Teknoloji Fakültesi
Bilgisayar Mühendisliği

3301409 MOBİL PROGRAMLAMA NÖ
3301456 MOBİL PROGRAMLAMA NÖ
3311409 MOBİL PROGRAMLAMA İÖ
3311456 MOBİL PROGRAMLAMA İÖ

Dr. Öğretim Üyesi Ahmet Cevahir ÇINAR
Selçuk Üniversitesi Teknoloji Fakültesi Bilgisayar Mühendisliği Bölümü
accinar@selcuk.edu.tr

Final ve Bütünleme için ön kontrol uyarısı

Gönderilen projenin pubspec.yaml dosyasında aşağıdaki 6 zorunlu kütüphaneden 3 tanesinin bulunması Final veya Bütünleme sınavına katılım için ön şarttır. Bunları içermeyen projeler kontrol edilmeden sınava girmemiş sayılacak ve sisteme notu -1 (sınava girmedi) olarak yansıtılacaktır.

Aşağıdaki güncel versiyonlar olmak zorundadır.

firebase_core: ^1.16.0 - Zorunlu
firebase_auth: ^3.3.17 – Zorunlu
cloud_firestore: ^3.1.14 – Zorunlu

Kendisi API geliştirip Firebase Authentication ve Firestore kullanmayanlar sınav anında API geliştirmesini nasıl yaptıklarını göstereceklerdir!

path_provider 2.0.10 veya path 1.8.1 veya alternatif bir path paketi zorunludur

http 0.13.4 veya dio 4.0.6 veya alternatif bir internet paketi zorunludur

sqflite 2.0.2+1 veya hive 2.1.0 veya alternatif bir local storage paketi zorunludur

HAFTA	TARİH	DERSİN İÇERİĞİ
1	9 Şubat 2022	Mobil Programlamaya genel bakış, tanıtım, derse giriş ve işlenişi ile ilgili yol haritasının belirlenmesi
2	16 Şubat 2022	Dart Programlama Dili
3	23 Şubat 2022	Geliştirme ortamının gereksinimleri ve kurulumlar (Flutter, Git, Android Studio vb.)
4	2 Mart 2022	Flutter uygulamalarının temelleri (klasör yapısı, pubspec.yaml dosyası, temel Flutter kütüphaneleri vb.), genel bileşenler, Flutter uygulamalarının yaşam döngüsü
5	9 Mart 2022	Flutter ile kullanıcı ara yüzü tasarlamak (MaterialApp, Scaffold, AppBar, SafeArea, SnackBar vb.)
6	16 Mart 2022	Widgetler (Value, Layout, Navigation, vb.) ve Widgetleri stillendirmek
7	23 Mart 2022	Geliştirilecek projelerin derste değerlendirilmesi, yönlendirme ve yardımcı olunması
8	30 Mart 2022	Projeyi Github'a yükleme ve Github Pages üzerinden yayına alma – Youtube'da var
	1 Nisan 2022 20.00	**Ara Sınav, Final ve Bütünleme sınavlarının nasıl yapılacağı ile ilgili YouTube toplantısı ☺**
	4-10 Nisan 2022	ARA SINAV SÜRECİ
9	13 Nisan 2022	Gestures ve Asenkron Programlama
10	20 Nisan 2022	Dosya işlemleri ve API ile çalışmak
11	27 Nisan 2022	SQLite ile veritabanı işlemleri
12	11 Mayıs 2022	Firebase Authentication, Localization ve Provider Kullanımı
13	18 Mayıs 2022	FireStore ile Provider destekli veritabanı üzerinde CRUD işlemleri
14	25 Mayıs 2022	Animasyonlar ve Grafikler

Firebase nedir?

Firebase, gerçek zamanlı veritabanı, bulut depolama, kimlik doğrulama, kilitlenme raporlama, makine öğrenimi, uzaktan yapılandırma ve statik dosyalarınız için barındırma gibi hizmetleri sağlayan bir (Backend-as-a-Service (BaaS)) uygulama geliştirme platformudur.

Hem Firebase, hem Flutter Google tarafından desteklenmektedir.

12-13-14. derslerimizdeki konuları öğrenmek için RiseTime şirketinin kendi iç işleyişinde kullanmak üzere istemiş olduğu bir uygulamanın kullanıcı kaydı ve alan adı firması kayıt kısımlarını birlikte gerçekleştireceğiz.

Genel İstekler:

-Üyelik ile SEO teklifi istenmesi

-Alan adlarını satın aldıkları firmaların giriş bilgileri

-Hosting hizmetlerini satın aldıkları firmaların giriş bilgileri

-Adsense hesaplarının giriş bilgileri

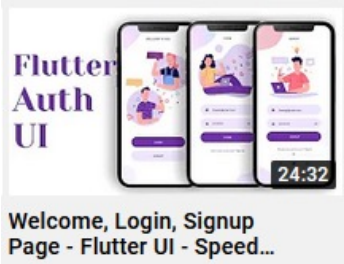
-Günlük kazanç ve ziyaretçi bilgilerinin manuel olarak girilmesi

-Detaylı rapor ve yönetim sayfalarının oluşturulması

-Yönetim panelinde kullanıcı kontrollerinin oluşturulması

İstekleri doğrultusunda arayüz için kullanılacaklar

https://www.youtube.com/watch?v=ExKYjqgswJg adresindeki kullanıcı giriş ve kayıt ekranlarını doğrudan kullanıp https://www.youtube.com/watch?v=_uOgXpEHNbc adresindeki Admin Paneli tasarımından bazı içerikleri kendimize uyarlayarak kullanacağız.



RiseTime

Modellerin oluşturulması

Domain Firması için model oluşturalım

DomainFirm

id

name

loginname

loginpassword

web

Hosting Firması için model oluşturalım

HostingFirm

id

Name

loginurl

loginname

loginpassword

ip

monthlyprice

Adsense Hesabı için model oluşturalım

AdsenseAccount

id

loginname

loginpassword

Domain için model oluşturalım

Domain
id
DomainFirm_id
HostingFirm_id
AdsenseAccount_id
name
isNecessary
registerDate
Description
redirectedUrl

DailyReport için model oluşturalım

DailyReport

id

Domain_id

Date

visitors

earnings

comment

User için model oluşturalım

User

user_id

user_name

user_mail

user_password

SeoTalep için model oluşturalım

SeoTalep

seotalep_id

seotalep_name

seotalep_phone

seotalep_mail

seotalep_web

seotalep_keywords

seotalep_description

Harici kodları projeye nasıl dahil ederim?

- 1-/lib klasörünü al ve yerleştir, import satırlarındaki proje isimlerini düzenle
- 2-/assets klasörünü al ve yerleştir
- 3-pubspec.yaml içerisine gerekli kütüphaneleri yükle ve assets yolunu belirt
- 4-Güncelliğini yitirmiş metotları güncellemeye çalış

İngilizce ve Türkçe dil desteği sunacağız!

easy_localization paketi sayesinde İngilizce ve Türkçe dil desteği sunacağız!

Kurulum için https://pub.dev/packages/easy_localization buradaki adımları takip ediniz.

Ayrıntılı anlatım için https://www.youtube.com/watch?v=cposNqIsyAY adresindeki videoyu izleyiniz, herhangi bir sorunuz olursa sorabilirsiniz.

Not:Her kayıt girildikten sonra aşağıdaki komutlar çağrılmalıdır. Bu yüzden bu işlemin en son (uygulama sona ereceği zaman) yapılması daha faydalı olur.

flutter pub run easy_localization:generate -S "assets/translations" -O "lib/translations"

flutter pub run easy_localization:generate -S "assets/translations" -O "lib/translations" -o "locale_keys.g.dart" -f keys

Firebase entegrasyonuna başlıyoruz

https://firebase.google.com/docs/flutter/setup?platform=android

Buradaki adımları takip edeceğiz.

https://firebase.google.com/docs/cli#setup_update_cli Firebase CLI'yi kurun veya güncelleyin

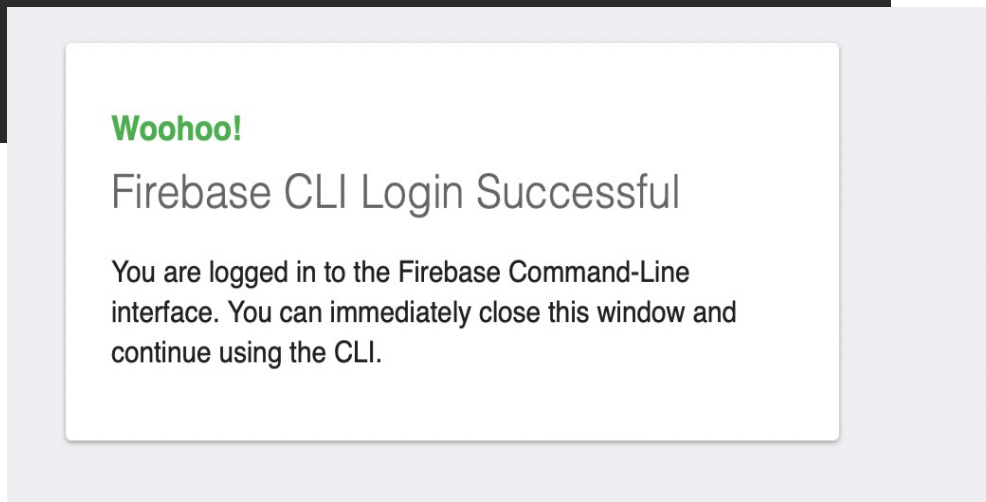
sentius — -zsh — 80×24

```
Last login: Wed May 11 00:42:20 on console
(base) sentius@Sentius-MacBook-Pro ~ % curl -sL https://firebase.tools | bash
Password:
-- Checking for existing firebase-tools on PATH...
Your machine already has firebase-tools@10.1.2 installed. Nothing to do.
-- All done!
(base) sentius@Sentius-MacBook-Pro ~ %
```

firebase login

```
(base) sentius@Sentius-MacBook-Pro risetimedev % firebase login
Already logged in as corapreklam@gmail.com
(base) sentius@Sentius-MacBook-Pro risetimedev % firebase logout
✔  Logged out from corapreklam@gmail.com
(base) sentius@Sentius-MacBook-Pro risetimedev %
```

```
(base) sentius@Sentius-MacBook-Pro risetimedev % firebase login
i  Firebase optionally collects CLI usage and error reporting information to help improve our produc
s not used to identify you.

? Allow Firebase to collect CLI usage and error reporting information? Yes
i  To change your data collection preference at any time, run `firebase logout` and log in again.

Visit this URL on this device to log in:
https://accounts.google.com/o/oauth2/auth?client_id=563584335869-fgrhgmd47bqnekij5i8b5pr03ho849e6.ap
cts.readonly%20https%3A%2F%2Fwww.googleapis.com%2Fauth%2Ffirebase%20https%3A%2F%2Fwww.googleapis.com

Waiting for authentication...

✔  Success! Logged in as risetimedev@gmail.com
(base) sentius@Sentius-MacBook-Pro risetimedev %
```



firebase projects:list

```
(base) sentius@Sentius-MacBook-Pro risetimedev % firebase projects:list
✔ Preparing the list of your Firebase projects
```

