

FLUTTER DASTURLASH TILIDA PERMISSIONLAR BILAN ISHLASH

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Annotatsiya: Hozirgi kunda mobil ilovalar foydalanuvchilardan turli xil ruxsatnomalar (permissions) talab qilishi odatiy holga aylangan. Ushbu maqolada Flutter dasturlash tilida ilovalarda permissionlar bilan ishlash haqida batafsil ma'lumot beriladi. Android va iOS platformalarida permissionlarni boshqarishning asosiy usullari, ularning turli xil funksional imkoniyatlarga qanday ta'sir ko'rsatishi hamda kichik loyiha misollari orqali amaliy ko'nikmalar shakllantiriladi.

Kalit so'zlar: Flutter, Permissionlar, Android, iOS, Mobile ilova, Ruxsat so'rash, Platforma-specifik funksiyalar

Kirish

Mobil ilovalar zamonaviy hayotning ajralmas qismiga aylangan. Ushbu ilovalar foydalanuvchi ma'lumotlariga kirish uchun ko'pincha turli xil ruxsatnomalarni talab qiladi. Masalan, kamera, mikrofon, yoki kontaktlar ro'yxatiga kirish uchun maxsus permissionlar kerak bo'ladi. Bu ruxsatnomalar ilova funksionalligini oshirish bilan birga, foydalanuvchilar xavfsizligini ta'minlash uchun ham muhim hisoblanadi.

Flutter - bu Google tomonidan ishlab chiqilgan, kross-platformali mobil ilovalar yaratish uchun mo'ljallangan open-source frameworkdir. Flutter yordamida Android va iOS platformalarida bir xil kod asosida ilovalar ishlab chiqish mumkin. Ammo, platformalarga xos permissionlar bilan ishlashda ma'lum farqlarni hisobga olish zarur.

Nazariy qism

Permissionlarning turlari va ularning ahamiyati

Mobil platformalarda permissionlar foydalanuvchi ma'lumotlarini himoya qilish va ilova xavfsizligini ta'minlash uchun muhimdir. Quyida keng tarqalgan permission turlari keltirilgan:

Kamera (Camera) – suratga olish va video yozib olish uchun kerak.

Mikrofon (Microphone) – ovoz yozib olish uchun foydalaniladi.

Geolokatsiya (Location) – foydalanuvchi joylashuvini aniqlash uchun kerak.

Kontaktlar (Contacts) – telefon kitobi yoki boshqa kontakt ma'lumotlariga kirish uchun

Xotira (Storage) – fayllarni saqlash yoki o'qish uchun ishlatiladi.

Android va iOS permissionlarining farqlari

Android va iOS tizimlarida permissionlar bilan ishlashda quyidagi farqlar mavjud:

Android: Android 6.0 (API 23) dan boshlab runtime permissionlar kiritildi. Bu shuni anglatadiki, ilova foydalanish jarayonida zarur permissionlarni so‘rashi kerak.

iOS: iOSda permissionlar so‘ralganda foydalanuvchiga maxsus dialog oynasi ko‘rsatiladi. Shuningdek, Info.plist fayliga kerakli izohlar kiritilishi shart.

Flutterda permissionlar bilan ishlash uchun kutubxonalar

Flutterda permissionlar bilan ishlashni osonlashtirish uchun bir nechta tayyor kutubxonalar mavjud. Eng mashhuri ‘permission_handler’ kutubxonasidir. Ushbu kutubxona yordamida quyidagi amallarni bajarish mumkin:

Permission holatini tekshirish

Permission so‘rash

Foydalanuvchini sozlamalarga yo‘naltirish

Kutubxona o‘rnatish va konfiguratsiya

Permissionlarni boshqarish uchun ‘permission_handler’ kutubxonasini pubspec.yaml fayliga qo‘shamiz:

```
dependencies:
  permission_handler: ^10.2.0
```

Android uchun AndroidManifest.xml faylida kerakli permissionlarni qo‘shamiz:

```
<uses-permission android:name="android.permission.CAMERA" />
<uses-permission android:name="android.permission.ACCESS_FINE_LOCATION" />
```

iOS uchun Info.plist fayliga quyidagi izohlarni kiritamiz:

```
<key>NSCameraUsageDescription</key>
<string>Kameradan foydalanish uchun ruxsat talab qilinadi.</string>
<key>NSLocationWhenInUseUsageDescription</key>
<string>Geolokatsiya ma'lumotlarini olish uchun ruxsat talab qilinadi.</string>
```

Permissionlar bilan ishlash jarayoni

Permission holatini tekshirish:

```
var status = await Permission.camera.status;
if (status.isGranted) {
  print('Kamera ruxsat etilgan');
} else {
```

```
print('Kamera ruxsat etilmagan');
}
```

Permission so‘rash:

```
var result = await Permission.camera.request();
if (result.isGranted) {
  print('Kamera ruxsat etildi');
} else {
  print('Kamera ruxsat berilmadi');
}
```

Foydalanuvchini sozlamalarga yo‘naltirish:

```
openAppSettings();
```

Kichik loyiha: Kamera ruxsatini so‘rash

Quyida kamera ruxsatini so‘rash bo‘yicha kichik loyihaning keltirilgan kodi:

```
import 'package:flutter/material.dart';
import 'package:permission_handler/permission_handler.dart';

void main() {
  runApp(MyApp());
}

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: PermissionExample(),
    );
  }
}

class PermissionExample extends StatefulWidget {
  @override
  _PermissionExampleState createState() => _PermissionExampleState();
}

class _PermissionExampleState extends State<PermissionExample> {
  String _status = "Ruxsat holatini tekshirish";

  Future<void> _checkPermission() async {
    var status = await Permission.camera.status;
    if (status.isGranted) {
      setState(() {
        _status = "Kamera ruxsat etilgan";
      });
    }
  }
}
```

```

    });
  } else if (status.isDenied) {
    var result = await Permission.camera.request();
    setState(() {
      _status = result.isGranted
        ? "Kamera ruxsat etildi"
        : "Kamera ruxsat berilmadi";
    });
  }
}

@override
Widget build(BuildContext context) {
  return Scaffold(
    appBar: AppBar(title: Text("Permission Misoli")),
    body: Center(
      child: Column(
        mainAxisAlignment: MainAxisAlignment.center,
        children: [
          Text(_status),
          SizedBox(height: 20),
          ElevatedButton(
            onPressed: _checkPermission,
            child: Text("Kamera ruxsatini so‘rash"),
          ),
        ],
      ),
    ),
  );
}

```

Xulosa

Permissionlar mobil ilovalar xavfsizligini va funksionalligini ta'minlashda muhim rol o'ynaydi. Flutter platformasi uchun 'permission_handler' kabi kutubxonalar permissionlar bilan ishlashni ancha osonlashtiradi. Ushbu maqolada nazariy qism va kichik loyiha misollari orqali permissionlar bilan ishlashning asosiy usullari yoritib berildi.

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