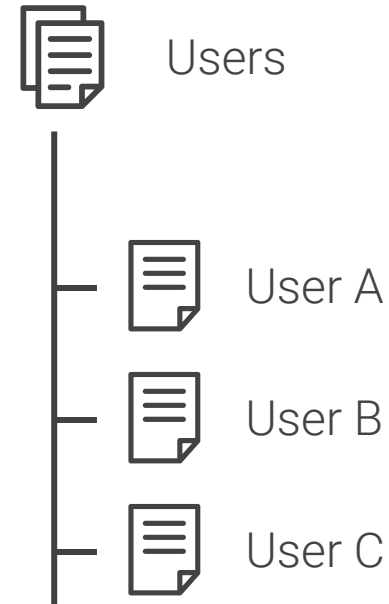
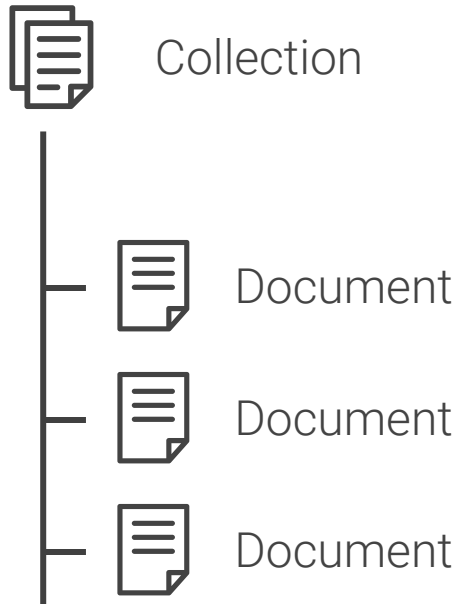




WEB ENGINEERING

FIRESTORE DATENBANK

- Data Structure
- **CRUD** Operations
 - **C**reate
 - **R**ead
 - **U**ppdate
 - **D**eleate



Create Data

Read Data

Uppdate Data

Delete Data

ADD

```
user = {  
  name: "Mike",  
  lastname: "Miller"  
}  
  
db.collection("users").add(user);
```

Generates a new id

SET

```
user = {  
  name: "Mike",  
  lastname: "Miller"  
}  
  
db.collection("users")  
  .doc("mmiller").set(user);
```

We pass the id

GET

```
var users =
  await db.collection("users").get();

users.forEach(displayUser);

function displayUser(userRaw) {
  var user = userRaw.data();
  console.log(user.name);
}
```

Get all documents in a collection.

WHERE

```
var users = await
  db.collection("users")
    .where("city", "=", "Köln")
    .get();

users.forEach(...);
```

Query with one or more conditions.

onSnapshot

```
var users =  
  await db.collection("users").onSnapshot(updateData);  
  
function updateData(docs) {  
  doc.forEach(displayDoc);  
}  
  
function displayDoc(doc) { ... }
```

Listens to changes in all
documents in real-time

UPDATE

```
db.collection("users").doc("mmiller").update({ children: 3 });
```

Updates or adds only
given fields

DELETE WHOLE DOCUMENT

```
db.collection("users").doc("mmiller").delete();
```

DELETE SINGLE FIELD

```
var userRef = db.collection("users").doc("mmiller");  
  
var removeChildren = userRef.update({  
  children: firebase.firestore.FieldValue.delete()  
});
```