

**TUGAS GUIDED
PEMROGRAMAN PERANGKAT BERGERAK**

**MODUL 11
FIREBASE NOTIFIKASI**



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**PROGRAM STUDI S1 SOFTWARE ENGINEERING
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Main.dart

```
import 'package:firebase_core/firebase_core.dart';
import 'package:firebase_messaging/firebase_messaging.dart';
import 'package:flutter/material.dart';
import 'package:flutter_local_notifications/flutter_local_notifications.dart';
import 'package:praktikum_11/my_notification_screen.dart';

Future<void> _firebaseMessagingBackgroundHandler(RemoteMessage message) async {
  await Firebase.initializeApp();
  print('Handling a background message: ${message.messageId}');
}

const AndroidNotificationChannel channel = AndroidNotificationChannel(
  'high_importance_channel', // ID Channel
  'High Importance Notifications', // Nama Channel
  description: 'This channel is used for important notifications.', // Deskripsi
  importance: Importance.high, // Prioritas
);

final FlutterLocalNotificationsPlugin flutterLocalNotificationsPlugin =
  FlutterLocalNotificationsPlugin();

Run | Debug | Profile
void main() async {
  WidgetsFlutterBinding.ensureInitialized();
  await Firebase.initializeApp();

  FirebaseMessaging.onBackgroundMessage(_firebaseMessagingBackgroundHandler);

  await flutterLocalNotificationsPlugin
    .resolvePlatformSpecificImplementation<AndroidFlutterLocalNotificationsPlugin>()
    ?.createNotificationChannel(channel);

  await FirebaseMessaging.instance.setForegroundNotificationPresentationOptions(
    alert: true,
    badge: true,
    sound: true,
  );

  runApp(const MyApp());
}

class MyApp extends StatelessWidget {
  const MyApp({super.key});

  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Flutter Demo',
      theme: ThemeData(
        colorScheme: ColorScheme.fromSeed(seedColor: Colors.deepPurple),
        useMaterial3: true,
      ), // ThemeData
      home: const MyHomePage(title: 'Flutter Demo Home Page'),
    ); // MaterialApp
  }
}

class MyHomePage extends StatefulWidget {
  const MyHomePage({super.key, required this.title});

  final String title;

  @override
  State<MyHomePage> createState() => _MyHomePageState();
}

class _MyHomePageState extends State<MyHomePage> {
  @override
  void initState() {
    super.initState();
    _initFCM();
  }
}
```

```

Future<void> _initFCM() async {
  FirebaseMessaging.instance.getInitialMessage().then((message) {
    if (message != null) {
      Navigator.push(
        context,
        MaterialPageRoute(
          builder: (context) => const MyNotificationScreen(),
        ), // MaterialPageRoute
      );
    }
  });

  FirebaseMessaging.onMessage.listen((RemoteMessage message) {
    RemoteNotification? notification = message.notification;
    AndroidNotification? android = message.notification?.android;

    if (notification != null && android != null) {
      flutterLocalNotificationsPlugin.show(
        notification.hashCode,
        notification.title,
        notification.body,
        NotificationDetails(
          android: AndroidNotificationDetails(
            channel.id,
            channel.name,
            channelDescription: channel.description,
            color: Colors.blue,
            icon: '@mipmap/ic_launcher',
          ), // AndroidNotificationDetails
        ), // NotificationDetails
      );
    }
  });
}

```

```

FirebaseMessaging.onMessageOpenedApp.listen((RemoteMessage message) {
  Navigator.push(
    context,
    MaterialPageRoute(
      builder: (context) => const MyNotificationScreen(),
    ), // MaterialPageRoute
  );
});
}

@override
Widget build(BuildContext context) {
  return Scaffold(
    appBar: AppBar(
      backgroundColor: Theme.of(context).colorScheme.inversePrimary,
      title: Text(widget.title),
    ), // AppBar
    body: Center(
      child: const Text('Flutter FCM Demo'),
    ), // Center
  ); // Scaffold
}
}

```

My_notification_screen.dart

```
import 'dart:ffi';

import 'package:firebase_messaging/firebase_messaging.dart';
import 'package:flutter/material.dart';
import 'package:flutter_local_notifications/flutter_local_notifications.dart';
import 'package:praktikum_11/main.dart';

class MyNotificationScreen extends StatefulWidget {
  const MyNotificationScreen({super.key});

  @override
  State<MyNotificationScreen> createState() => MyNotificationScreenState();
}

class MyNotificationScreenState extends State<MyNotificationScreen> {
  @override
  void initState() {
    super.initState();
    // Membuat pengaturan inisialisasi notifikasi untuk Android
    var initializationSettingsAndroid =
      const AndroidInitializationSettings('@mipmap/ic_launcher');
    var initializationSettings =
      InitializationSettings(android: initializationSettingsAndroid);
    FlutterLocalNotificationsPlugin().initialize(initializationSettings);

    // Mendengarkan pesan saat aplikasi aktif
    FirebaseMessaging.onMessage.listen((RemoteMessage message) {
      RemoteNotification? notification = message.notification;
      AndroidNotification? android = message.notification?.android;

      // Jika notifikasi tersedia, tampilkan menggunakan notifikasi lokal
      if (notification != null && android != null) {
        var show = FlutterLocalNotificationsPlugin().show(
          notification.hashCode, // ID notifikasi (hashCode untuk unik)
          notification.title, // Judul notifikasi
          notification.body, // Isi notifikasi
          NotificationDetails(
            android: AndroidNotificationDetails(
              channel.id,
              channel.name,
              channelDescription: channel.description,
              color: Colors.blue,
              icon: "@mipmap/ic_launcher",
            ), // AndroidNotificationDetails
          ), // NotificationDetails
        );
      }
    });
  }
}
```

```

// Menangani aksi ketika notifikasi dibuka
FirebaseMessaging.onMessageOpenedApp.listen((RemoteMessage message) {
  RemoteNotification? notification = message.notification;
  AndroidNotification? android = message.notification?.android;

  // Jika notifikasi tersedia, tampilkan dialog
  if (notification != null && android != null) {
    showDialog(
      context: context,
      builder: (_) {
        return AlertDialog(
          title: Text(notification.title ?? ""), // Judul dialog
          content: SingleChildScrollView(
            child: Column(
              crossAxisAlignment: CrossAxisAlignment.start,
              children: [Text(notification.body ?? "")], // Isi dialog
            ), // Column
          ), // SingleChildScrollView
        ); // AlertDialog
      },
    );
  }
});
}

```

```

Widget build(BuildContext context) {
  return Scaffold(
    appBar: AppBar(
      title: const Text('My Notification Screen'),
      backgroundColor: Colors.amber,
      centerTitle: true,
    ), // AppBar
    body: Center(
      child: Text('Mendapatkan Notifikasi'),
    ), // Center
  ); // Scaffold
}

```

Output