Project Display Name	Project ID	Project Number	Resource Location ID
risetimedev	risetimedev-646e9	435207503228	europe-west
risetimedev2022	risetimedev2022	1093795560242	europe-west

```
2 project(s) total.
```

```
dart pub global activate flutterfire_cli
```

flutterfire configure

```
(base) sentius@Sentius-MacBook-Pro risetimedev % flutterfire configure
i Found 2 Firebase projects.
? Select a Firebase project to configure your Flutter application with ›
❯ risetimedev-646e9 (risetimedev)
  risetimedev2022 (risetimedev2022)
  <create a new project>
```

```
✔ Select a Firebase project to configure your Flutter application with · risetimedev2022 (risetimedev2022)
? Which platforms should your configuration support (use arrow keys & space to select)? ›
✔ android
✔ ios
  macos
✔ web
```

```
✔ Select a Firebase project to configure your Flutter application with · risetimedev2022 (risetimedev2022)
✔ Which platforms should your configuration support (use arrow keys & space to select)? · android, ios, web
i Firebase android app com.piteknoloji.risetimedev registered.
i Firebase ios app com.piteknoloji.risetimedev is not registered on Firebase project risetimedev2022.
i Registered a new Firebase ios app on Firebase project risetimedev2022.
i Firebase web app risetimedev (web) registered.

Firebase configuration file lib/firebase_options.dart generated successfully with the following Firebase apps:

Platform  Firebase App Id
web       1:1093795560242:web:a6ec23a5d81a164fb5b52b
android   1:1093795560242:android:dd849a18441834adb5b52b
ios       1:1093795560242:ios:faf92e8fcd173d0bb5b52b

Learn more about using this file in the FlutterFire documentation:
 > https://firebase.flutter.dev/docs/cli
(base) sentius@Sentius-MacBook-Pro risetimedev %
```

`flutterfire configure` bu ilk çalıştırılmasından sonra, aşağıdakileri yaptığınızda komutu yeniden çalıştırmanız gerekir:

- Flutter uygulamanızda yeni bir platformu desteklemeye başlayın.
- Özellikle Google, Crashlytics, Performance Monitoring veya Realtime Database ile oturum açmayı kullanmaya başladıysanız, Flutter uygulamanızda yeni bir Firebase hizmeti veya ürünü kullanmaya başlayın.

Komutu yeniden çalıştırmak, Flutter uygulamanızın Firebase yapılandırmasının güncel olmasını sağlar ve (Android için) gerekli Gradle eklentilerini uygulamanıza otomatik olarak ekler.

flutter pub add firebase_core

- https://pub.dev/packages/firebase_core kütüphanesini yüklüyoruz.

2. `lib/main.dart` dosyanızda, Firebase çekirdek eklentisini ve daha önce oluşturduğunuz yapılandırma dosyasını içe aktarın:

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

3. Ayrıca `lib/main.dart` dosyanızda, yapılandırma dosyası tarafından dışa aktarılan `DefaultFirebaseOptions` nesnesini kullanarak Firebase'i başlatın:

```
await Firebase.initializeApp(
  options: DefaultFirebaseOptions.currentPlatform,
);
```

4. Flutter uygulamanızı yeniden oluşturun:

```
your-flutter-proj$  flutter run
```

Available plugins

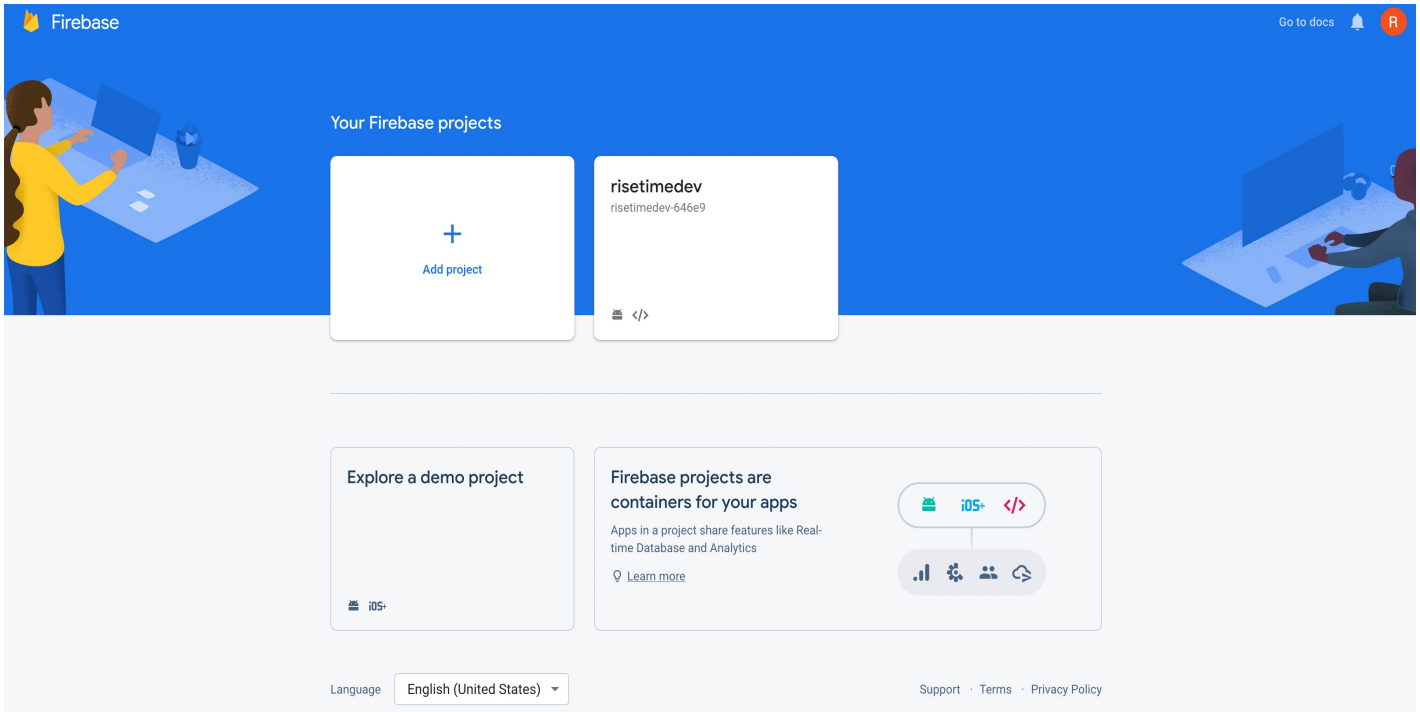
Product	Plugin name	iOS	Android	Web	Other Apple (macOS, etc.)
Analytics	`firebase_analytics`	✓	✓	✓	beta
App Check	`firebase_app_check`	✓	✓	✓	beta
Authentication	`firebase_auth`	✓	✓	✓	beta
Cloud Firestore	`cloud_firestore`	✓	✓	✓	beta
Cloud Functions	`cloud_functions`	✓	✓	✓	beta
Cloud Messaging	`firebase_messaging`	✓	✓	✓	beta
Cloud Storage	`firebase_storage`	✓	✓	✓	beta
Crashlytics	`firebase_crashlytics`	✓	✓		beta
Dynamic Links	`firebase_dynamic_links`	✓	✓		
In-App Messaging	`firebase_in_app_messaging`	✓	✓		
Firebase installations	`firebase_app_installations`	✓	✓	✓	beta
ML Model Downloader	`firebase_ml_model_downloader`	✓	✓		beta
Performance Monitoring	`firebase_performance`	✓	✓	✓	
Realtime Database	`firebase_database`	✓	✓	✓	beta
Remote Config	`firebase_remote_config`	✓	✓	✓	beta

Firebase CLI kullanmazsanız
Android ve Web için gerekli ayarları yapınız

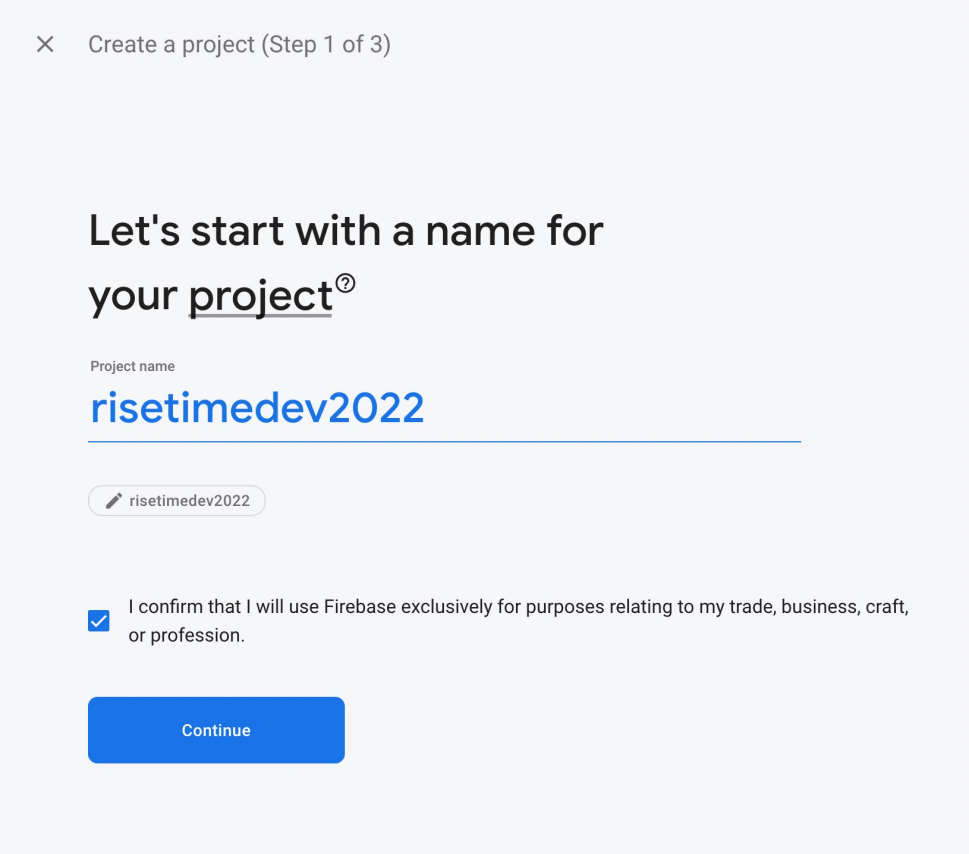
- https://firebase.flutter.dev/docs/installation/android
- https://firebase.flutter.dev/docs/installation/web

