

# MindMap+(stack=flutter)

## App Concept: MindMap+

### Purpose:

A dynamic **mind-mapping and note-organizing app** that helps users visualize their thoughts, tasks, and ideas as interactive, customizable mind maps. Perfect for brainstorming, project planning, or visualizing concepts for personal or professional use.

## App Structure

### Folder Structure

```
/MindMapPlus
|
├── /assets                # Static resources
|   ├── /images            # Icons, node images, banners
|   ├── /themes            # Predefined theme files (light/dark/colorful)
|   └── /fonts              # Custom typography
|
├── /lib                   # Main application logic (Flutter or modular architecture)
|   ├── main.dart          # App entry point
|   ├── /models            # Data models
|   │   ├── MindMapNode.dart # Defines nodes of the mind map
|   │   ├── Connection.dart  # Defines relationships between nodes
|   │   └── UserProfile.dart  # Stores user settings and profiles
|   └── /screens            # Main screens of the app
|       ├── HomeScreen.dart    # Mind map overview
|       ├── MapEditorScreen.dart # Full-screen mind map editor
|       ├── NotesScreen.dart    # Linked notes editor
|       ├── TemplatesScreen.dart # Predefined mind map templates
|       ├── AnalyticsScreen.dart # Analytics of your mind maps
|       └── SettingsScreen.dart  # App settings and customization
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|   |─ /widgets          # Reusable UI components
|   |   |─ NodeWidget.dart      # Visual representation of
a node
|   |   |─ ConnectionWidget.dart # Visual representation of
a connection
|   |   |─ Toolbar.dart         # Floating toolbar for map
editing
|   |   └─ AnalyticsGraph.dart  # Graphical representation
of map stats
|   |─ /services          # App services
|   |   |─ SaveLoadService.dart # Save/load mind maps to c
loud/local
|   |   |─ TemplateService.dart # Predefined template hand
ling
|   |   |─ AnalyticsService.dart # Generate insights from m
ind maps
|   |   └─ NotificationService.dart # Reminders for incomple
te maps
|   |─ /utils              # Helper functions
|   |   |─ ColorUtils.dart      # Dynamic node colors
|   |   |─ LayoutUtils.dart     # Node positioning helpers
|   |   └─ Constants.dart       # App-wide constants
|
|─ /backend                # Optional backend services
|   |─ /api                # API endpoints for mind map storag
e
|   |─ server.js           # Main server file (if using Node.j
s)
|   |─ /models             # Backend schemas for storing mind
maps
|   |─ /services           # Backend analytics or export tools
|   |   └─ /database       # Mind map data storage (e.g., Fire
base, MongoDB)
|
|─ /docs                   # Documentation
|   |─ README.md           # Overview of the app
|   |─ API_Documentation.md # API endpoint details
|   |   └─ UX_Wireframes.pdf # Wireframe designs
|
|─ /test                   # Unit and integration tests
|   |─ MapEditorTests.dart
|   |─ NodeTests.dart
|   |   └─ SaveLoadTests.dart
|
|─ /config                 # Configuration files
|   |─ firebase.json       # Firebase configuration

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|— .env          # Environment variables
|— package.json  # Backend dependencies
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## Features

### 1. Dynamic Mind Maps

- Create, edit, and link nodes with relationships.
- Drag-and-drop for easy positioning.

### 2. Linked Notes

- Attach detailed notes to any node.
- Markdown support for rich-text formatting.

### 3. Predefined Templates

- Templates for personal, professional, or educational use:
  - To-do lists, project plans, goal-setting, etc.

### 4. Analytics

- Insights on your maps (e.g., most active nodes, connections density).
- Highlighting potential gaps in your thought process.

### 5. Export Options

- Export mind maps to PDF, PNG, or as sharable links.

### 6. Cloud Sync and Collaboration

- Sync across devices via Firebase or similar services.
- Invite others to collaborate on a shared map.

### 7. Themes and Customization

- Choose from multiple color palettes or create your own.
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