JÖNKÖPING UNIVERSITY

School of Engineering

CLOUD FIRESTORE

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WHAT IS FIREBASE?

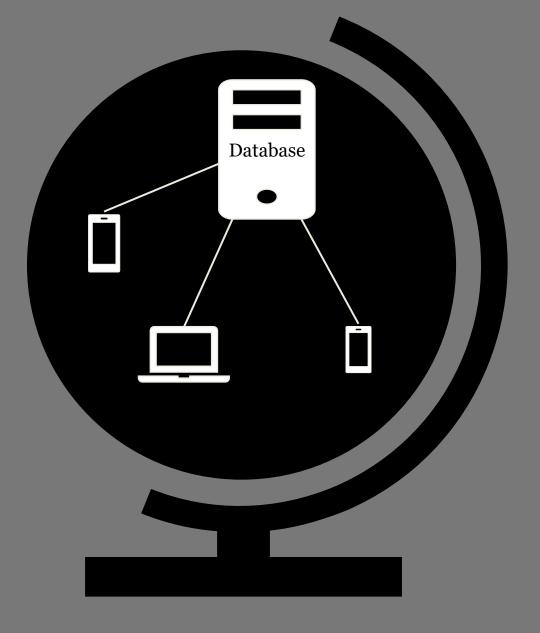
Started out as a company with one product:

- Firebase: realtime-database-as-a-service.
- Google bought the company.
- More products added: https://firebase.google.com/products/

WHAT IS FIRESTORE?

Realtime-database-as-a-service.

- Realtime.
- Rules on the server.
- NoSQL Document database.
 - Designed to be scalable.
- Pricing: https://firebase.google.com/pricing/





DOCUMENT DATABASES

Relational database: Tables store posts.

Document database: Collections store documents.

Humans collection:

```
1: {Name: "Alice", Age: 10}
2: {Name: "Bob", Age: 15}
3: {Name: "Claire", Age: 20}
```

Pets collection:

1:	{Name:	"Catty",	HumanId:	1 }
2:	{Name:	"Doggy",	HumanId:	2 }
3:	{Name:	"Fishy",	HumanId:	1 }

Id	Name	Age
1	Alice	10
2	Bob	15
3	Claire	20

Humans

Id	Name	HumanId
1	Catty	1
2	Doggy	2
3	Fishy	1

Pets



DOCUMENT DATABASES

Relational database: Tables store posts.

Document database: Collections store documents.

Id	Name	Age
1	Alice	10
2	Bob	15
3	Claire	20

Humans

Id	Name	HumanId
1	Catty	1
2	Doggy	2
3	Fishy	1

Pets

Humans collection:

```
1: {Name: "Alice", Age: 10, Pets: ["Catty", "Fishy"]}
2: {Name: "Bob", Age: 15, Pets: ["Doggy"]}
3: {Name: "Claire", Age: 20, Pets: []}
```

DOCUMENT DATABASES

Relational database: Tables store posts.

Document database: Collections store documents.

Humans collection with sub collection:

```
1: {Name: "Alice", Age: 10, Pets: SubCollection}
```

2: {Name: "Bob", Age: 15, Pets: SubCollection}

3: {Name: "Claire", Age: 20, Pets: SubCollection}

Id	Name	Age
1	Alice	10
2	Bob	15
3	Claire	20

Humans

Id	Name	HumanId
1	Catty	1
2	Doggy	2
3	Fishy	1

Pets



IT'S SCALEABLE!

The comparison can be <, <=, ==, >, >=, or array_contains.

• != not supported 🖰

You can only perform range comparisons (<, <=, >, >=) on a single field, and you can include at most one array_contains clause in a compound query.

• Id > 2 and HumanId <= 5 not supported 🖰

Id	Name	Age
1	Alice	10
2	Bob	15
3	Claire	20

Humans

Id	Name	HumanId
1	Catty	1
2	Doggy	2
3	Fishy	1

Pets

EXAMPLE

Tutorial: https://firebase.google.com/docs/firestore/quickstart

Firebase Console: https://console.firebase.google.com/