Gmail hesabımız ile Firebase’e giriş yapıyoruz

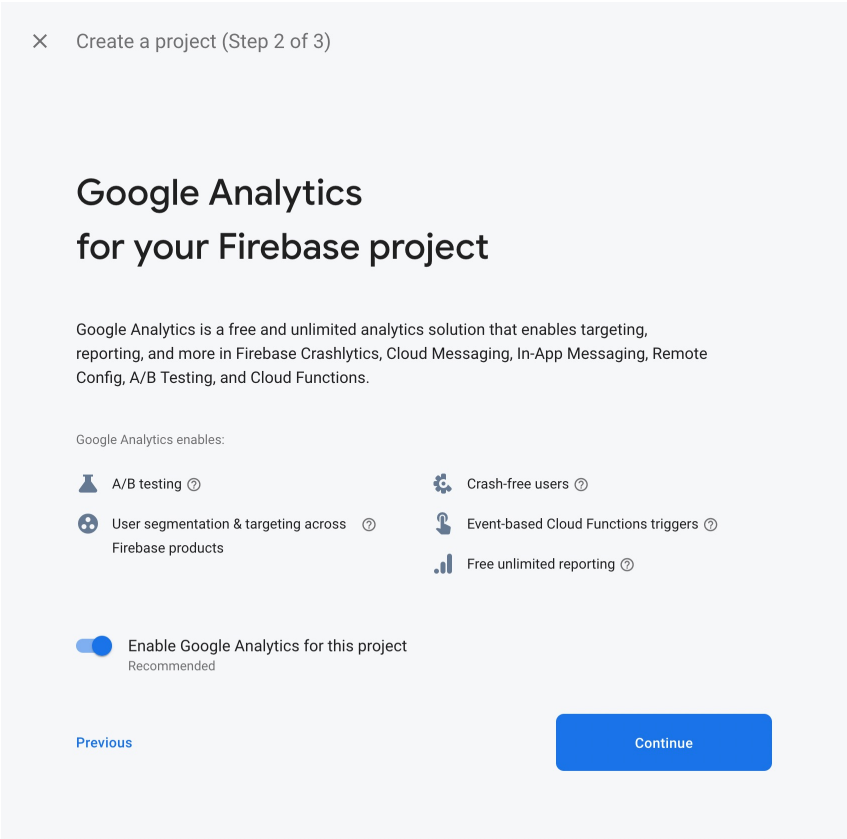
https://console.firebase.google.com/adresine giriniz, Add Project’e basınız

