**Database Schema Documentation**

**Collections :-**

**User Collection**

The User collection stores information about users and their associated tasks and subtasks. Each user has a unique record that contains their personal information and an array of tasks, each of which may contain an array of subtasks.

**User Document Structure :-**

{

"\_id": "ObjectId",

"name": "string",

"email": "string",

"tasks": [

{

"\_id": "ObjectId",

"subject": "string",

"deadline": "Date",

"status": "string",

"isDeleted": "boolean",

"subtasks": [

{

"\_id": "ObjectId",

"subject": "string",

"deadline": "Date",

"status": "string",

"isDeleted": "boolean"

}

]

}

]

}

**Fields :-**

* **\_id**: A unique identifier for the user document (generated by MongoDB).
* **name**: The name of the user (string).
* **email**: The email address of the user (string, unique).
* **tasks**: An array of task objects associated with the user.

**Task Document Structure :-**

Each task document embedded within the tasks array has the following fields:

* **\_id**: A unique identifier for the task document (generated by MongoDB).
* **subject**: The subject or title of the task (string).
* **deadline**: The deadline for the task (Date).
* **status**: The current status of the task (string, e.g., "pending", "completed").
* **isDeleted**: A flag indicating if the task is marked for deletion (boolean, default: false).
* **subtasks**: An array of subtask objects associated with the task.

**Subtask Document Structure :-**

Each subtask document embedded within the subtasks array has the following fields:

* **\_id**: A unique identifier for the subtask document (generated by MongoDB).
* **subject**: The subject or title of the subtask (string).
* **deadline**: The deadline for the subtask (Date).
* **status**: The current status of the subtask (string, e.g., "pending", "completed").
* **isDeleted**: A flag indicating if the subtask is marked for deletion (boolean, default: false).

**Relationships**

In this schema, the relationships are primarily between the user, their tasks, and the subtasks within those tasks.

1. **User to Tasks**: Each user document contains an array of task objects. This is a one-to-many relationship where a single user can have multiple tasks.
2. **Task to Subtasks**: Each task object contains an array of subtask objects. This is also a one-to-many relationship where a single task can have multiple subtasks.

**Soft Deletion**

The schema supports soft deletion for both tasks and subtasks:

1. **Tasks**: The isDeleted field in the task object indicates whether the task is considered deleted. Soft-deleted tasks are excluded from GET API responses but remain in the database.
2. **Subtasks**: Similarly, the isDeleted field in the subtask object indicates whether the subtask is considered deleted. Soft-deleted subtasks are excluded from GET API responses but remain in the database.