

# Project Management System

## Admin/Owner Features

- 1. User Management**
  - Can assign roles to user such as project manager or team member
  - Modify user details
  - Deactivate/activate user
  - Delete user
- 2. Project Management**
  - Can create ,update, delete and assign project to PM or TM
  - Archive or delete project
  - View all ongoing, complete & upcoming projects
- 3. Team Management**
  - Can create a teams such as Design , Development , Testing and assign users in particular team
- 4. Task Management**
  - Can create task , assign task, update task, give due date , view tasks
- 5. Report & Analysis**
  - Can view total projects , employee performance , completed projects within due date
  - Export data to excel or pdf

## Project Manager Features

- 1. Project Management**
  - Can update project details and also assign project to team members
  - Can set timelines and milestones
  - Can remove team member from particular project if needed
  - Can view all assigned projects given by the owner
- 2. Task Management**
  - Can create, update and delete tasks for the particular project and also assigns task to team members
  - Can classify tasks into in progress , under review and completed
  - Can set type of task(design,development,important,high priority ),due date of task , estimated time,and users name whom gave the task
  - Can give detailed information about task by adding description , sub tasks and attaching files in task
  - Can add notes with particular task
- 3. Calender**
  - Can separate tasks date wise in calander
- 4. Report & Analysis**
  - Can view total tasks done by employees and also watch time taken by employee to complete particular task

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## Team Member Features

### 1. Task Management

- Can view assigned tasks and also can update the status of tasks such as in progress to completed or stuck
- Also can add attach documents to the tasks
- Add comment in task if any query

### 2. Personal dashboard

- Can view own profile , completed tasks , projects and it's details and many more....

## Client Features

### 1. Client Profile Management

- Store client contact information (e.g., name, email, phone number).
- Maintain company details (e.g., company name, address).

### 2. View All Projects

### 3. Communication

- Communication between clients and the admin or project manager through messages or comments.
- Notify clients about project updates, timelines, and milestones.

### 4. Feedback

- Enable clients to give feedback on completed projects.

## Additional Features

### 1. Notifications

- Admin and project manager send notification to the team member or project manager.
- Notification can be reminders about meeting or reminder about project or task deadlines

### 2. Sprint

- Admin can create a sprint
- Project Manager can assign tasks in sprints created by admin

### 3. Comments

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- We can add one comment section where everyone can send message if they suffering with any problems related to projects or task or wanna give any instruction to everyone.

### 4. Activity Log

- Here we can access every activities performed by all by dates and times to save the log in memory

### 5. Preview of task

- Can create table view or kanban view for preview of task.

## User

- Roles : Admin,Project manager or team member
- Registration , login , access for service

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## Tables

### 1. Users

Column	Data type	Description
UserID	Int	Unique UserID
Name	Varchar(100)	Name of user
Email	Varchar(100)	Email of user (unique)
Password	Varchar(50)	Encrypted password for authentication
Role	Int	References UserRoles(RoleID)
Status	BIT	User Status : Active(1), Inactive(0), Default: Active(1)
CreatedAt	Datetime	Account creation date
UpdatedAt	Datetime	Updation date (allow null)

### 2. Clients

Column	Data type	Description
ClientID	Int	Unique ClientID
Name	Varchar(100)	Name of Client or Organization name
Email	Varchar(100)	Email of client
Phone	Varchar(50)	Contact number of client
Address	Varchar(50)	Address of Organization or client
Status	Bit	User Status : Active, Inactive, Default: Active
CreatedAt	Datetime	Account creation date
UpdatedAt	Datetime	Updation date (allow null)

### 3. Projects

Column	Data type	Description
ProjectID	Int	Unique project id
Title	Varchar(100)	Project title
Description	Varchar(100)	Project description
ClientID	Int	Associated client who gave the project(Fk of client table)
StartDate	DATETIME	Project starting date
EndDate	DATETIME	Last date for completing project
Status	Varchar	Project Status : Ongoing', 'Completed', 'Upcoming', 'Archived' ,Default: 'Upcoming'
CreatedAt	Datetime	Project creation date
UpdatedAt	Datetime	Project update date(allow null)

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## 4. Milestones

Column	Data type	Description
MilestoneID	Int	Unique milestone id
ProjectID	Int	References Projects(ProjectID)
Title	Varchar(100)	Title of milestone
DueDate	Datetime	End date to achive milestone
Status	varchar	Status : Pending , Achived , default:pending

