# Google Cloud Firestore

What is it? Why do we need it?

#### What is Cloud Firestore?

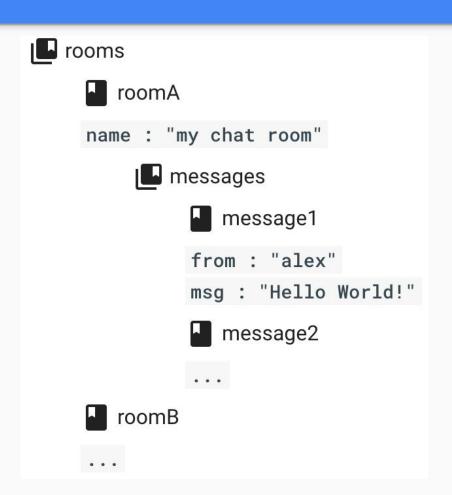
- Documents and collections with powerful querying
- iOS, Android, and Web SDKs with offline data access
- Real-time data synchronization
- Automatic, multi-region data replication with strong consistency
- Node, Python, Go, and Java server SDKs

#### What is Cloud Firestore? - Data model

```
rooms
roomA

name: "my chat room"
roomB
```





### What is Cloud Firestore? - Querying

```
citiesRef.where("state", "==", "CA");
citiesRef.where("state", "==", "CA").where("population", "<", 1000000)
citiesRef.orderBy("name").limit(3)
citiesRef.orderBy("population").startAt(100).limit(100)</pre>
```

### Why do we need Cloud Firestore?

- Running your own database server and API is hard work
  - Hosting
  - Setup
  - Maintenance
  - Security
  - Scaling

- Messing with databases and APIs takes the fun out of mobile side projects
  - Intermittent connectivity
  - Offline data
  - I just want to make an app!

#### What about Firebase Realtime Database?

- Still a tiny bit faster
- Support for presence of a user (online status)
- Different pricing model RTDB might be cheaper for your specific use case
- Battle tested Cloud Firestore is still in beta

## **⚠ PERSONAL OPINION ⚠**

**Use Cloud Firestore** 

#### Firebase Realtime Database vs. Cloud Firestore

#### **Realtime Database**

- JSON tree
- Data duplication encouraged
- ✓ Offline access
- ✓ Security rules
- ☐ Query: Filter or sort
- One-time reads are awkward

#### **Cloud Firestore**

- Document collection tree
- Deep nesting encouraged
- ✓ Offline access
- ✓ Security rules
- ✓ Full queries
- ✓ One-time reads are a first-class feature

## Resources - Read

- Firestore announcement
- Firestore vs. Realtime Database
- Documentation
- Data model
- Supported data types

# Resources - Watch

Getting started with Cloud Firestore on Android

# Resources - Do

• Firestore Android Codelab

# Google Cloud Firestore

We need it!