

# TaskNexus - Project Documentation

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## 1. Short Summary

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**TaskNexus** is a project and task management web application built with Spring Boot and JSP. It helps teams manage projects, assign tasks, track progress, and collaborate through comments and file attachments.

### Key Features:

- Project management with status tracking
- Task management with priorities and deadlines
- Team collaboration (comments and file attachments)
- Role-based access control
- Dashboard with statistics

**Technology:** Java 17, Spring Boot, Hibernate, MySQL, JSP, Bootstrap

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## 2. List of User Roles

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### System-Level Roles

- **ROLE\_ADMIN (Administrator)**
  - Full system access to all projects and tasks
- **ROLE\_USER (Regular User)**
  - Base role for all authenticated users
  - Access depends on project assignments

### Project-Specific Roles

- **PROJECT\_MANAGER**
  - Full control over assigned project(s)
  - Assigned via project manager field

- **TEAM\_MEMBER**

- Collaborative access to assigned project(s)
  - Can view all tasks, create tasks, and collaborate on any task in the project
  - Added to project team members
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### **3. Tasks That Each User Role Can Perform**

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#### **Administrator (ROLE\_ADMIN)**

- **User Management**
    - View, create, edit, delete users
    - Assign roles to users
  - **Project Management**
    - View, create, edit, delete all projects
    - Assign project managers
    - Manage team members for any project
  - **Task Management**
    - View, create, edit, delete all tasks
    - Assign tasks to users
    - Update task status
  - **Collaboration**
    - Add comments, upload/download/delete attachments on any task
  - **Dashboard**
    - View system-wide statistics
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#### **Project Manager (PROJECT\_MANAGER)**

- **Project Management (Their Projects Only)**
  - View and edit their projects
  - Manage team members
  -  Cannot create or delete projects

- **Task Management (Their Projects)**
    - View, create, edit, delete tasks in their projects
    - Assign tasks to team members
    - Update task status
  - **Collaboration (Their Projects)**
    - Add comments, upload/download/delete attachments
  - **Dashboard**
    - View their project statistics
- 

## **Team Member (TEAM\_MEMBER)**

- **Project Management (Their Projects)**
    - View project details
    - ❌ Cannot edit or delete projects
    - ❌ Cannot manage team members
  - **Task Management (Their Projects)**
    - View and create tasks
    - Edit tasks assigned to them
    - Update status of assigned tasks
    - ❌ Cannot delete tasks
    - ❌ Cannot assign tasks
  - **Collaboration (Their Projects)**
    - Add comments, upload/download attachments
    - Delete own attachments
  - **Dashboard**
    - View "My Tasks" and project statistics
- 

## **Users Assigned to Tasks**

When a Team Member or Project Manager is assigned to a specific task, they gain:

- Edit permissions for that assigned task
- Ability to update task status
- Full collaboration (comments, attachments) on assigned task

**Note:** Task assignment is a property, not a role. Users must already be Team Members or Project Managers to be assigned to tasks.

