# One-to-One Relationship

A *one-to-one relationship* in MongoDB means that a document in one collection is associated / connected with exactly one document in another collection.

 **Example :**🙂

Imagine a scenario where each user has exactly one profile.

**There are two main ways to model this relationship:**

1. Embedding (Storing the related document inside the parent document)
   - The user document includes the profile directly inside it.

**Example:**

```json
{
"_id": 1,
"name": "John Doe",
"profile": {
  "age": 30,
  "address": "123 Main St"
 }
}
```

**Benefits** 😁

    - Easy to access both user and profile together.

    - Only one query is needed to get all the data.

**Drawbacks** 😣

    - If the profile data grows too large or changes often, updating or managing it can become inefficient.

## 2.Referencing (Linking documents using IDs)

   - The **user** document has a `profile_id` field that references a separate **profile** document.

   **Example:**

```
User document:


{
  "_id": 1,
  "name": "John Doe",
  "profile_id": 100
}

Profile document:

{
  "_id": 100,
  "age": 30,
  "address": "123 Main St"
}
```

## Benefits 😁

    - Keeps documents small and focused.

    - Easier to update profile information without affecting the user document.

## Drawbacks 😖

    - You need two queries: one to fetch the user and another to fetch the profile.

## Choosing Between Embedding and Referencing 👍

### Embed when:

  - The related data is small and often accessed together.

  - Data doesn't change often.

### Reference when:

  - The related data is large or frequently updated.

  - You might need to access the related data separately.

**Summary**

In a **one-to-one** relationship:

Embedding keeps everything in one place for quick access.

Referencing keeps data modular and easier to manage when it grows or changes.

Choose the method based on how you'll access and update your data.