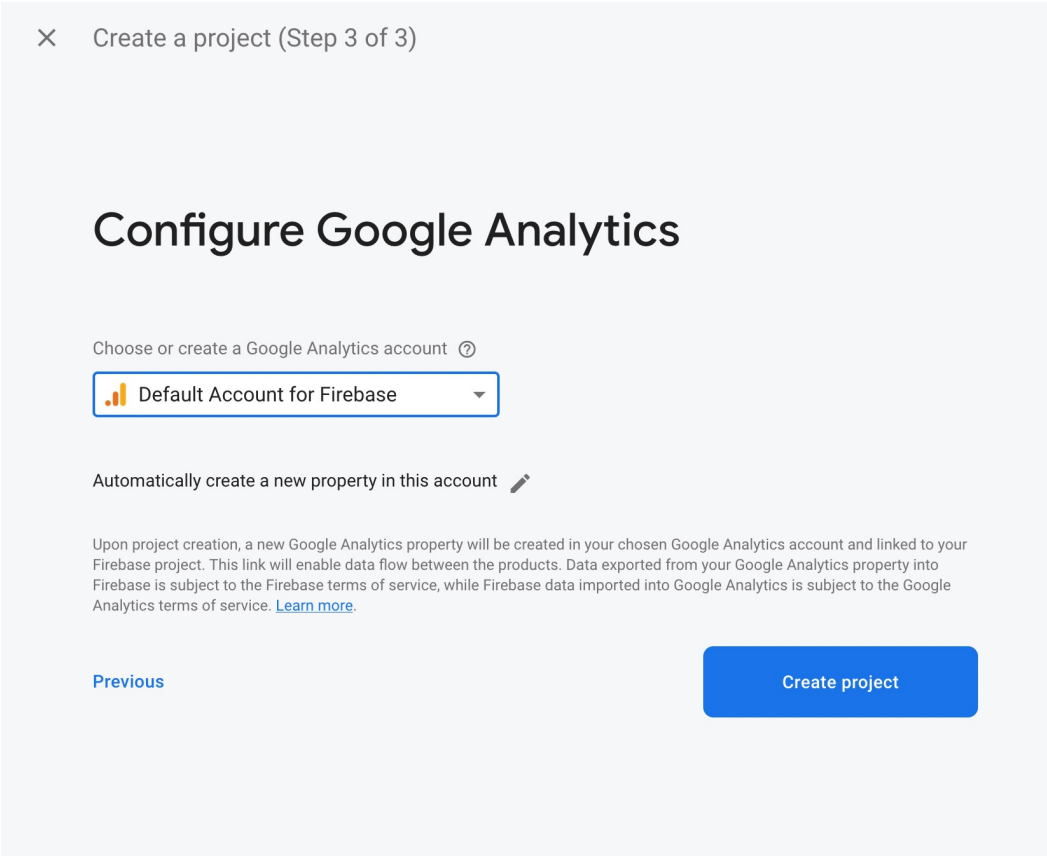


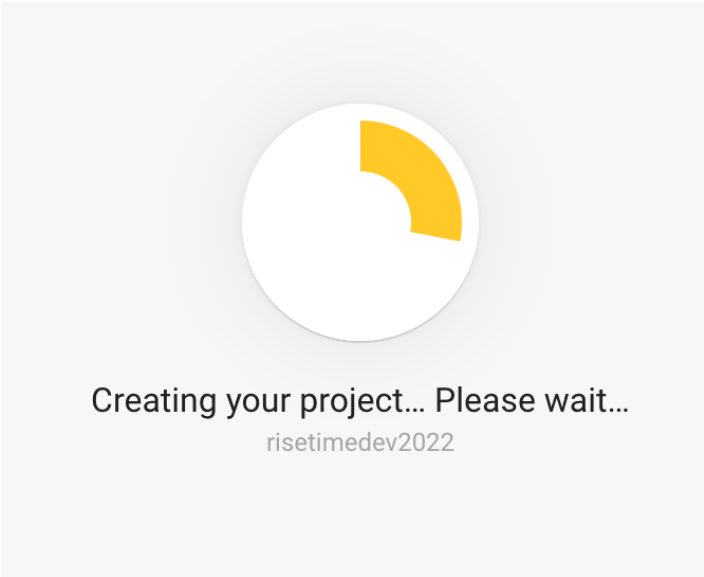
Projemizin ismini veriyoruz

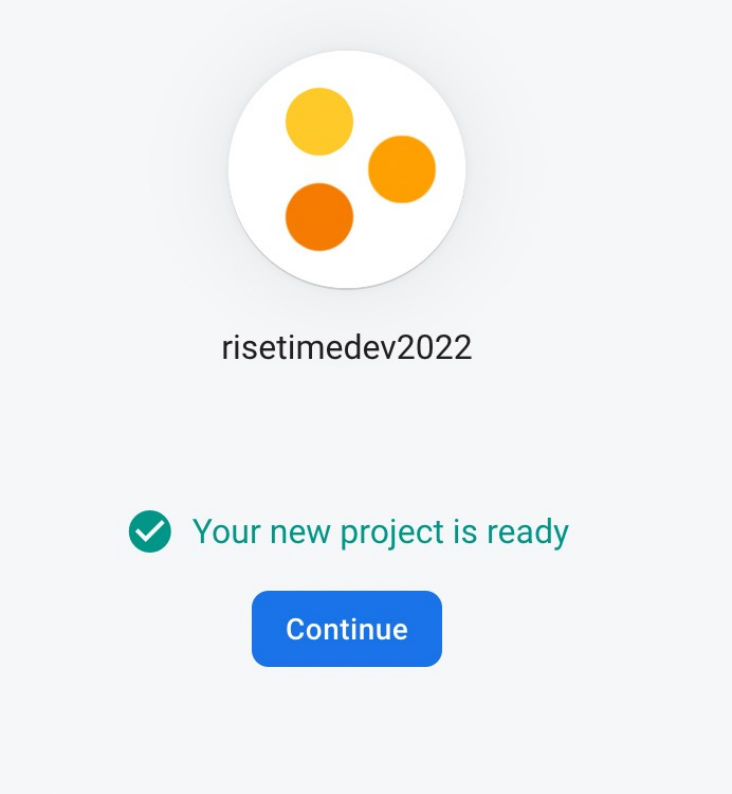


Projeye Analytics ekliyoruz

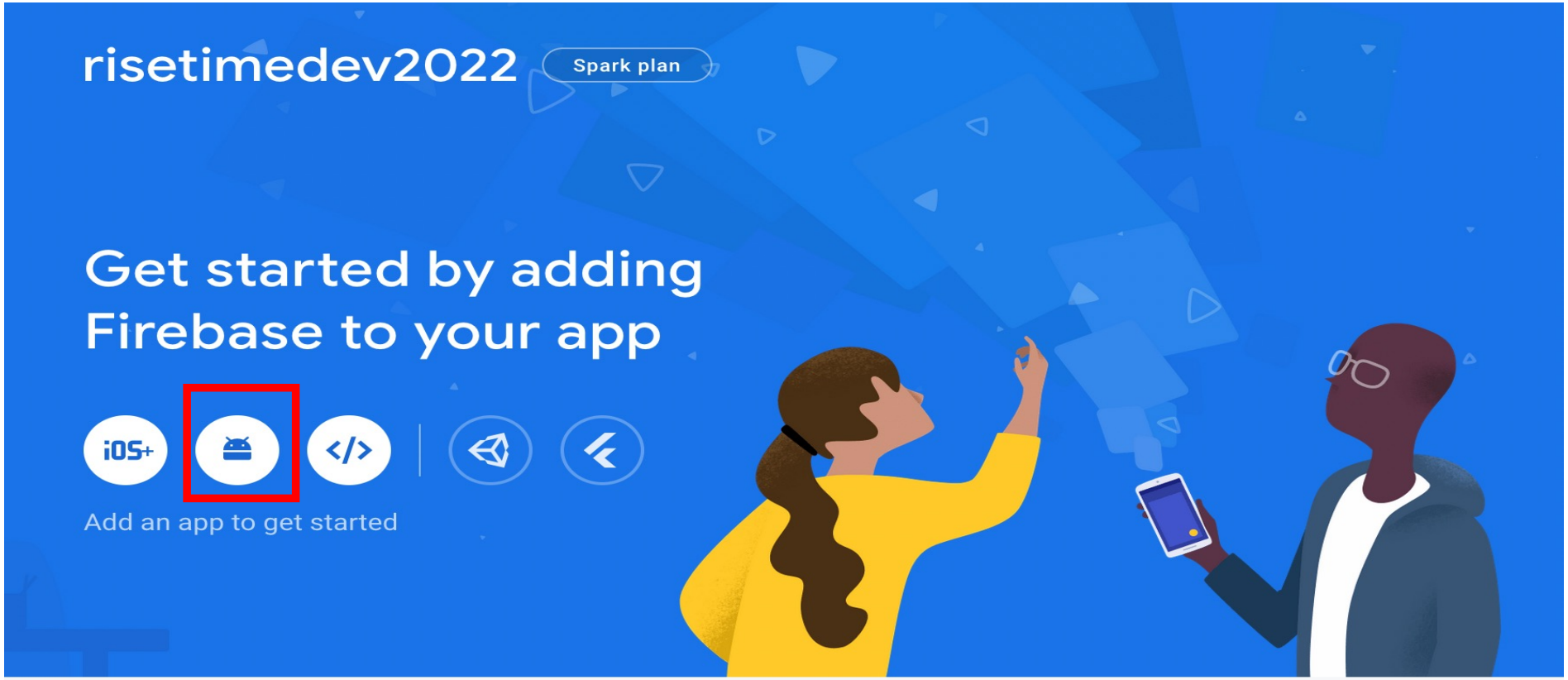




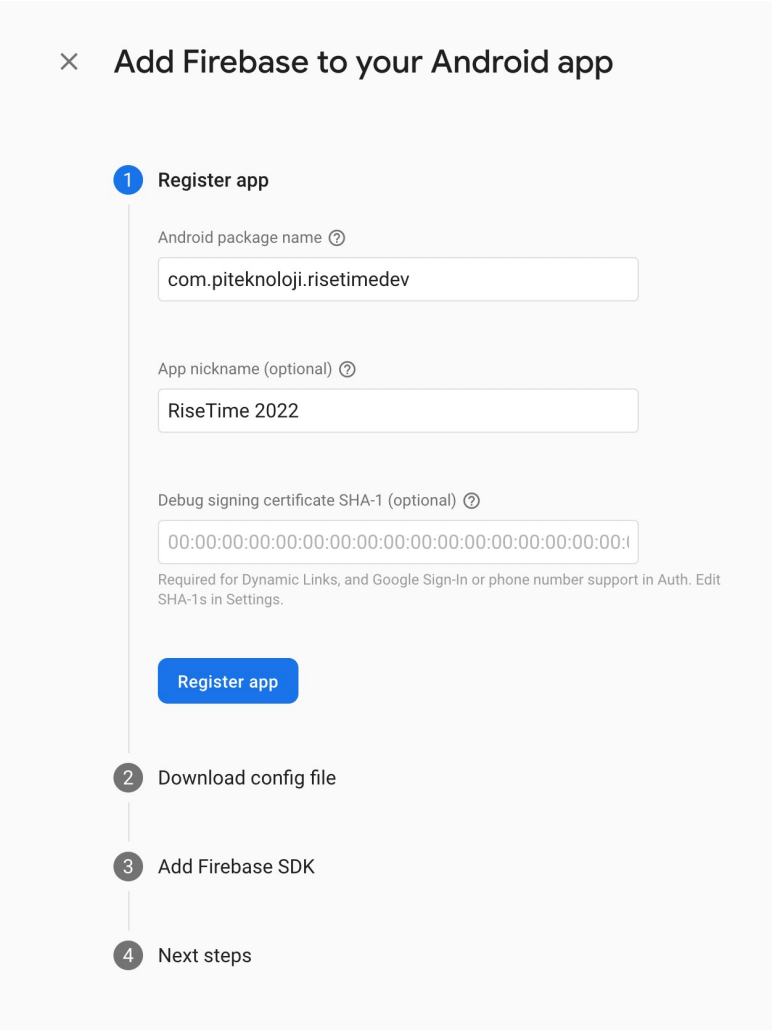

Creating your project... Please wait...
risetimedev2022


risetimedev2022
Your new project is ready
Continue

Android ayarlarını yapalım



/android/app/build.gradle dosyasından applicationId bulunabilir : com.piteknoloji.risetimedev

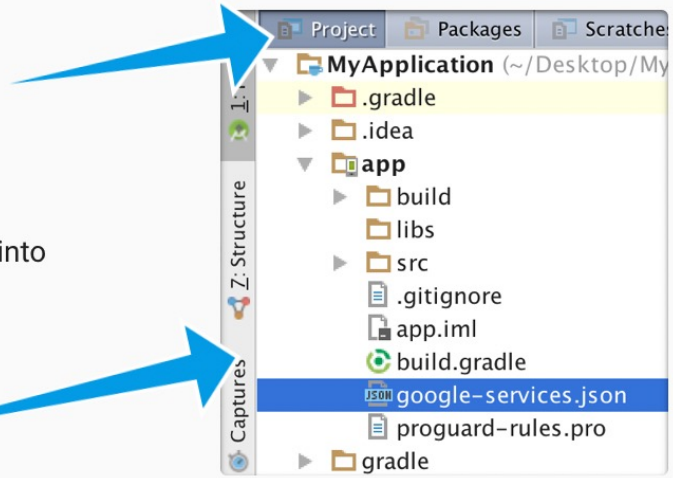


2 Download config file

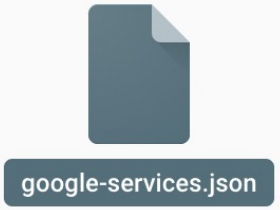
Instructions for Android Studio below | Unity C++

Download google-services.json

Switch to the **Project** view in Android Studio to see your project root directory.



Move the google-services.json file you just downloaded into your Android app module root directory.



Next

/android/build.gradle içerisine:

Project-level build.gradle (`<project>/build.gradle`):

```
buildscript {
  repositories {
    // Check that you have the following line (if not, add it):
    google()  // Google's Maven repository
  }
  dependencies {
    ...
    // Add this line
    classpath 'com.google.gms:google-services:4.3.10'
  }
}

allprojects {
  ...
  repositories {
    // Check that you have the following line (if not, add it):
    google()  // Google's Maven repository
    ...
  }
}
```

/android/app/build.gradle içerisine:

```
apply plugin: 'com.android.application'
apply plugin: 'com.google.gms.google-services'
apply plugin: 'kotlin-android'
apply from: "$flutterRoot/packages/flutter_tools/gradle/flutter.gradle"
```

```
dependencies {
    implementation "org.jetbrains.kotlin:kotlin-stdlib-jdk7:$kotlin_version"
    implementation platform('com.google.firebase:firebase-bom:28.0.1')
    implementation 'com.google.firebase:firebase-analytics'
}
```

Add Firebase to your Android app

Register app

Android package name: com.piteknoloji.risetimedev, App nickname: RiseTime 2022

Download config file

Add Firebase SDK

4 **Next steps**

You're all set!