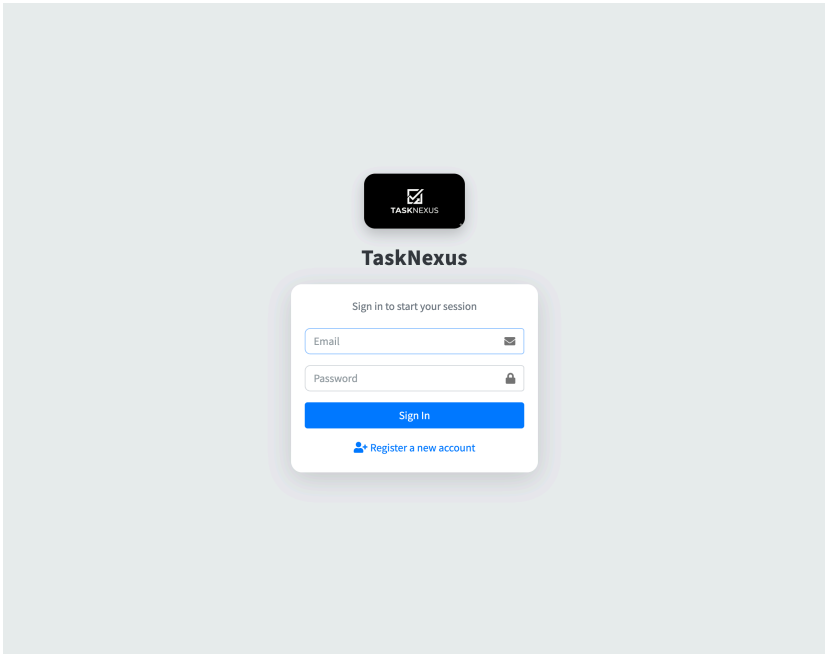
## 4. Permission Matrix Summary

Action	Admin	Project Manager	Team Member
User Management			
Manage Users	✓	✗	✗
Project Management			
Create Projects	✓	✗	✗
View Projects	✓ All	Their Projects	Their Projects
Edit Projects	✓ All	Their Projects	✗
Delete Projects	✓	✗	✗
Manage Team	✓ All	Their Projects	✗
Task Management			
Create Tasks	✓ All	Their Projects	Their Projects
View Tasks	✓ All	Their Projects	Their Projects
Edit Tasks	✓ All	Their Projects	Assigned Tasks Only
Delete Tasks	✓ All	Their Projects	✗
Assign Tasks	✓	Their Projects	✗
Collaboration			
Comments/Attachments	✓ All	Their Projects	Their Projects

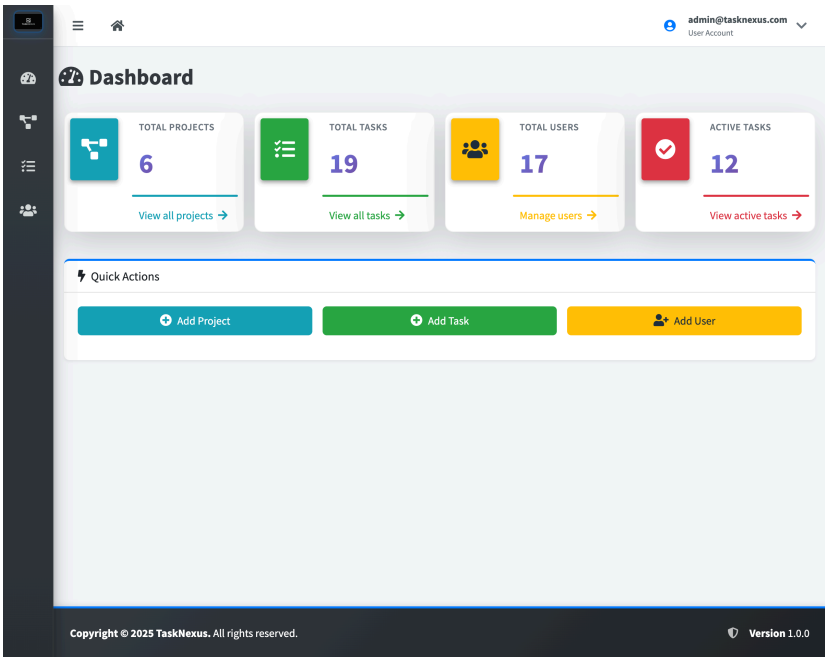
## 5. Key Screenshots

The following screenshots showcase the main features and pages of TaskNexus. All screenshots were captured with the sidebar collapsed for better content visibility.

### 1. Login Page ( /login )



### 2. Dashboard - Admin View ( /page )



### 3. Projects List ( /viewProject )

Projects
















Projects

Search by name or description...

Search

Clear

Add Project

NAME	DESCRIPTION	STATUS	PROJECT MANAGER	ACTIONS
E-Commerce Platform Redesign	Complete redesign and modernization of the company e-commerce platform to improve user experience, mobile responsiveness, and checkout conversion rates. Includes new payment gateway integration and enhanced product search functionality.	IN PROGRESS	Sarah Johnson	  
Mobile Banking App	Development of a new mobile banking application for iOS and Android platforms. Features include account management, bill payments, money transfers, and biometric authentication.	PLANNING	David Kim	  
Customer Support Portal	Build a comprehensive customer support portal with ticket management, live chat integration, knowledge base, and automated response system.	COMPLETED	Sarah Johnson	  
Data Analytics Dashboard	Create an interactive analytics dashboard for business intelligence, featuring real-time data visualization, custom reports, and export capabilities.	IN PROGRESS	PM1	  
Jupiter Going	An advanced human generated rocketized project on going to Jupiter. If we Survive or not is secondary. Let's go there first...	PLANNING	Hotragn Pettugani	  

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### 4. Add/Edit Project ( /addProject )