## 5. Project Assignments

Column	Data type	Description
AssignmentID	Int	Unique assignment id
ProjectID	Int	References Projects(ProjectID)
UserID	Int	References Users(UserID)
Role	Int	References UserRoles(RoleID)
AssignedAt	Datetime	Date when project is assigned to PM or TM

## 6. Teams

Column	Data type	Description
TeamID	Int	Unique team id
Team Name	Varchar(100)	Team name
Description	Varchar(100)	Small info about team
CreatedAt	Datetime	Team creation date
UpdatedAt	Datetime	Modification date(allow null)

## 7. TeamMembers

Column	Data type	Description
TeamMemberID	Int	Unique team member id
TeamID	Int	References Teams(TeamID)
UserID	int	References Users(UserID)
AssignedAt	Datetime	Date of assignment in team

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## 8. Tasks

Column	Data type	Description
TaskID	Int	Unique task id
Titile	Varchar(100)	Task title
Description	Varchar(100)	Task description
Task type	Int	References TaskType(TaskTypeID)
DueDate	DATETIME	Last date for completing task
Status	varchar	Project Status : in progress, Under Review, Completed ,Default : in progress
AssignedTo	Int	References Users(UserID)
ProjectID	int	References Projects(ProjectID)
CreatedAt	Datetime	Task creation date
UpdatedAt	Datetime	Task update date(allow null)

## 9. TaskType

Column	Data type	Description
TaskTypeID	Int	Unique Task type id
Tasktype Name	Varchar	Type of tasks

## 10.TaskAssignments

Column	Data type	Description
AssignmentID	Int	Unique assignment id
TaskID	Int	References Task(TaskID)
UserID	Int	References Users(UserID)
Role	Int	References UserRoles(RoleID)
AssignedAt	Datetime	Date when Task is assigned to PM or TM

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## 11.TaskAttachments

Column	Data type	Description
AttachmentID	Int	Unique task Attachment id
TaskID	Int	References Tasks(TaskID)
FilePath	int	Path of file that we want to upload
UploadedAt	Datetime	Date of file upload

## 12.TaskComments

Column	Data type	Description
CommentID	Int	Unique task Comment id
TaskID	Int	References Tasks(TaskID)
UserID	Int	References Users(UserID)
Comment	Varchar	Comment that we want to add in task for particular user
CreatedAt	Datetime	Date of Comment creation

## 13.Notifications

Column	Data type	Description
NotificationID	Int	Unique notification id
SenderID	Int	References Users(UserID)
ReceiverID	Int	References Users(UserID)
Message	Varchar	Message that we want to send in Notification
SendAt	Datetime	Date of Notification send to users
IsRead	Bit	True is notification is readed by user else false...default:0

## 14. ActivityLog

Column	Data type	Description
ActivityID	Int	Unique activity id
UserID	Int	References Users(UserID)
Action	Varchar	Action that is performed by employer
ActionTime	Datetime	Date and time of action when is caused

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## 15.UserRoles

Column	Data type	Description
RoleID	Int	Unique role id
RoleName	Varchar	Name of role(Admin,PM,TM,Client)
Description	Varchar	About role

## 16.Sprints

Column	Data type	Description
SprintID	Int	Unique sprint id
ProjectID	Int	References Projects(ProjectID)
StartDate	Datetime	Start date of the sprint.
EndDate	DateTime	End date of the sprint (1-week duration).
Status	varchar	Sprint status (Ongoing, Completed, Failed).
Goals	Varchar	Objectives or goals of the sprint.

## 17.SprintTasks

Column	Data type	Description
SprintTaskID	Int	Unique SprintTask id
SprintID	Int	Sprint associated with the task.(Fk of sprint table)
TaskID	Int	Task assigned to this sprint.(FK of task table)



# Project Management System

## RelationShips

1. **User and Projects:**
  - One User(admin) can create multiple projects
2. **Client and Projects:**
  - One Client can give multiple projects
3. **Projects and Tasks:**
  - One Project have multiple tasks
4. **Teams and Team members:**
  - One team can have multiple members in team.
5. **User and UserRoles**
  - Each user is assigned one role
6. **Teams and Projects**
  - Teams can be assigned to multiple projects, and projects can involve multiple teams
7. **Projects and Sprints**
  - One project have n numbers of sprints
8. **Sprint and SprintTasks**
  - In one sprint there can be add multiple tasks