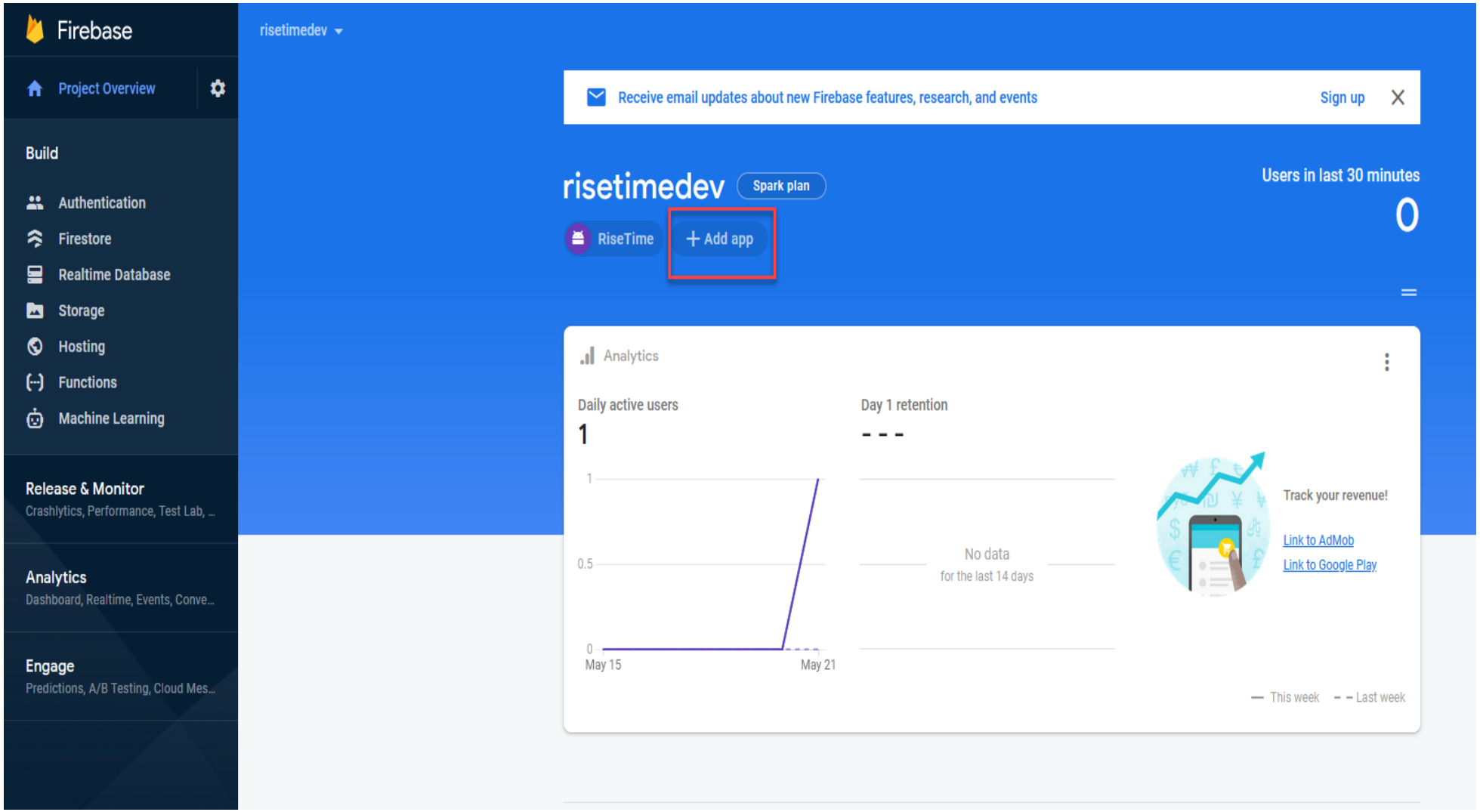
Make sure to check out the documentation to learn how to get started with each Firebase product that you want to use in your app.

You can also explore sample Firebase apps.

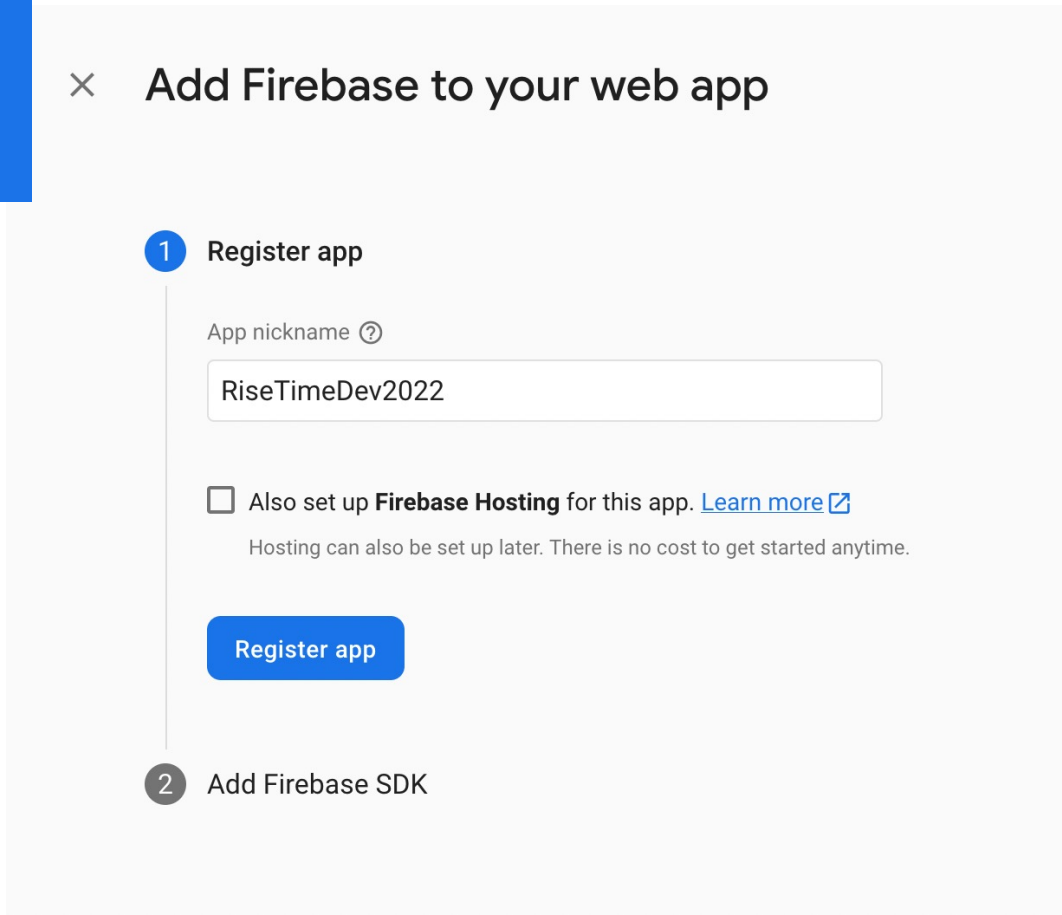
Or, continue to the console to explore Firebase.

Previous **Continue to console**

- https://firebase.google.com/docs/flutter/setup?platform=android adresini inceleyelim
- Bahsi geçen hataları alan olursa buradaki çözümleri uygulayabilir.


Firebase
risetimedev
Project Overview
Build
Authentication
Firestore
Realtime Database
Storage
Hosting
Functions
Machine Learning
Release & Monitor
Crashlytics, Performance, Test Lab, ...
Analytics
Dashboard, Realtime, Events, Conve...
Engage
Predictions, A/B Testing, Cloud Mes...
Receive email updates about new Firebase features, research, and events
Sign up
risetimedev
Spark plan
RiseTime
+ Add app
Users in last 30 minutes
0
Analytics
Daily active users
1
Day 1 retention
- - -
1
0.5
0
May 15
May 21
No data
for the last 14 days
Track your revenue!
Link to AdMob
Link to Google Play
This week
Last week

risetimedev2022
Spark plan
iOS+
Select a platform


Add Firebase to your web app
1
Register app
App nickname
RiseTimeDev2022
Also set up Firebase Hosting for this app. Learn more
Hosting can also be set up later. There is no cost to get started anytime.
Register app
2
Add Firebase SDK

2 Add Firebase SDK

○ Use npm ◉ Use a <script> tag

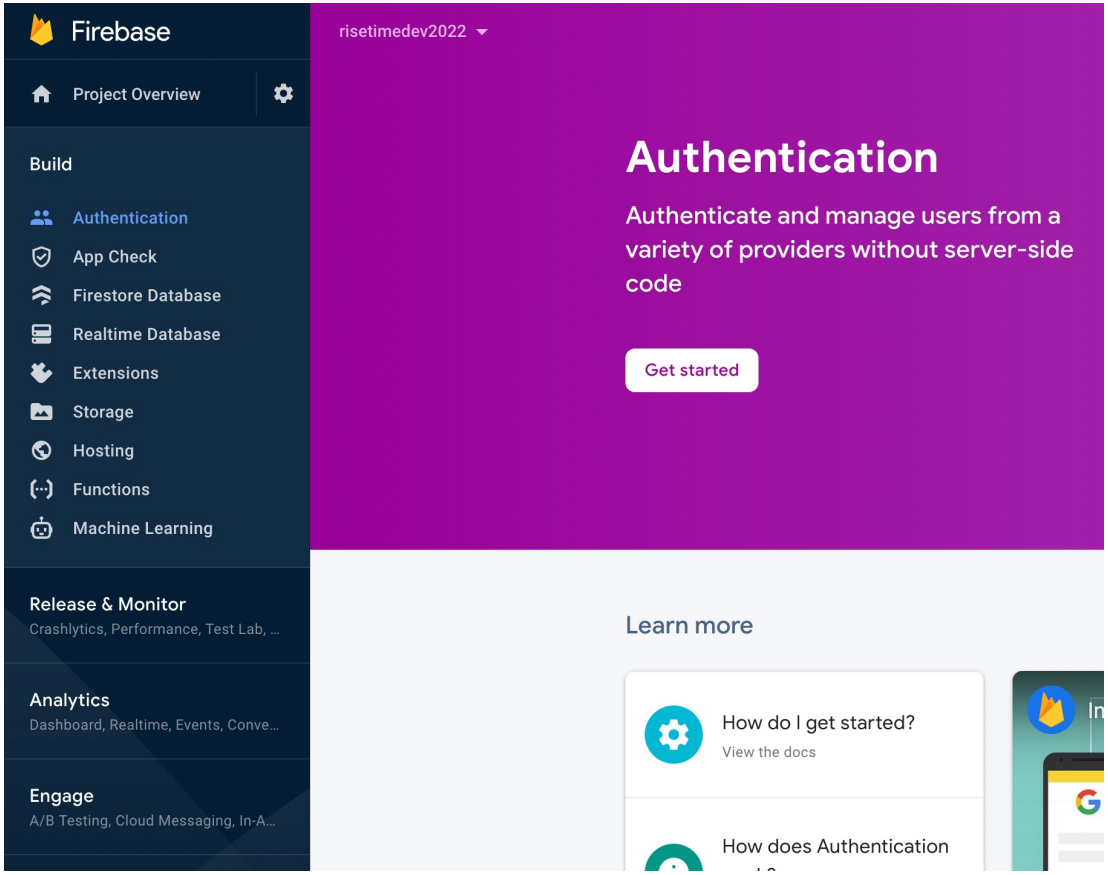
Copy and paste these scripts into the bottom of your <body> tag, but before you use any Firebase services:

