
Flutter Push Notifications: Using Firebase Cloud Messaging (FCM)

Subtitle: Learn how to send push notifications to users in Flutter apps using Firebase Cloud Messaging.

Website Name: haas.dev

Website Link: <https://dev-roast-app.vercel.app>

Introduction

Push notifications are essential for **user engagement and retention**. Firebase Cloud Messaging (FCM) allows you to **send targeted notifications** to mobile devices easily.

Step 1: Add Dependencies

```
dependencies:  
  firebase_core: ^2.20.0  
  firebase_messaging: ^14.4.0
```

Run:

```
flutter pub get
```

Import in Dart:

```
import 'package:firebase_core/firebase_core.dart';  
import 'package:firebase_messaging/firebase_messaging.dart';
```

Step 2: Initialize Firebase & FCM

```
void main() async {  
  WidgetsFlutterBinding.ensureInitialized();  
  await Firebase.initializeApp();  
  
  FirebaseMessaging messaging = FirebaseMessaging.instance;  
  
  NotificationSettings settings = await messaging.requestPermission(  
    alert: true,
```

```
    badge: true,  
    sound: true,  
  );  
  
  print('User granted permission: ${settings.authorizationStatus}');  
  runApp(MyApp());  
}
```

Exercise: Request notification permission and print the status.

Step 3: Get Device Token

```
String? token = await FirebaseMessaging.instance.getToken();  
print('Device Token: $token');
```

Exercise: Print the FCM token in console and use it for testing notifications.

Step 4: Listen for Notifications

```
// Foreground messages  
FirebaseMessaging.onMessage.listen((RemoteMessage message) {  
  print('Message data: ${message.data}');  
  if (message.notification != null) {  
    print('Message also contained a notification: ${message.notification}');  
  }  
});
```

Exercise: Show a local alert when a notification arrives in foreground.

Step 5: Mini Project

Build a **Flutter Notification App**:

- Request notification permission
 - Print device token
 - Handle foreground notifications
 - Bonus: Integrate with Firebase Console to send test messages
-

Key Takeaways

- FCM allows **real-time communication with users**
 - Proper setup ensures **reliable notifications across devices**
 - Handling foreground and background notifications improves **user experience**
 - Mastering FCM is essential for **engagement-focused Flutter apps**
-

Skipping push notifications reduces **user retention and app interaction**, making your app less competitive.

Visit **haas.dev** for more Flutter guides, tutorials, and complete project resources.

Website Name: haas.dev

Website Link: <https://dev-roast-app.vercel.app>
