Mobile Programming

Final Exam

Day 15 – On / Off switch

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Contents

Introduction

This Flutter-based music player app is inspired by the TOOL album *Lateralus* and provides users with a simple yet engaging way to interact with a curated playlist of tracks. The app showcases core Flutter features including theme switching, state management, and UI responsiveness. It simulates track playback with progress indication and allows enabling or disabling individual tracks. The design aims to balance functionality with visual appeal for an enjoyable user experience.

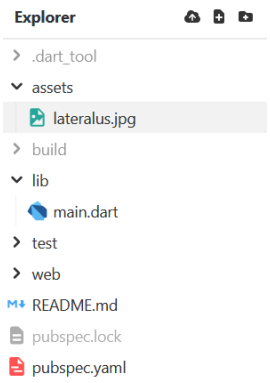
Features

Key features include a toggleable dark/light theme, a track list with on/off switches for each song, a progress bar that visually represents simulated playback, and clear display of the currently playing track. The app ensures users have control over which tracks play and provides immediate feedback through smooth animations and color changes. These features collectively make the app intuitive and fun to use.

Technology Stack

The app is built with Flutter and Dart, utilizing Flutter's Material Design components to create a consistent look and feel across platforms. State management is handled with StatefulWidget and setState, and timers are used to simulate track progress. The app assets include an image for the album cover stored locally. This technology stack offers flexibility, cross-platform compatibility, and performance suited for mobile apps.

Project Structure (from Zapp project)



Controls

User interaction is straightforward: tapping a track starts playback simulation, toggling the switch next to each track enables or disables that track, and a theme switcher at the bottom toggles between dark and light modes. Visual cues like highlighted track backgrounds and progress bars provide immediate feedback to user actions, enhancing usability.

Zapp Link

This project is also hosted on Zapp for instant access:

Zapp Editor Link:
https://zapp.run/edit/onoff-switchday15-zyna06tcynb0?entry=lib/main.dart&file=lib/main.dart

How to Run

To run this app, first ensure Flutter is installed and configured on your system. Clone or download the project repository, then navigate to the project directory in your terminal. Run flutter pub get to fetch dependencies. Launch the app on a connected device or emulator with flutter run. The app supports both Android and iOS platforms and adapts well to different screen sizes. (or)

- Go to https://zapp.run

- Click **Run** to launch the app

Assets Image

assets:

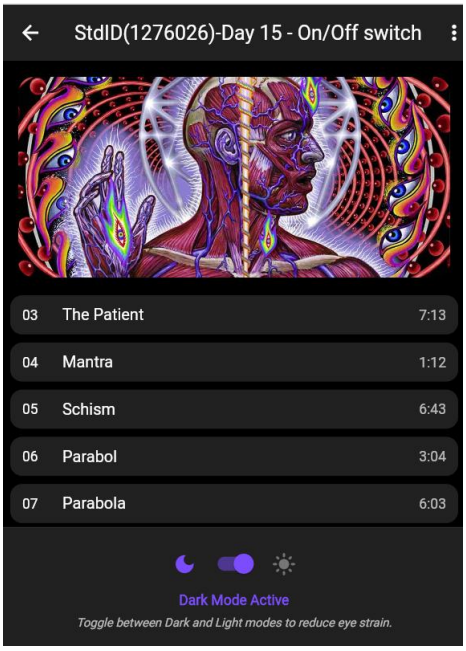
- assets/lateralus.jpg

Evaluation Summary

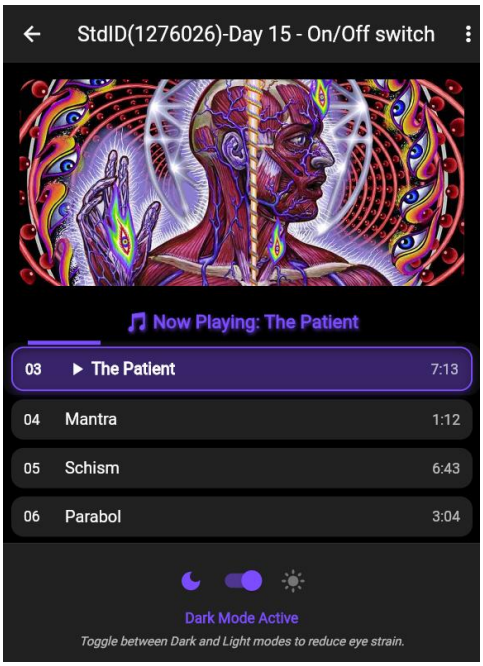
The app demonstrates strong scaffolding using core Flutter widgets like Scaffold, AppBar, and ListView, resulting in a clean and organized layout. It offers engaging features such as theme switching and a simulated playback bar, enhancing user interaction. Functionality is