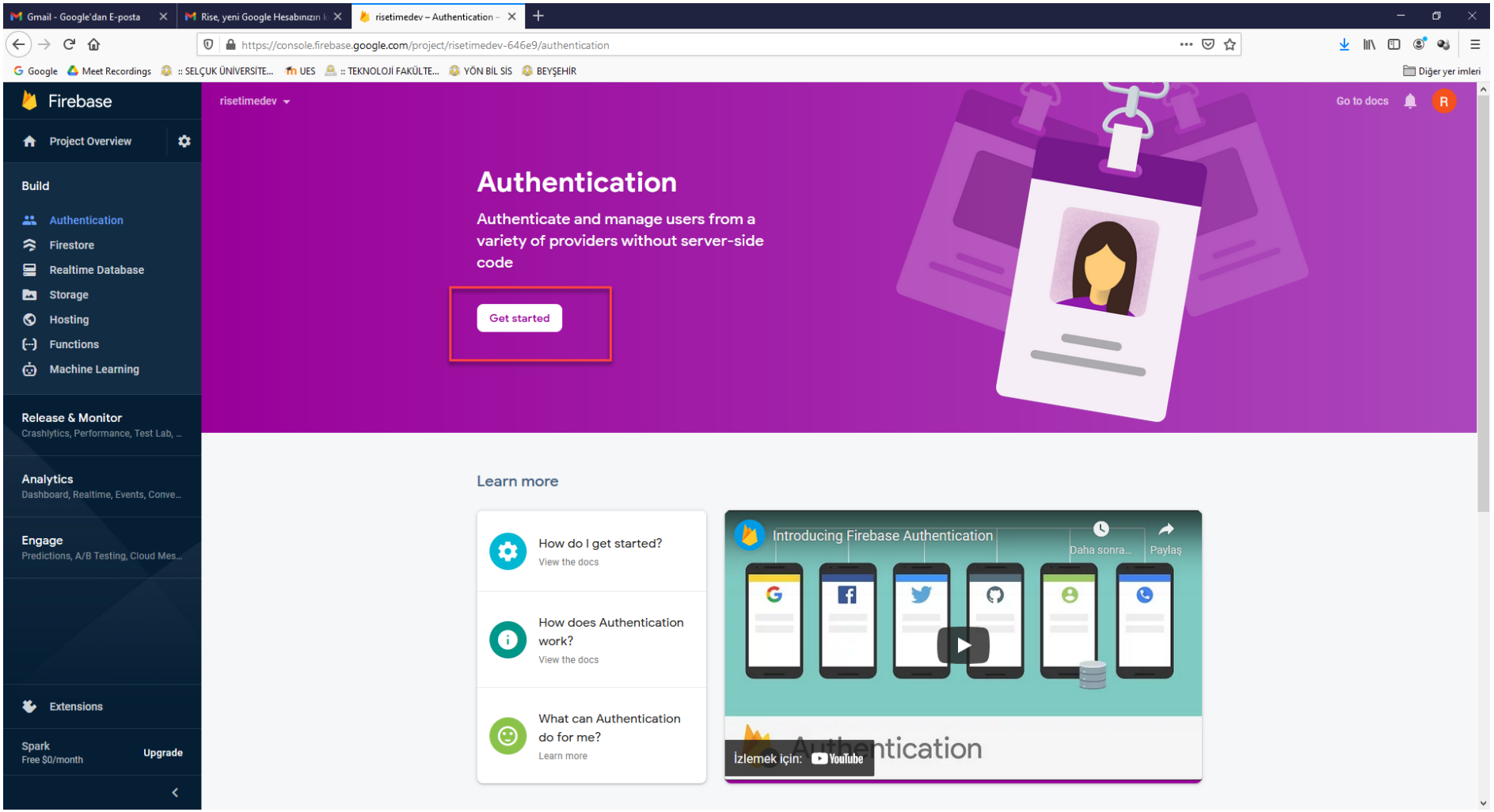
```
<script type="module">
  // Import the functions you need from the SDKs you need
  import { initializeApp } from "https://www.gstatic.com/firebasejs/9.8.1/fireb
  import { getAnalytics } from "https://www.gstatic.com/firebasejs/9.8.1/fireba
  // TODO: Add SDKs for Firebase products that you want to use
  // https://firebase.google.com/docs/web/setup#available-libraries

  // Your web app's Firebase configuration
  // For Firebase JS SDK v7.20.0 and later, measurementId is optional
  const firebaseConfig = {
    apiKey: "AIzaSyBhv8uqLnPIP6FVFqXbynUlY-XK2WxCzDU",
    authDomain: "risetimedev2022.firebaseapp.com",
    projectId: "risetimedev2022",
    storageBucket: "risetimedev2022.appspot.com",
    messagingSenderId: "1093795560242",
    appId: "1:1093795560242:web:a6ec23a5d81a164fb5b52b",
    measurementId: "G-S62E2ZN25L"
  };

  // Initialize Firebase
  const app = initializeApp(firebaseConfig);
  const analytics = getAnalytics(app);
</script>
```

Are you using npm and a bundler like webpack or Rollup? Check out the modular SDK.

Learn more about Firebase for web: Get Started, Web SDK API Reference, Samples

Authentication bölümüne girelim:




Gmail - Google'dan E-posta
Rise, yeni Google Hesabınızın k
risetimedev – Authentication –
https://console.firebase.google.com/project/risetimedev-646e9/authentication
Google
Meet Recordings
:: SELÇUK ÜNİVERSİTE...
UES
:: TEKNOLOJİ FAKÜLTE...
YÖN BİL SİS
BEYŞEHİR
Diğer yer imleri
Firebase
risetimedev
Go to docs
Project Overview
Build
Authentication
Firestore
Realtime Database
Storage
Hosting
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Machine Learning
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Crashlytics, Performance, Test Lab, ...
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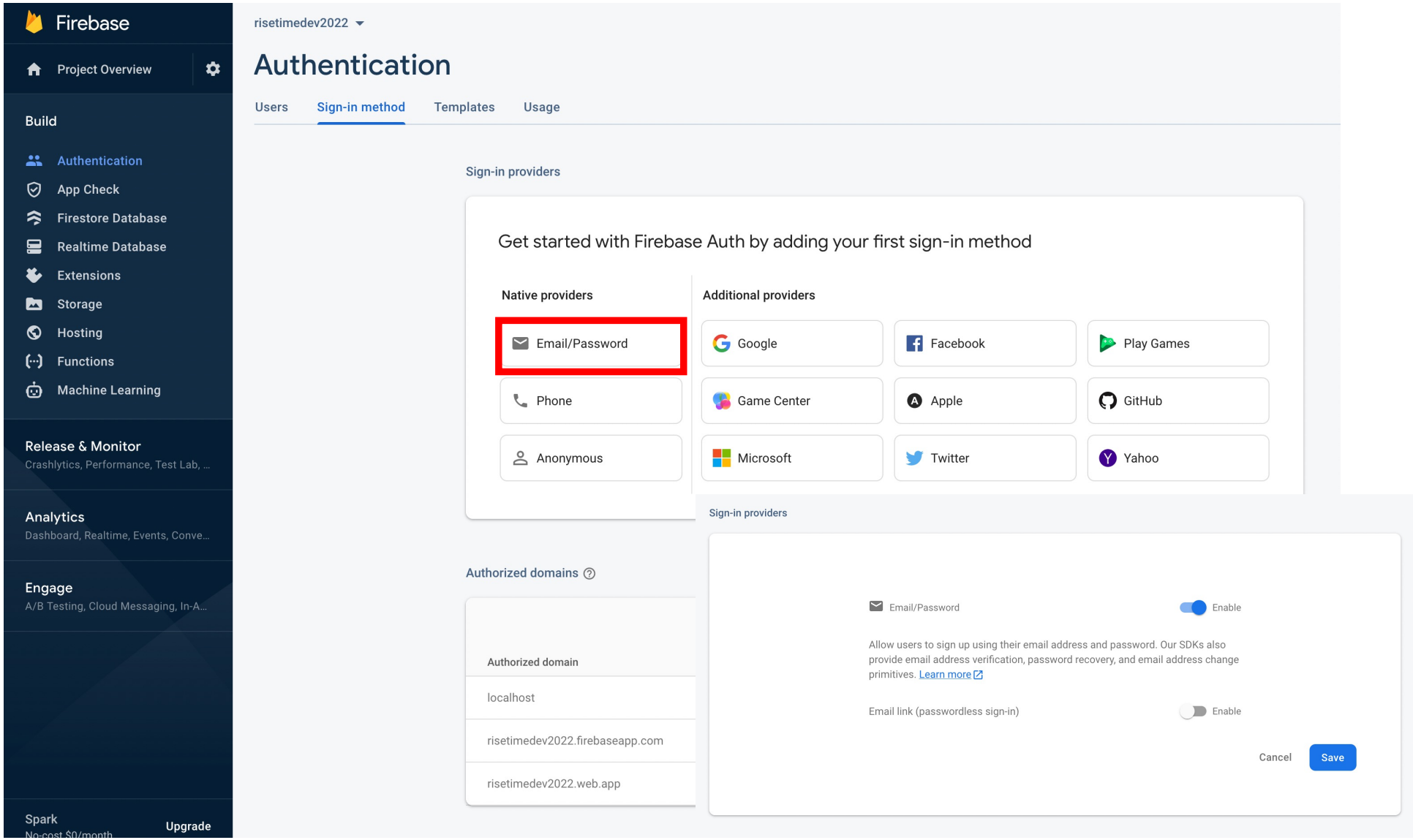
Engage
Predictions, A/B Testing, Cloud Mes...
Extensions
Spark
Free $0/month
Upgrade
Authentication
Authenticate and manage users from a variety of providers without server-side code
Get started
Learn more
How do I get started?
View the docs
How does Authentication work?
View the docs
What can Authentication do for me?
Learn more
Introducing Firebase Authentication
Daha sonra...
Paylaş
İzlemek için: YouTube


