📚 Database Schema Documentation

This document describes the MongoDB database schemas used in the Project Management System.
All schemas are implemented using **Mongoose ODM** with timestamps enabled.

👤 User Schema

Collection Name

`users`

Description

Stores all system users including admins, developers, and other employees.
Used for authentication, authorization, and task assignment.

Fields

Field Name	Type	Required	Default	Description
role	String	❌	`"user"`	Defines user role (e.g., admin, user)
name	String	✅	—	Full name of the employee
employee_id	String	✅	—	Unique employee identifier
email	String	✅	—	User email (must be unique)
password	String	✅	—	Hashed password
status	String	❌	`"available"`	Availability for task assignment

Enum Values

`status`

- `assigned`
- `available`

Timestamps

Field	Description
createdAt	Account creation time
updatedAt	Last profile update time

🏢 Workspace Schema

Collection Name

`workspaces`

Description

Represents organizational workspaces that contain multiple projects.

Fields

Field Name	Type	Required	Default	Description
name	String	✅	—	Workspace name
description	String	❌	" "	Workspace details
projectID	ObjectId[]	❌	[ ]	List of projects inside workspace

Relationships

Field	Refers To
projectID	Project Collection

Timestamps

Field	Description
createdAt	Workspace creation time
updatedAt	Last update time

📁 **Project Schema**

Collection Name

`projects`

Description

Stores project details under a workspace, including members and deadlines.

Fields

Field Name	Type	Required	Default	Description
name	String	✅	—	Project title
description	String	❌	`""`	Project summary
workspaceId	ObjectId	✅	—	Parent workspace ID
members	ObjectId[]	❌	`[]`	Assigned project users
remark	String	❌	`""`	Additional notes
due_date	Date	✅	—	Project deadline

Relationships

Field	Refers To
workspaceId	Workspace Collection
members	User Collection

Timestamps

Field	Description
createdAt	Project creation time
updatedAt	Last update time

✅ **Task Schema**

Collection Name

tasks

Description

Represents individual tasks assigned to users within projects.

Fields

Field Name	Type	Required	Default	Description
projectId	ObjectId	✅	—	Parent project ID
userId	ObjectId	✅	—	Assigned user
task_name	String	✅	—	Task title
task_description	String	✅	—	Task details
task_due_date	Date	✅	—	Task deadline
task_priority	String	✅	—	Priority level
status	String	❌	"todo"	Task progress status

Enum Values

status

- todo
- inprocess
- completed

Relationships

Field	Refers To
projectId	Project Collection
userId	User Collection

Timestamps

Field	Description
createdAt	Task creation time
updatedAt	Last update time

🔗 Schema Relationships Overview

Workspace
 ↓
Projects
 ↓
Tasks
 ↓
Users

Relation Flow

- One Workspace → Many Projects
- One Project → Many Tasks
- One User → Many Tasks
- Many Users → Many Projects

🛠️ Notes

- All schemas use `timestamps: true`
- ObjectId references enable `.populate()`
- User availability controlled via `status`
- Task workflow controlled via `status` enum