smooth and reliable—track toggling, playback simulation, and UI updates work as expected. Visually, the design is appealing with good use of colors, spacing, and icons. Information is clearly presented through visual cues and simple labels. Overall, the app maintains high quality for a prototype, successfully simulating a music player with solid usability and structure.

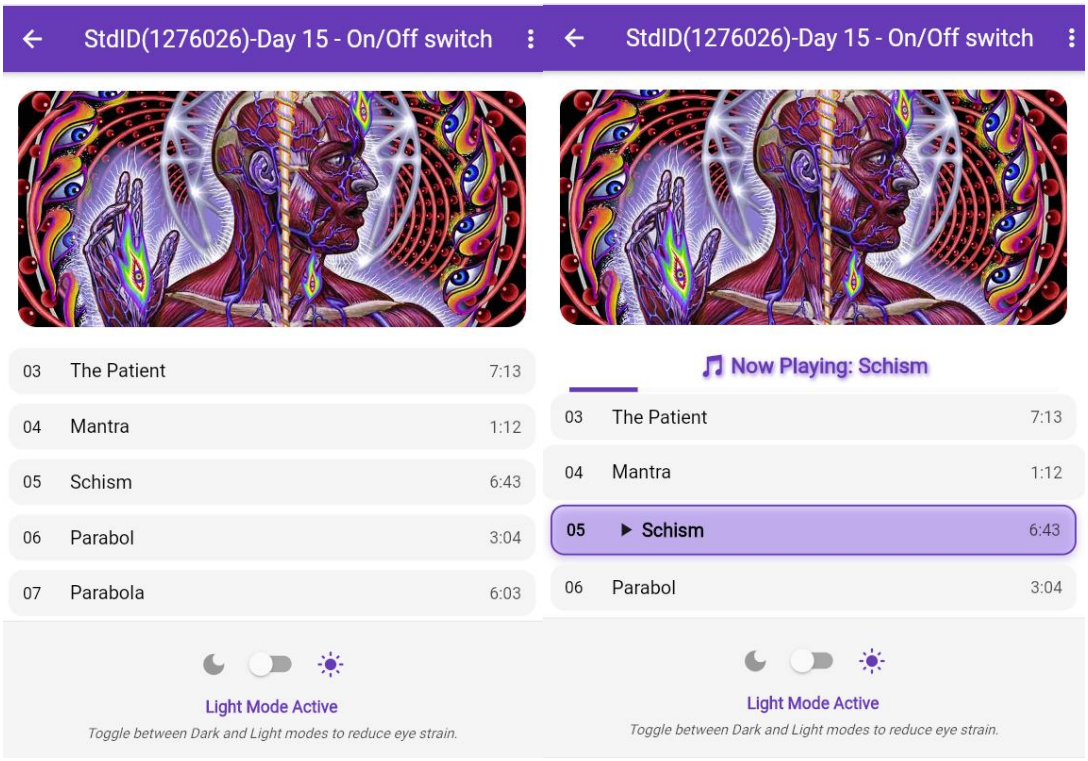
Screenshots



The image shows an **audio visualization bar** with five vertical bars of varying heights, typically used to indicate **music playback activity** or **sound levels** dynamically. Would you like me to integrate this effect into your Flutter app?



The image displays a set of **five vertical bars of varying heights**, commonly used to represent **audio activity or signal strength**. These bars are typically associated with **music playback indicators**, showing **dynamic sound levels** in real-time



The screenshot shows a **music player app** with light and dark mode toggles. The **left side** displays the standard tracklist, while the **right side** highlights "Schism" as the currently

playing track with a **purple "Now Playing" banner**. The interface balances **functionality, aesthetics, and usability**, making it intuitive for users. The image appears to be related but may show a different **variation of the UI**—perhaps an updated design or a different feature view.