Firebase
Project Overview
Build
Authentication
App Check
Firestore Database
Realtime Database
Extensions
Storage
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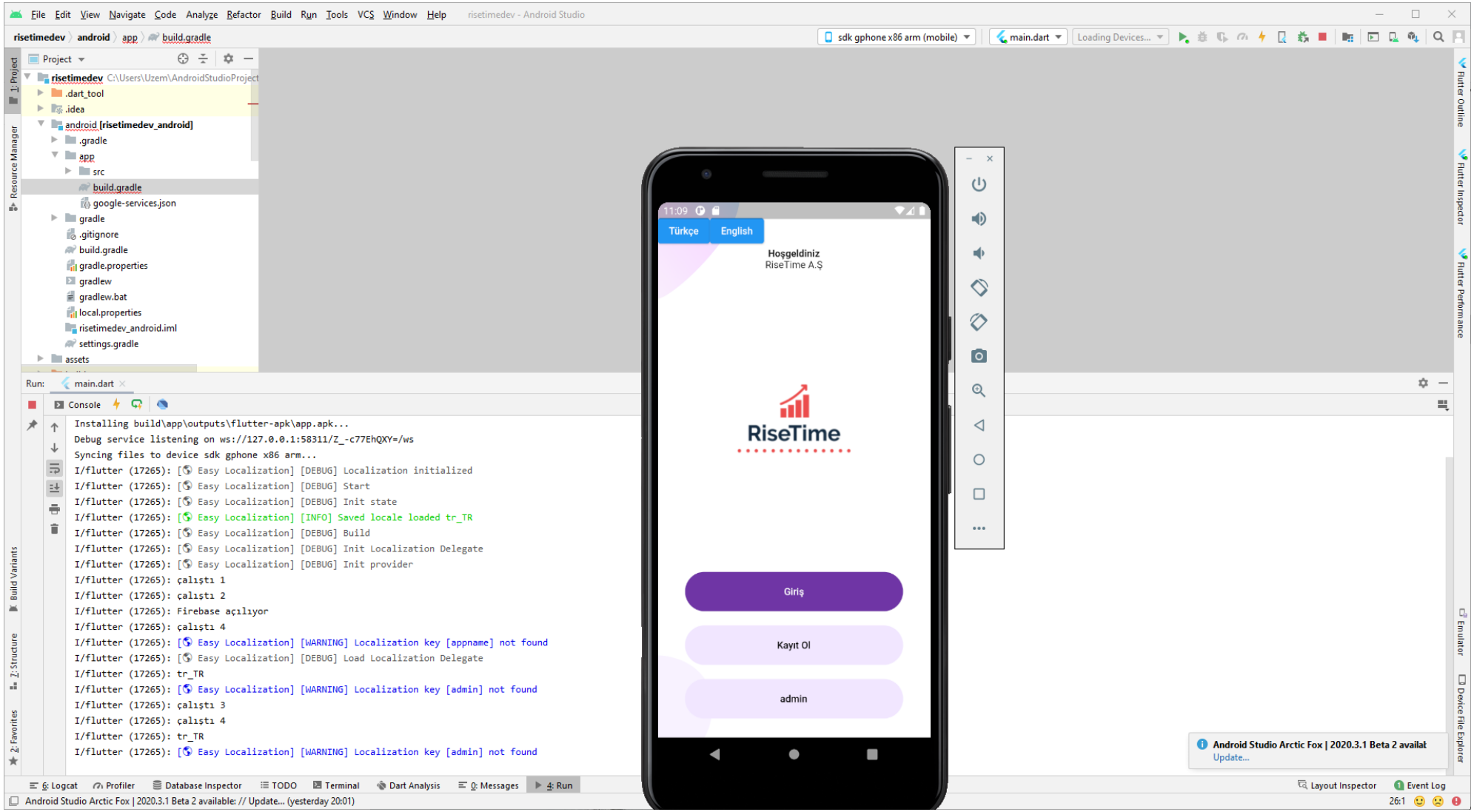
Functions
Machine Learning
Release & Monitor
Crashlytics, Performance, Test Lab, ...
Analytics
Dashboard, Realtime, Events, Conve...
Engage
A/B Testing, Cloud Messaging, In-A...
Spark
No-cost $0/month
Upgrade
risetimedev2022
Authentication
Users
Sign-in method
Templates
Usage
Sign-in providers
Get started with Firebase Auth by adding your first sign-in method
Native providers
Additional providers
Email/Password
Google
Facebook
Play Games
Phone
Game Center
Apple
GitHub
Anonymous
Microsoft
Twitter
Yahoo
Authorized domains
Authorized domain
localhost
risetimedev2022.firebaseapp.com
risetimedev2022.web.app
Sign-in providers
Email/Password
Enable
Allow users to sign up using their email address and password. Our SDKs also provide email address verification, password recovery, and email address change primitives. Learn more
Email link (passwordless sign-in)
Enable
Cancel
Save

https://firebase.google.com/docs/auth/flutter/start adresini takip edelim

flutter pub add firebase_auth 3.3.17 kütüphanesini yükleyelim

```
defaultConfig {
    // TODO: Specify your own unique Application ID (https://developer.android.com/studio/build/application-id.html).
    applicationId "com.piteknoloji.risetimedev"
    minSdkVersion 16
    targetSdkVersion 30
    multiDexEnabled true
    versionCode flutterVersionCode.toInteger()
    versionName flutterVersionName
}
```

```
dependencies {
    implementation "org.jetbrains.kotlin:kotlin-stdlib-jdk7:$kotlin_version"
    implementation platform('com.google.firebase:firebase-bom:28.0.1')
    implementation 'com.google.firebase:firebase-analytics'
    implementation 'com.android.support:multidex:1.0.3'
}
```


File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
risetimedev - Android Studio
risetimedev android app build.gradle
sdk gphone x86 arm (mobile)
main.dart
Loading Devices...
Project
risetimedev C:\Users\Uzem\AndroidStudioProject
.dart_tool
.idea
android [risetimedev_android]
.gradle
app
src
build.gradle
google-services.json
gradle
.gitignore
build.gradle
gradle.properties
gradlew
gradlew.bat
local.properties
risetimedev_android.iml
settings.gradle
assets
Run: main.dart
Console
Installing build\app\outputs\flutter-apk\app.apk...
Debug service listening on ws://127.0.0.1:58311/Z_-c77EhQXY=/ws
Syncing files to device sdk gphone x86 arm...
I/flutter (17265): [Easy Localization] [DEBUG] Localization initialized
I/flutter (17265): [Easy Localization] [DEBUG] Start
I/flutter (17265): [Easy Localization] [DEBUG] Init state
I/flutter (17265): [Easy Localization] [INFO] Saved locale loaded tr_TR
I/flutter (17265): [Easy Localization] [DEBUG] Build
I/flutter (17265): [Easy Localization] [DEBUG] Init Localization Delegate
I/flutter (17265): [Easy Localization] [DEBUG] Init provider
I/flutter (17265): çalıştı 1
I/flutter (17265): çalıştı 2
I/flutter (17265): Firebase açılıyor
I/flutter (17265): çalıştı 4
I/flutter (17265): [Easy Localization] [WARNING] Localization key [appname] not found
I/flutter (17265): [Easy Localization] [DEBUG] Load Localization Delegate
I/flutter (17265): tr_TR
I/flutter (17265): [Easy Localization] [WARNING] Localization key [admin] not found
I/flutter (17265): çalıştı 3
I/flutter (17265): çalıştı 4
I/flutter (17265): tr_TR
I/flutter (17265): [Easy Localization] [WARNING] Localization key [admin] not found
11:09
Türkçe
English
Hoşgeldiniz
RiseTime A.Ş
RiseTime
Giriş
Kayıt Ol
admin
Android Studio Arctic Fox | 2020.3.1 Beta 2 availat
Update...
6: Logcat
Profiler
Database Inspector
TODO
Terminal
Dart Analysis
0: Messages
4: Run
Layout Inspector
Event Log
Android Studio Arctic Fox | 2020.3.1 Beta 2 available: // Update... (yesterday 20:01)
26:1

compileSdkVersion hatası alınabilir

```
Launching lib/main.dart on sdk gphone64 arm64 in debug mode...
Running Gradle task 'assembleDebug'...
Warning: The plugin cloud_firestore requires Android SDK version 31.
Warning: The plugin firebase_auth requires Android SDK version 31.
Warning: The plugin firebase_core requires Android SDK version 31.
One or more plugins require a higher Android SDK version.
Fix this issue by adding the following to /Users/sentius/StudioProjects/risetimedev/android/app/build.gradle:
android {
  compileSdkVersion 31
  ...
}

Checking the license for package Android SDK Platform 30 in /Users/sentius/Library/Android/sdk/licenses
License for package Android SDK Platform 30 accepted.
Preparing "Install Android SDK Platform 30 (revision: 3)".
"Install Android SDK Platform 30 (revision: 3)" ready.
```

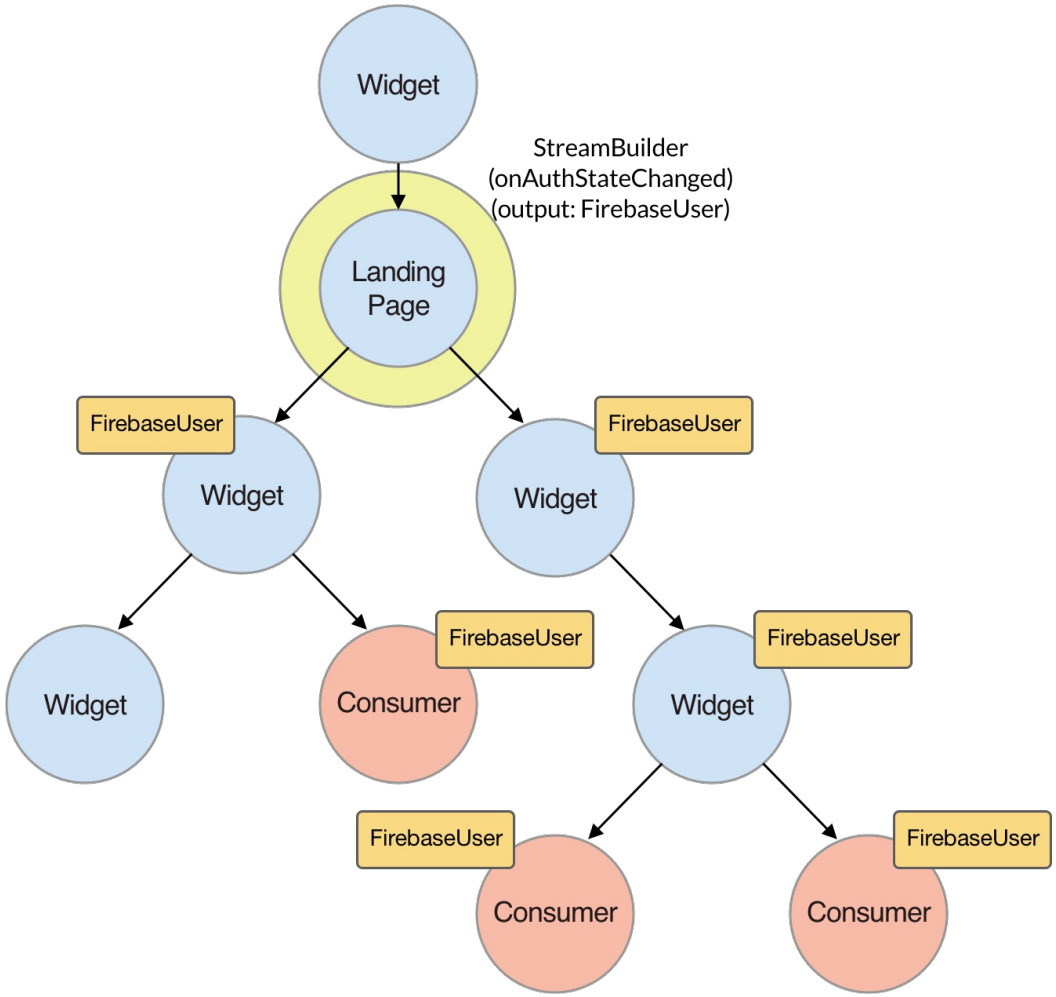
En güncel duruma geçiş için:

```
flutter clean
flutter upgrade
flutter pub upgrade
```

