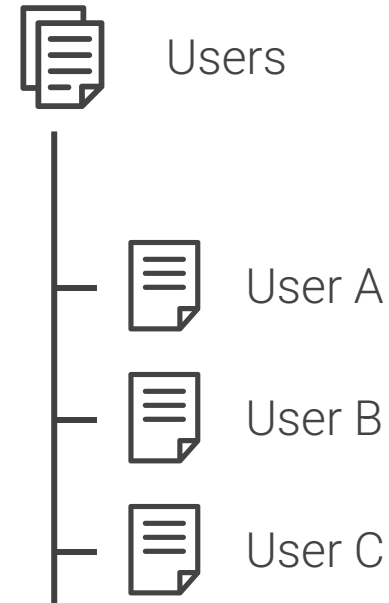
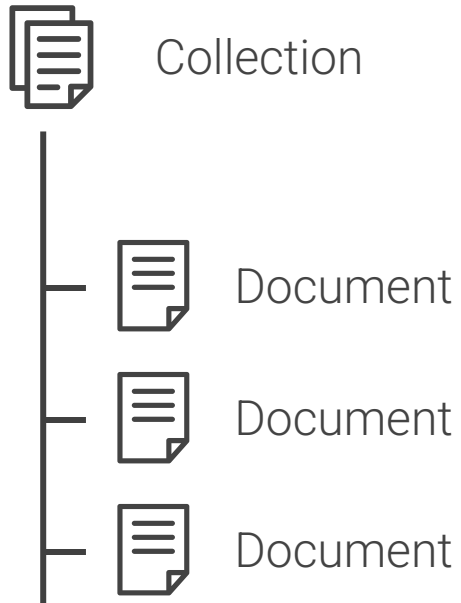




# WEB ENGINEERING

FIRESTORE DATENBANK

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



**C**reate Data

**R**ead Data

**U**ppdate Data

**D**eleate 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()  
});
```