배달 앱(패캠마트)

2 Firebase 알아보기
Firebase Cloud Firestore

Firebase Cloud Firestore

NoSQL

1. Cloud Firestore
2. MongoDB & Realm

- Documents : A document is a lightweight record that contains fields, which map to values. Each document is identified by a name.
- Collections: Documents live in collections, which are simply containers for documents.
- **여기서 알 수 있는것 !**
  - **컬렉션안에는 도큐먼트가, 도큐먼트 안에 또 컬렉션이 포함될 수 있음.**

출처: https://firebase.google.com/docs/firestore/data-model

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Realtime Data vs Firestore Data Model

Realtime Database	Cloud Firestore
Stores data as one large JSON tree. • Simple data is very easy to store. • Complex, hierarchical data is harder to organize at scale.	**Stores data as collections of documents.** • Simple data is easy to store in documents, which are very similar to **JSON**. • Complex, hierarchical data is easier to organize at scale, using sub-collections within documents. • Requires less denormalization and data flattening.

출처: https://firebase.google.com/docs/firestore/rtdb-vs-firestore

데이터 타입

1.Null values
2.Boolean values
3.NaN values
4.Integer and floating-point values, sorted in numerical order
5.Date values
6.Text string values
7.Byte values
8.Cloud Firestore references
9.Geographical point values
10.Array values
11.Map values

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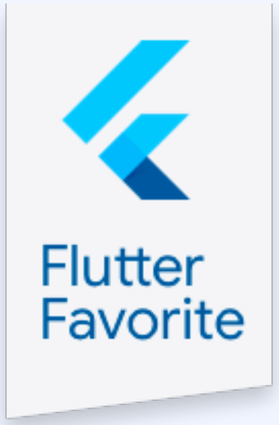
설치 필요 패키지

1. https://pub.dev/packages/firebase_core
2. https://pub.dev/packages/cloud_firestore



Document 추가하기

1.add()
- Document id가 Random한 고유키를 기반으로 데이터 생성

2.set()
- Document의 id(고유이름)을 지정할 수 있음.

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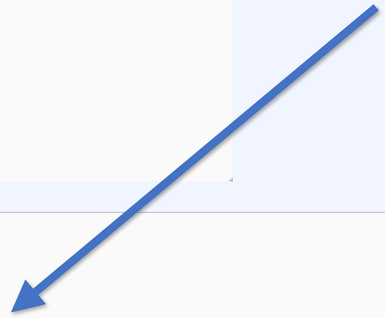
Document 추가하기 - add()

```
final docData = {
 "stringType": "Hello world!",
 "booleanType": true,
 "numberType": 3.14159265,
 "dateType": Timestamp.now(),
 "listType": [1, 2, 3],
 "nullType": null,
 "geo": const GeoPoint(36.15, 128.15),
};
```

Documents 고유 키를 중복되지 않는 랜덤한 키로 자동 생성



```
await db.collection("types").add(docData);
```

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Document 추가하기 - set()

```
final flutter = <String, String>{
  "sdk": "stable",
  "dart-version": "3",
  "platform": "mobile,web"
};
```

문서 명을 flutter로 지정하고 flutter 문서에 데이터를 삽입

```
db.collection("fast-campus").doc("flutter")
    .set(flutter)
    .onError((e, _) ⇒ print("Error writing document: $e"));
```

데이터 읽기(read) - get()

```
final docRef = db.collection("campus").doc("flutter");   가져올 데이터의 Document 를 지정
docRef.get().then(   ref를 통해 get() 메소드를 사용하여 데이터를 가져온다.
  (DocumentSnapshot doc) {
    final data = doc.data() as Map<String, dynamic>;   데이터타입 casting
  },
  onError: (e) => print("Error getting document: $e"),
);
```

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데이터 읽기(read) - 실시간 업데이트 대응

```
final docRef = db.collection("fast-campus").doc("flutter");
docRef.snapshots().listen(
  (event) ⇒ print("current data: ${event.data()}"),
  onError: (error) ⇒ print("Listen failed: $error"),
);
```

StreamBuilder 위젯 활용

데이터 업데이트 (Update) - update()

```
final flutterRef = db.collection("capmus").doc("flutter");

flutterRef.update({"dart-version": "3.0"}).then(
    (value) ⇒ print("DocumentSnapshot successfully updated!"),
    onError: (e) ⇒ print("Error updating document $e"));
```

도큐먼트 삭제 - delete()

```
db.collection("fast-campus").doc("chore").delete().then(
  (doc) => print("Document deleted"),
  onError: (e) => print("Error updating document $e"),
);
```

Document 완전 삭제
삭제 전 사용자에게 삭제 안내 제공 필요

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도큐먼트 삭제 - 도큐먼트 내 필드 삭제

```
final docRef = db.collection("fast-campus").doc("flutter");
final updates = <String, dynamic>{
  "dart2": FieldValue.delete(),
};
docRef.update(updates);
```

컬렉션 삭제

중요
컬렉션 삭제는 사용자에게 제공하는 행위는 권장하지 않음