Cloud Computing (CS495)

Firebase Cloud Messaging

Lab #2

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What is “Firebase Cloud messaging”?

Firebase Cloud Messaging (FCM) is a cross-platform messaging solution that lets you reliably deliver messages at no cost

Using FCM, you can notify a client app that new email or other data is available to sync. You can send notification messages to drive user re-engagement and retention. For use cases such as instant messaging, a message can transfer a payload of up to 4KB to a client app.

➢ How does it work?

An FCM implementation includes two main components for sending and receiving:

- ➢ A trusted environment such as Cloud Functions for Firebase or an app server on which to build, target, and send messages.
- ➢ An iOS, Android, or web (JavaScript) client app that receives messages.

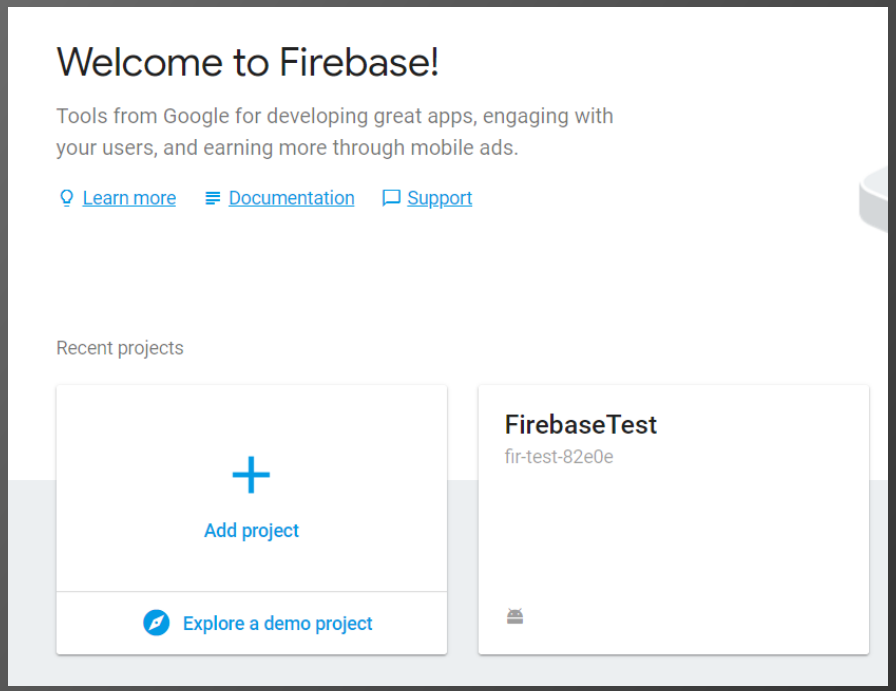
You can send messages using the RESTFul firebase api or for testing using firebase cloud messaging console

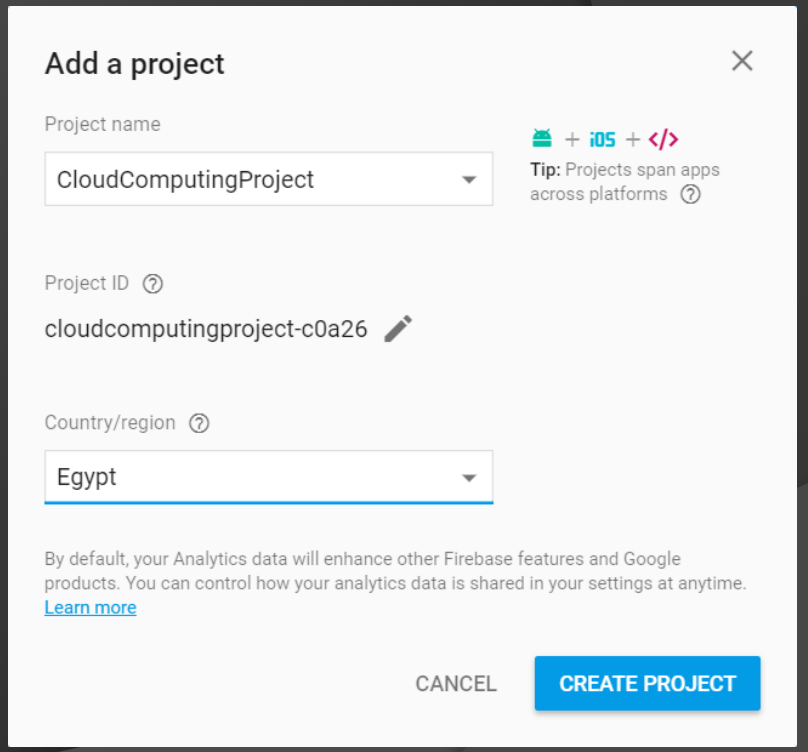
➢ FCM Features

- Send notification messages or data messages
  - Send notification messages that are displayed to your user. Or send data messages and determine completely what happens in your application code
- Versatile message targeting
  - Distribute messages to your client app in any of 3 ways—to single devices, to groups of devices, or to devices subscribed to topics.
- Send messages from client apps
  - Send acknowledgments, chats, and other messages from devices back to your server over FCM's reliable and battery-efficient connection channel.

