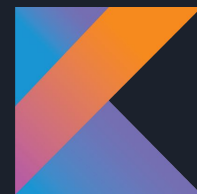


Android Dev Kotlin



CS 402: Mobile Development
Michael Ziray - michaelziray@boisestate.edu



Project 1 Feedback (General)

May have missed something in grading, so let me know.

If you didn't get the grade that you wanted, implement the missing features and turn it back in.



Project 1 Feedback - README.MD

Root of the project.

When project is opened, it's the first file viewed

I want you to pick up basic formatting since it's heavily used in GitHub projects.

****Bold****

Emphasis

Header ## Sub heading ### sub sub heading (must be on a new line)

[Link Text](url)



Project 1 Feedback: Project organization tips

Files can be organized by feature or by file type (fragments, activities, etc)

Capitalize class names, lowercase variables.



Project 1 Feedback - Design

Help picking out colors: <https://color.adobe.com/create/color-wheel>


Don't have a list of UI buttons as your initial interface.



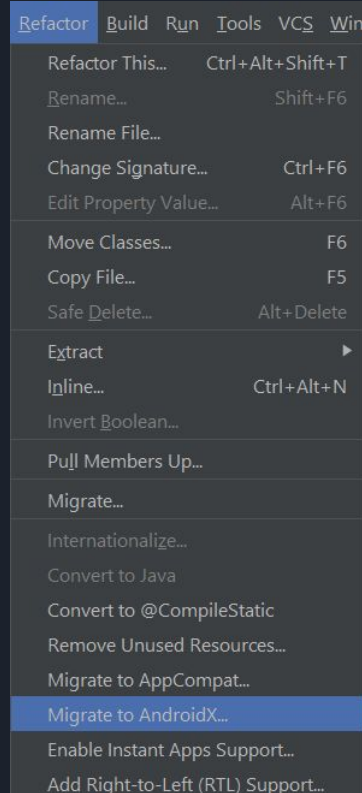
Firestore Demo

Building the basis of an events app with Firestore.





Refactor old apps to migrate them to newer technologies (you'll do this a lot in Android)





Firestore

Add Firebase to your Android app

1 Register app

Android package name ⓘ

App nickname (optional) ⓘ

Debug signing certificate SHA-1 (optional) ⓘ

Required for Dynamic Links, and Google Sign-In or phone number support in Auth. Edit SHA-1s in Settings.

Register app



Find the footprint SHA-1 for your debug key

gradlew signingReport



Register app

Android package name: com.electronicarmory, App nickname: BSU Events

2

Download config file

Instructions for Android Studio below | [Unity](#) [C++](#)



Download google-services.json

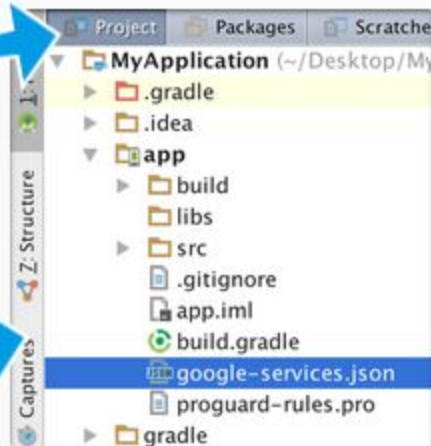
Switch to the **Project** view in Android Studio to see your project root directory.

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



google-services.json

Next



The Google services plugin for [Gradle](#) loads the `google-services.json` file you just downloaded. Modify your `build.gradle` files to use the plugin.

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:4.3.5'  
    }  
}  
  
allprojects {  
    ...  
    repositories {  
        // Check that you have the following line (if not, add it):  
        google() // Google's Maven repository  
        ...  
    }  
}
```

☐ Java ☒ Kotlin

App-level build.gradle (<project>/<app-module>/build.gradle):

```
apply plugin: 'com.android.application'
// Add this line
apply plugin: 'com.google.gms.google-services'

dependencies {
    // Import the Firebase BoM
    implementation platform('com.google.firebase:firebase-bom:26.8.0')

    // Add the dependency for the Firebase SDK for Google Analytics
    // When using the BoM, don't specify versions in Firebase dependencies
    implementation 'com.google.firebase:firebase-analytics-ktx'

    // Add the dependencies for any other desired Firebase products
    // https://firebase.google.com/docs/android/setup#available-libraries
}
```

By using the Firebase Android BoM, your app will always use compatible Firebase library versions. [Learn more](#)

Finally, press "Sync now" in the bar that appears in the IDE:

Gradle files have changed since last sync

[Sync now](#)

Cloud Firestore

Realtime updates, powerful queries, and automatic scaling

Create database

Create database



- 1 Secure rules for Cloud Firestore — 2 Set Cloud Firestore location

After you define your data structure, **you will need to write rules to secure your data.**

[Learn more](#)

☒ **Start in production mode**

Your data is private by default. Client read/write access will only be granted as specified by your security rules.

☐ **Start in test mode**

Your data is open by default to enable quick setup. However, you must update your security rules within 30 days to enable long-term client read/write access.

```
rules_version = '2';
service cloud.firestore {
  match /databases/{database}/documents {
    match /{document=**} {
      allow read, write: if false;
    }
  }
}
```



All third party reads and writes will be denied

Enabling Cloud Firestore will prevent you from using Cloud Datastore with this project, notably from the associated App Engine app

Cancel

Next

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```
rules_version = '2';
service cloud.firestore {
  match /databases/{database}/documents {
    match /{document=**} {
      allow read, write: if
        request.time < timestamp.date(2021, 5, 5);
    }
  }
}
```



The default security rules for test mode allow anyone with your database reference to view, edit and delete all data in your database for the next 30 days

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Cancel

Next

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Secure rules for Cloud Firestore

2

Set Cloud Firestore location

Your location setting is where your Cloud Firestore data will be stored.



After you set this location, you cannot change it later. Also, this location setting will be the location for your default Cloud Storage bucket.

[Learn more](#)

Cloud Firestore location

us-west2

Enabling Cloud Firestore will prevent you from using Cloud Datastore with this project, notably from the associated App Engine app

Cancel

Enable



Getting and monitoring a document from Firestore

```
firebaseDB.collection("events").orderBy("date")  
  
.whereGreaterThan("date", Date())
```




Getting and monitoring a document from Firestore

```
.addSnapshotListener { querySnapshot,  
firebaseFirestoreException ->
```

🏠 > events > K7W9XR1xqj74...

📶 broncoapp-44433

📁 events

📄 K7W9XR1xqj74wmYFfEjR

+ Start collection

+ Add document

+ Start collection

events

K7W9XR1xqj74wmYFfEjR

+ Add field

date: April 9, 2021 at 12:00:00 AM UTC-6

description: "Description of the Firestore event"

hostedBy: "Mike Z"

▼ location

addressOne: "addressOne"

addressTwo: "addressTwo"

city: "city"

locationName: "Location Name"

state: "state"

zip: "zip"

topic: "Event Topic"