

Project Management Software - Developer Documentation

Project Overview:

A Project Management Software for a software house. Admin can create projects, add users to projects, and create chat sections inside projects for specific users. Users can send messages, daily work updates (marked with **@update**), and attachments. Admin can track and filter employee work updates across projects.

1. Key Features

1.1 Projects

- Admin can create, edit, delete projects.
- Assign users to projects.
- Each project can have multiple chat sections.
- Users are added to chat sections manually by admin. Only those users see messages in that chat.

1.2 Users

- Admin can create users.
- Users are assigned to projects and to specific chat sections inside projects.
- Users can:
 - Send messages
 - Upload attachments
 - Send daily work updates using **@update**.

1.3 Chat

- Chats belong to projects.
- Admin can create multiple chat sections per project and add any user to it.
- Supports:
 - Text messages
 - File attachments (images, PDF, docs)
 - Daily work updates (@update) marked messages
- Pagination:
 - Users can set how many messages to view at a time.
 - Infinite scroll or "load more" supported.
- Admin can filter messages by date range or user.

1.4 Daily Work Updates

- Extracted from @update messages in chats.
- Admin can view updates for:
 - Specific user
 - Specific project
 - Specific date range
- Clear UI with:
 - User name
 - Project name
 - Work content

- **Attachments**
- **Date**

1.5 UI Requirements

- **Clean, simple, responsive layout.**
- **Projects page: lists all projects, their users, chat sections.**
- **Chat interface:**
 - **Shows messages for users added to the chat.**
 - **Clear distinction between normal messages and daily work updates.**
- **Work updates page:**
 - **Filterable by project, user, and date.**
 - **Paginated list of work updates.**
- **File upload functionality for chat and daily updates.**

2. Data Models

2.1 User

Field		Type	Description
id	integer		Primary key
name	string		Full name
email	string		Unique email

password	string	Hashed password
role	enum	admin / developer / designer / other
created_at	timestamp	
updated_at	timestamp	

2.2 Project

Field	Type	Description
id	integer	Primary key
name	string	Project name
description	text	Project description
created_by	integer	Admin id
created_at	timestamp	
updated_at	timestamp	

Relationships:

- **project_user** table: Many-to-many linking users and projects.

2.3 Chat Section

Field	Type	Description
id	integer	Primary key
project_id	integer	Foreign key to project
name	string	Chat section name (e.g., "Frontend")
created_by	integer	Admin id
created_at	timestamp	
updated_at	timestamp	

Relationships:

- **chat_user** table: links specific users to chat sections.
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2.4 Chat Message

Field	Type	Description
id	integer	Primary key
chat_id	integer	Foreign key to chat section
user_id	integer	Sender user id
message	text	Message content
attachments	json	Array of attachment URLs
is_update	boolean	True if @update keyword detected
created_at	timestamp	
updated_at	timestamp	

2.5 Work Update (Optional Table)

- Extracted automatically from chat messages with **@update**.

Field	Type	Description
id	integer	Primary key
user_id	integer	Sender user id
project_id	integer	Project id
chat_id	integer	Chat section id
message_id	integer	Chat message id
content	text	Work update content
attachments	json	Attachments
date	date	Work update date

3. Workflow

3.1 Admin Workflow

1. Admin logs in.
2. Creates a project and adds users.
3. Creates chat sections inside project and adds specific users.
4. Admin can post messages and work updates.
5. Admin can view any user's daily updates filtered by project, date range, or user.

3.2 User Workflow

1. Logs in.
2. Views projects assigned.
3. Enters chat sections they are added to.
4. Can send messages, attachments, and **@update** messages.
5. Cannot see messages in chat sections they are not added to.