Flutter Learning Roadmap (Beginner to Advanced)

PHASE 1: BASICS

- Install Flutter, Android Studio, VS Code

- Dart basics: variables, functions, lists, futures

- Widgets: Stateless, Stateful

- Layout basics

- Mini Projects: Login UI, Calculator UI

PHASE 2: UI & LAYOUTS

- Padding, Margin, Flex, Stack

- ListView, GridView

- Themes, Colors, Fonts

- Navigation: push/pop, bottom nav

- Projects: Ecommerce UI, Travel UI

PHASE 3: STATE MANAGEMENT

- setState, InheritedWidget

- Provider, Riverpod, Bloc

- App Architecture basics

- Projects: Todo App, Notes App

PHASE 4: BACKEND INTEGRATION

- REST APIs (HTTP)

- JSON parsing

- Firebase: Auth, Firestore, Storage

- Local DB: Hive, SQFlite

- Projects: Chat App, Blog App

PHASE 5: INTERMEDIATE

- Animations

- Form Validation

- Maps + Geolocation

- Device features: camera, sensors

- Projects: Delivery Tracker, Fitness Tracker

PHASE 6: ADVANCED

- Optimization

- Bloc/Riverpod advanced

- Platform channels

- Background services

- Testing: unit, widget, integration

- Projects: Full Attendance System, Ecommerce App

PHASE 7: EXPERT LEVEL

- Deployment

- Flutter Web / Desktop

- Custom Paint, Rive animations

- AR, Unity Integration

- Web3 + Blockchain apps