main menu application** that replaces or recreates the built-in Android launcher.
- Enable **user accounts** so each person can have their own customized menu layout.
- Provide **offline storage** of menu configurations and **cloud synchronization** when online.
- Support **image handling** for menu customization (icons, wallpapers, app previews).
- Offer **list and search functions** to quickly locate apps or menu items.
- Deliver **push notifications** from the main menu app itself for updates, tips, or layout reminders.

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4. Requirement Fulfillment

Requirement	Fulfillment in Main Menu App
Auto-start application	The main menu app will launch automatically when the phone is turned on, acting as the device's entry point.
Store data locally (offline mode)	Menu layout, app shortcuts, and settings will be saved locally so they remain available without internet.
Data sync (online mode)	Layout and customization will be synchronized with a cloud service when online, so users can restore them on any device.
Cloud storage	The user's account, menu preferences, and images will be stored in the cloud for portability and backup.
Image handling (GET/POST)	Users can upload custom icons, wallpapers, or screenshots for apps, which will be uploaded/downloaded from the server.
Lists and search	The app list will be displayed in a structured list format with a search box to quickly locate apps.
Sign Up and Login	The main menu app itself will support creating and managing user accounts (email or mobile-based).
Push Notifications	The main menu app will send notifications about updates, layout reminders, or new features.

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5. System Flow

1. **Device boots → Main Menu app launches automatically.**
2. **User signs in** (or signs up for the first time).
3. **Main Menu screen displays:**
    - List of apps with icons.
    - Options to customize layout and sequence.
    - Search box for quick access.
4. **User customizations saved locally.**
5. **When online → data and images sync to cloud.**
6. **Main Menu app sends notifications** (e.g., "Your layout has been backed up", "New main menu version available").

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6. Expected Outcomes

- A **launcher-style application** that auto-starts on boot.
- A **main menu system** with:
    - User sign up & login.

    - Offline storage & online synchronization of layouts.
    - Cloud storage of preferences and media.
    - Image handling for icons/wallpapers.
    - Searchable app lists.
    - Push notifications for updates and reminders.
- A **complete, standalone project** demonstrating all course-required features within the context of the main menu app itself.