ChatGPT

Firebase Learning Roadmap for React Native

A complete beginner-to-advanced guide for mastering Firebase in your React Native projects.

Beginner Level

1. What is Firebase?

- Overview of Firebase and its purpose
- Key services (Auth, Firestore, Storage, etc.)
- Firebase vs custom backend (Node.js, Express)

2. Firebase Setup in React Native

- Installing `@react-native-firebase/app`
- Creating a project in Firebase Console
- Adding `google-services.json` (Android)
- Basic Firebase initialization in RN

3. Firebase Authentication

- Email & Password Login/Signup
- Logout functionality
- Checking if user is logged in
- Handling auth errors (e.g., weak password, used email)

Intermediate Level

4. Firestore (Cloud NoSQL Database)

- Firestore vs Realtime DB
- CRUD operations:
- `collection`, `doc`, `add`, `get`, `set`, `update`, `delete`
- Real-time listeners using `onSnapshot`
- Firebase rules for Firestore

5. Realtime Database (Optional)

- Structure & syntax differences from Firestore
- Real-time syncing
- Use cases

6. Firebase Storage

- Upload images/files to Firebase Storage
- Retrieve & display download URLs
- Image display in app using RN Image component

7. Authentication Enhancements

- Google Sign-In (`react-native-google-signin`)
- OTP-based Phone Authentication
- Reset password flows
- Email verification

Advanced Level

8. Firebase Security Rules

- Writing custom Firestore and Storage rules
- Protecting user-specific documents
- Using Firebase Emulator for testing rules

9. Cloud Functions

- What are Cloud Functions?
- Creating & deploying functions
- Trigger types (Auth, Firestore, HTTP, etc.)
- Example use cases (sending push, payments)

10. Firebase Hosting

- Hosting static content (useful for web support)
- Deploying web React apps (optional)

11. Firebase Analytics & Crashlytics

- Tracking custom user events
- Crash reports and monitoring in Firebase Console

12. Firebase Cloud Messaging (FCM)

- Setting up push notifications in React Native
- Sending push to user or topic
- Handling foreground/background messages

Bonus Practice Ideas

Project Idea	Firebase Services Used
Login App	Auth
Chat App	Auth, Firestore, Storage
Notes App	Auth, Firestore
Image Gallery	Auth, Storage, Firestore
E-commerce (Basic)	Auth, Firestore, Cloud Functions (optional)

Stay consistent and build projects to solidify each concept. Need step-by-step projects? Just ask!