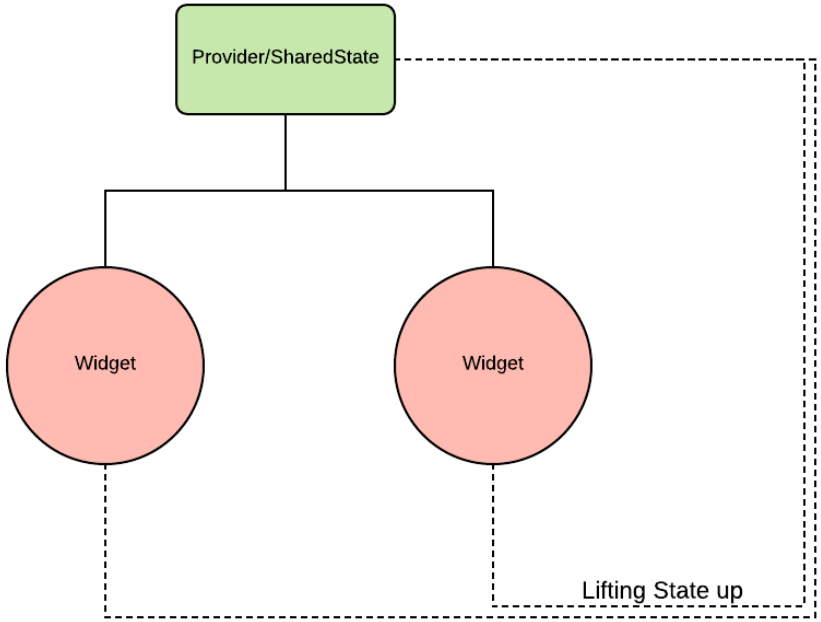
Provider kullanımı

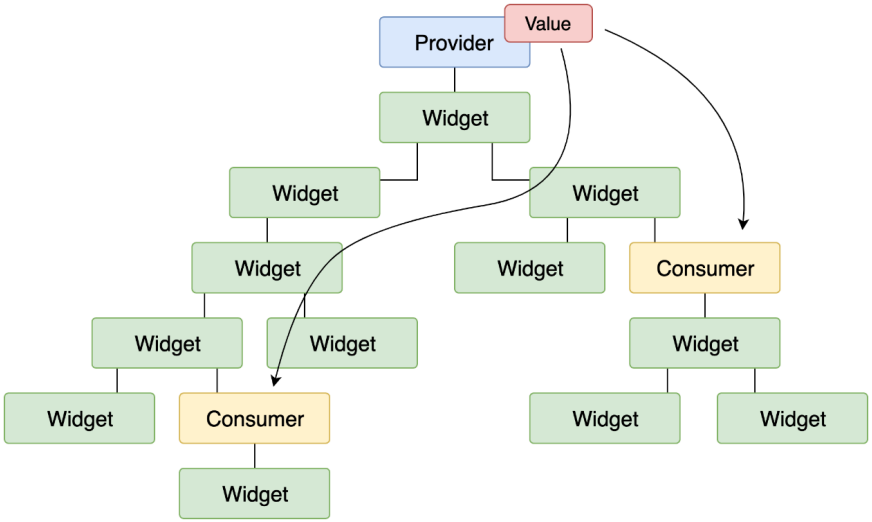
Firebase Authentication ile Provider paketini kullanan yalın bir örnek:

https://youtu.be/yKKta6ZoyZY

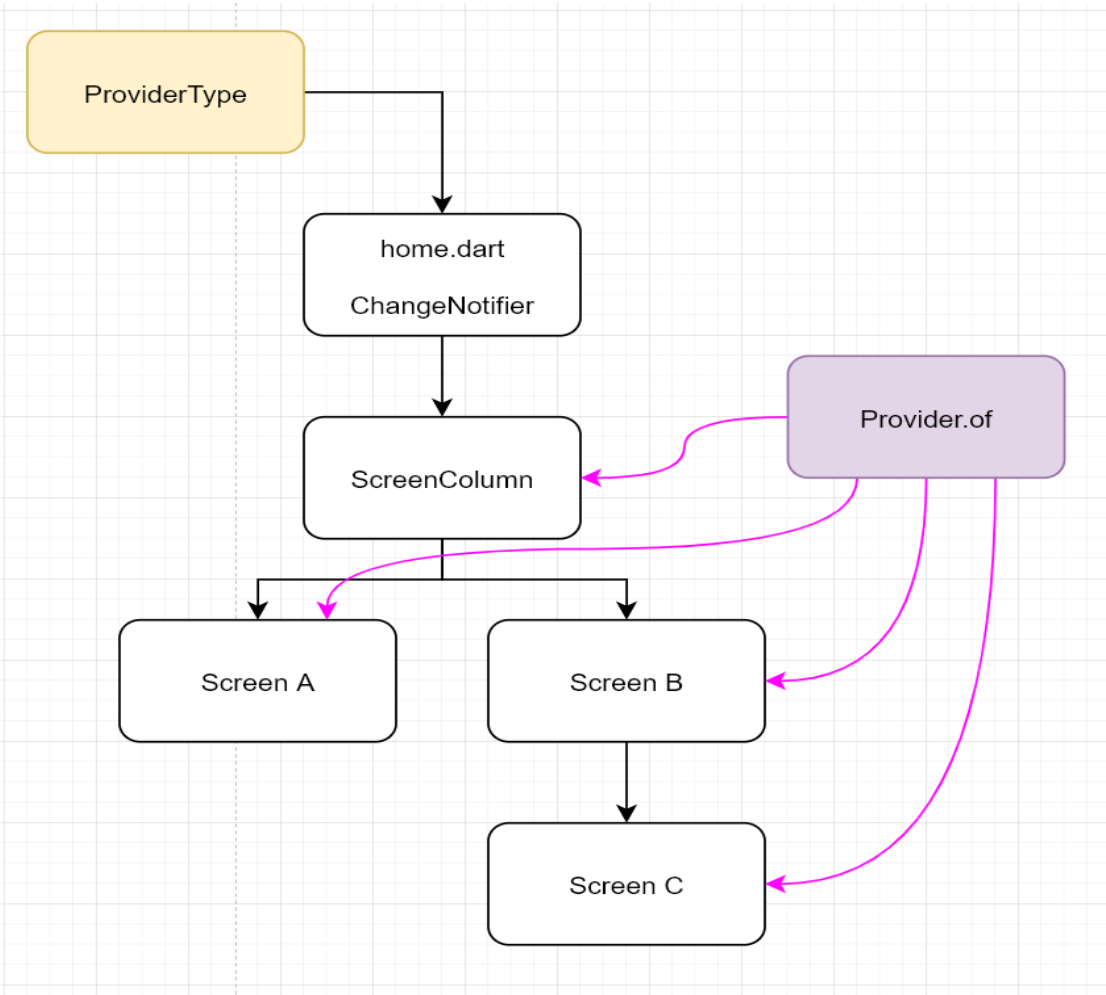


Flutter Provider





```dart
import 'package:provider/provider.dart';
```



```
class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MultiProvider(
      providers: [
        Provider<FlutterFireAuthService>(
          create: (_) => FlutterFireAuthService(FirebaseAuth.instance),
        ),  // Provider
        StreamProvider(
          create: (context) =>
              context.read<FlutterFireAuthService>().authStateChanges,
          initialData: null,
        ),  // StreamProvider
        ChangeNotifierProvider(create: (context) => MenuDrawerNotifier()),
      ],
      child: MaterialApp(
```

/services/auth/auth_methods.dart

auth_methods.dart

```dart
import 'package:cloud_firestore/cloud_firestore.dart';
import 'package:firebase_auth/firebase_auth.dart';
import 'package:flutter/material.dart';
import 'package:risetimedev/screens/login/login_screen.dart';
import 'package:risetimedev/screens/seotalep/seotalep_screen.dart';
import 'package:risetimedev/services/general/general_methods.dart';

class FlutterFireAuthService {
  final FirebaseAuth _firebaseAuth;

  FlutterFireAuthService(this._firebaseAuth);

  Stream<User> get authStateChanges => _firebaseAuth.idTokenChanges();

  Future<User> createAccount(String name, String email, String password) async {...}
```

Kayıt olma işlemlerinin bulunduğu fonksiyon

```dart
  Future<User> logIn(
      String email, String password, BuildContext context) async {...}
```

Giriş işlemlerinin bulunduğu fonksiyon

```dart
  Future<void> logOut(BuildContext context) async {...}
```

Çıkış işlemlerinin bulunduğu fonksiyon

```dart
  Future<dynamic> controlAuth() async {...}
}
```

Giriş yapılıp yapılmadığını kontrol eden fonksiyon

Bu ders kapsamında anlatılan kodlara aşağıdaki adresten erişebilirsiniz:
https://github.com/ahmetcevahircinar/risetimedev2022

- Sorular?