## **TeamHub – Database Schema Explanation**

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### **🔐 User**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| id | String | Unique identifier (UUID). |
| name | String | Full name of the user. |
| email | String | Unique email for authentication. |
| password | String | Hashed password. |
| createdAt | DateTime | Timestamp of user creation. |
| updatedAt | DateTime | Auto-updated timestamp on modification. |

**Relations:**

* teams: Teams where the user is a member (TeamMember).
* createdTeams: Teams created by the user.
* createdProjects: Projects created by the user.
* createdTasks: Tasks created by the user.
* assignedTasks: Tasks assigned to the user.
* taskHistories: Task history entries logged by the user.
* comments: Comments made by the user.
* invitedMembers: Members invited by the user to a team.

### **👥 Team**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| id | String | Unique team identifier. |
| name | String | Team name (unique globally). |
| createdBy | String | User ID of the creator. |
| createdAt | DateTime | Timestamp of team creation. |

**Relations:**

* creator: Refers to the user who created the team.
* members: Users in the team via TeamMember.
* projects: Projects assigned to the team.

### **👤 TeamMember**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| id | String | Unique membership ID. |
| teamId | String | ID of the team. |
| userId | String | ID of the user. |
| invitedBy | String (optional) | User ID who sent the invite. |
| status | InvitationStatus | PENDING / ACCEPTED / REJECTED |

**Relations:**

* team: Belongs to a Team.
* user: Belongs to a User.
* inviter: The user who sent the invite.

**Constraints:**

* @@unique([teamId, userId]): A user can join a team only once.

### **📁 Project**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| id | String | Unique project ID. |
| name | String | Project name (unique per team). |
| description | String? | Optional details. |
| teamId | String? | Team that owns the project. |
| createdBy | String | User who created the project. |
| createdAt | DateTime | Timestamp of creation. |
| updatedAt | DateTime | Timestamp of last update. |

**Relations:**

* creator: Creator of the project.
* team: Optional team owner.
* tasks: Tasks belonging to the project.

### **✅ Task**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| id | String | Unique task ID. |
| title | String | Title of the task. |
| description | String? | Task details. |
| status | TaskStatus | Enum: TODO / INPROGRESS / DONE |
| dueDate | DateTime? | Optional due date. |
| createdBy | String | ID of task creator. |
| assigneeId | String? | Optional ID of the assigned user. |
| projectId | String | ID of the project. |
| createdAt | DateTime | Creation timestamp. |
| updatedAt | DateTime | Auto-updated on modification. |

**Relations:**

* creator: User who created the task.
* assignee: User assigned to the task.
* project: Parent project.
* comments: List of task comments.
* history: Task history (status changes, etc.).

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### **📜 TaskHistory**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| id | String | Unique ID. |
| taskId | String | Related task ID. |
| changedBy | String | User ID who made the change. |
| fromStatus | TaskStatus? | Previous status. |
| toStatus | TaskStatus | Updated status. |
| changedAt | DateTime | Change timestamp. |

**Relations:**

* task: The affected task.
* user: The user who made the change.

### **💬 Comment**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| id | String | Unique comment ID. |
| taskId | String | ID of the commented task. |
| authorId | String | User who wrote the comment. |
| content | String | The comment content. |
| createdAt | DateTime | Time when comment was made. |

**Relations:**

* task: Associated task.
* author: User who authored the comment.

### **📊 Enums**

#### **✅ TaskStatus**

* TODO: Initial status.
* INPROGRESS: Work started.
* DONE: Completed task.

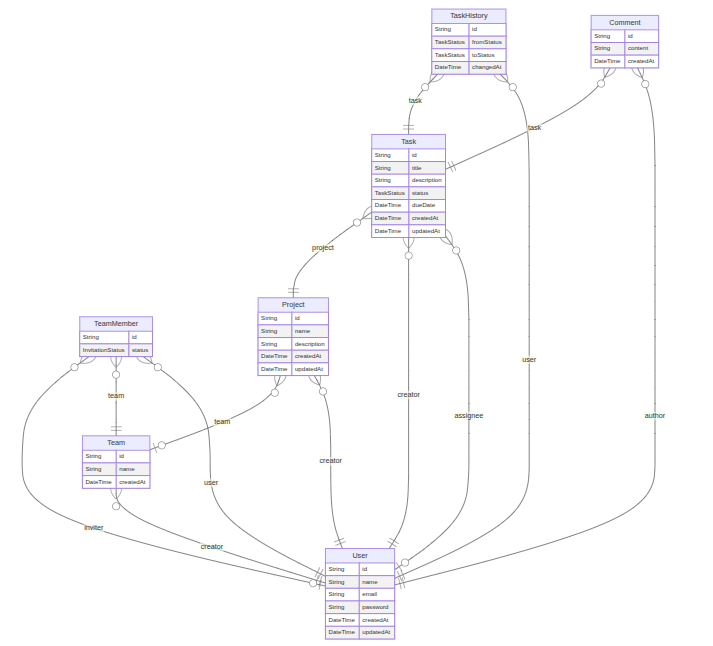
#### **📩 InvitationStatus**

* PENDING: Invite not yet accepted.
* ACCEPTED: Membership confirmed.
* REJECTED: Invite declined.

### **🔗 Entity Relationship Summary**

* **One User** ↔ has many **Teams** via TeamMember.
* **One Team** ↔ has many **Projects** and **TeamMembers**.
* **One Project** ↔ has many **Tasks**.
* **One Task** ↔ has many **Comments** and **TaskHistory**.
* **Tasks** are created/assigned by **Users**, belong to **Projects**.

### **📄 Entity Relationship Summary**



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