Add Project

Project Name

Enter project name

Description

Project description

Project Manager

-- Select Project Manager --

Project Status

Planning

Team Members

Sarah Johnson  
Michael Chen  
Emily Rodriguez  
David Kim  
Jessica Martinez

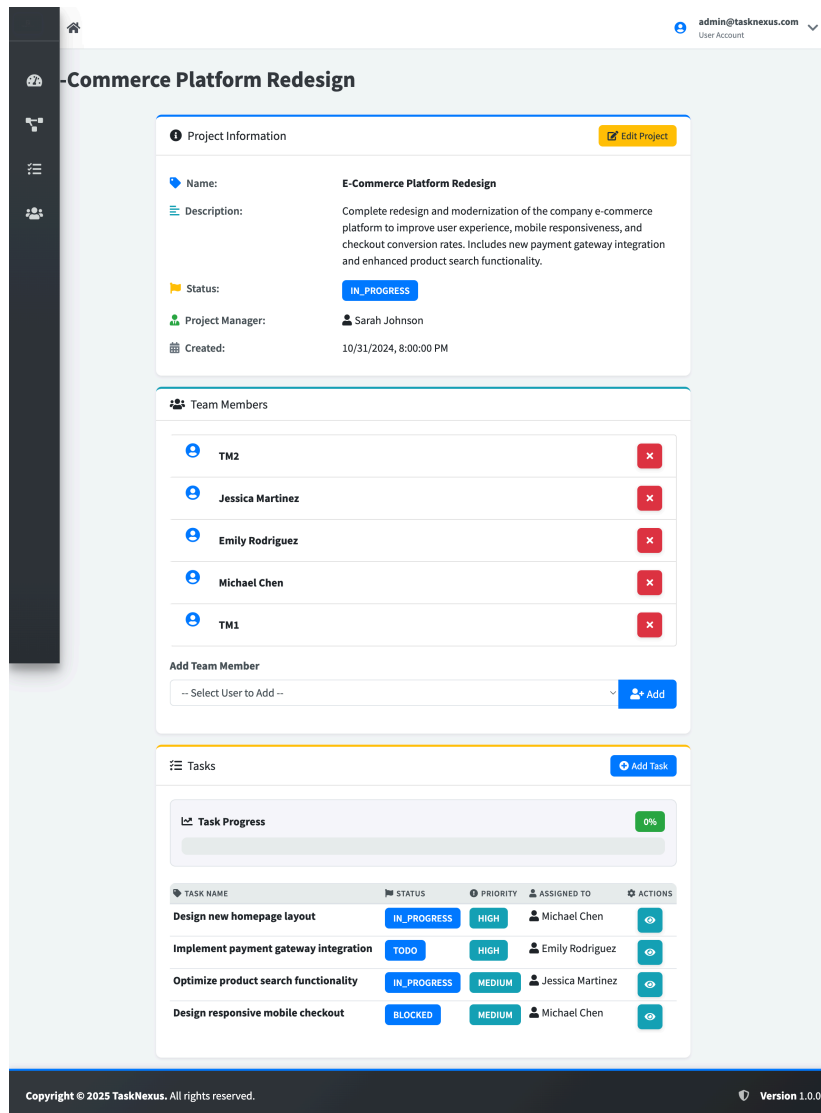
Hold Ctrl/Cmd to select multiple members

Submit

View Projects

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## 5. Project Detail ( /project/{projectId} )



6. Tasks List ( /viewTask )

Home

Tasks

Projects

Users

Tasks

admin@tasknexus.com

User Account

Add Task

Clear

Projects

All Assignees

All Statuses

All Priorities

ID	DESCRIPTION	PROJECT	PRIORITY	STATUS	ASSIGNED TO	DEADLINE	ACTIONS
1	Design new homepage layout	E-Commerce Platform Redesign	HIGH	IN_PROGRESS	Michael Chen	12/20/2024, 5:00:00 PM OVERDUE	<div><div></div><div></div><div></div></div>
2	Implement payment gateway integration	E-Commerce Platform Redesign	HIGH	TODO	Emily Rodriguez	12/25/2024, 5:00:00 PM OVERDUE	<div><div></div><div></div><div></div></div>
3	Optimize product search functionality	E-Commerce Platform Redesign	MEDIUM	IN_PROGRESS	Jessica Martinez	12/18/2024, 5:00:00 PM OVERDUE	<div><div></div><div></div><div></div></div>
4	Setup project repository and CI/CD pipeline	Mobile Banking App	HIGH	COMPLETED	PM1	12/5/2024, 5:00:00 PM	<div><div></div><div></div><div></div></div>
5	Design user authentication flow	Mobile Banking App	HIGH	IN_PROGRESS	Emily Rodriguez	12/15/2024, 5:00:00 PM OVERDUE	<div><div></div><div></div><div></div></div>