➢ Create Firebase Project

Open firebase console https://console.firebase.google.com/





➢ Configuring Android Project with FCM

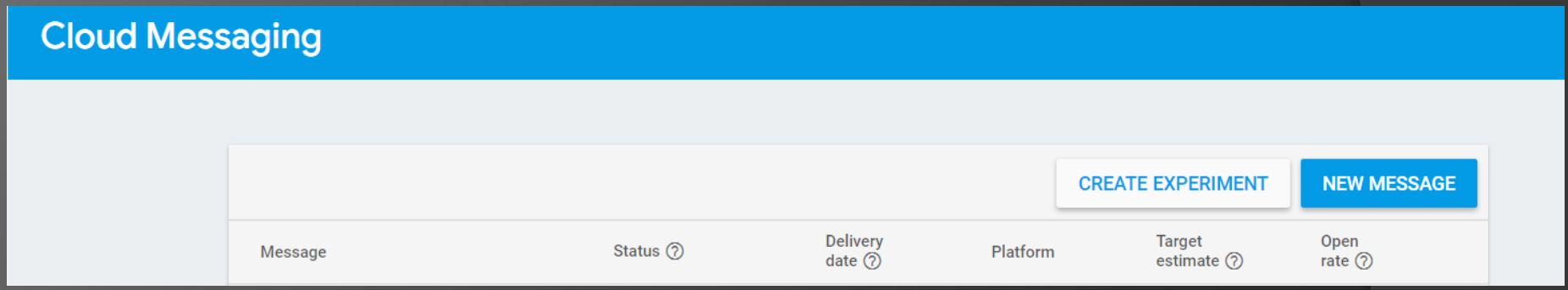
• Use the Firebase Assistant

To open the Firebase Assistant in Android Studio:

- ➢ Click **Tools > Firebase** to open the **Assistant** window.
- ➢ Click to expand firebase cloud messaging
- ➢ Click the **Connect to Firebase** button to connect to Firebase and add the necessary code to your app.

➢ Send Your First Cloud Message

- ➢ Open your project at firebase console
- ➢ Select Notification to view notifications console



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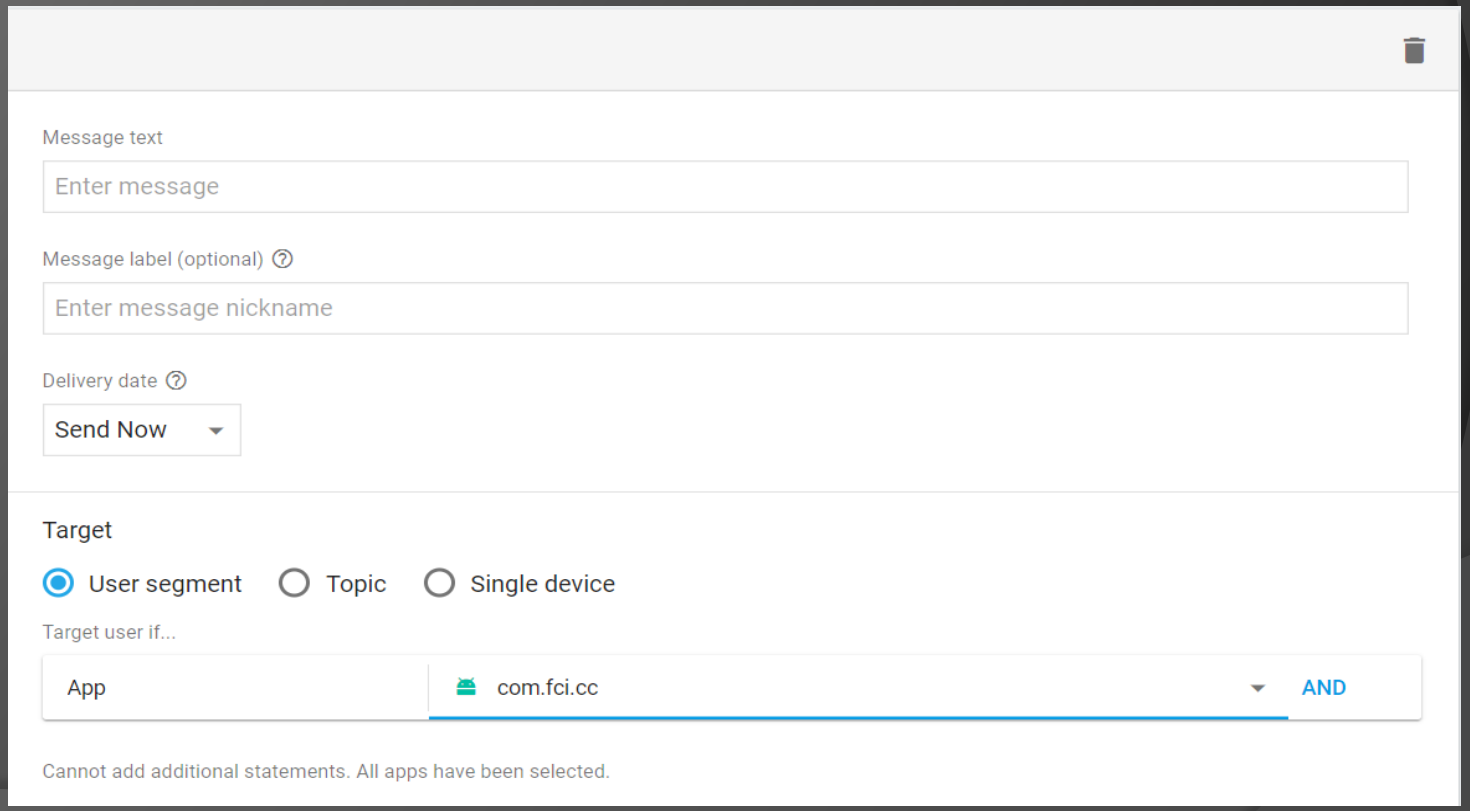

➢ Task 2

➢ You are required to create a firebase project and integrate it in an android project

➢ Your app should be able to successfully receive and display cloud messages as push notifications

➢ Team is max 3 members

Reference

https://firebase.google.com/docs/cloud-messaging/