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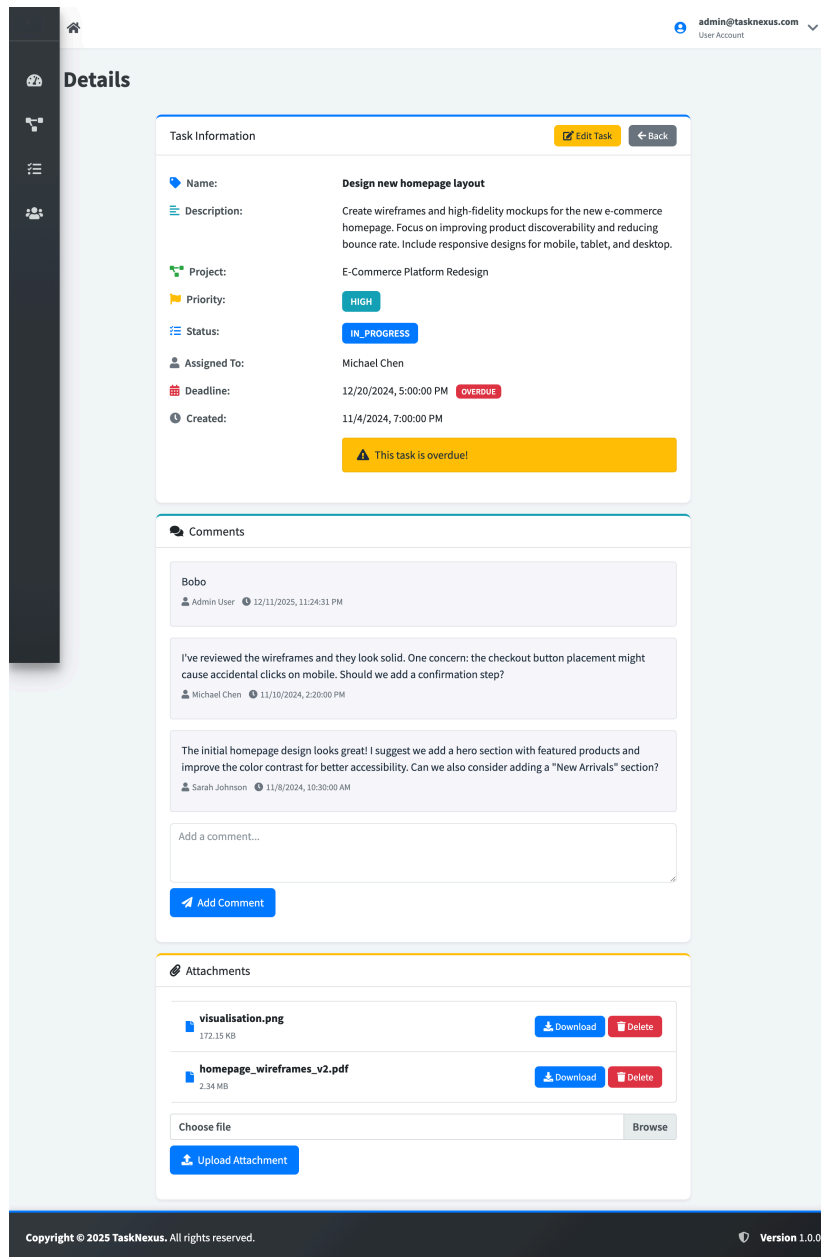
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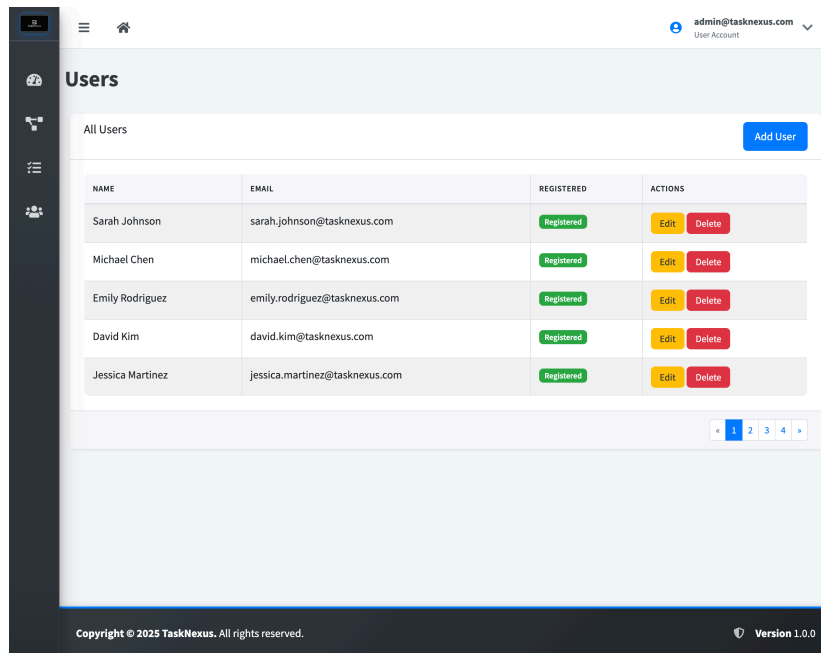
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## 7. Task Detail ( /task/{taskId} )



## 8. User Management - Admin ( /viewUser )



## 9. Add/Edit Task ( /addTask )

