

TaskNexus - Project Documentation

1. Short Summary

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

2. List of User Roles

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
-

3. Tasks That Each User Role Can Perform

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
-

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.

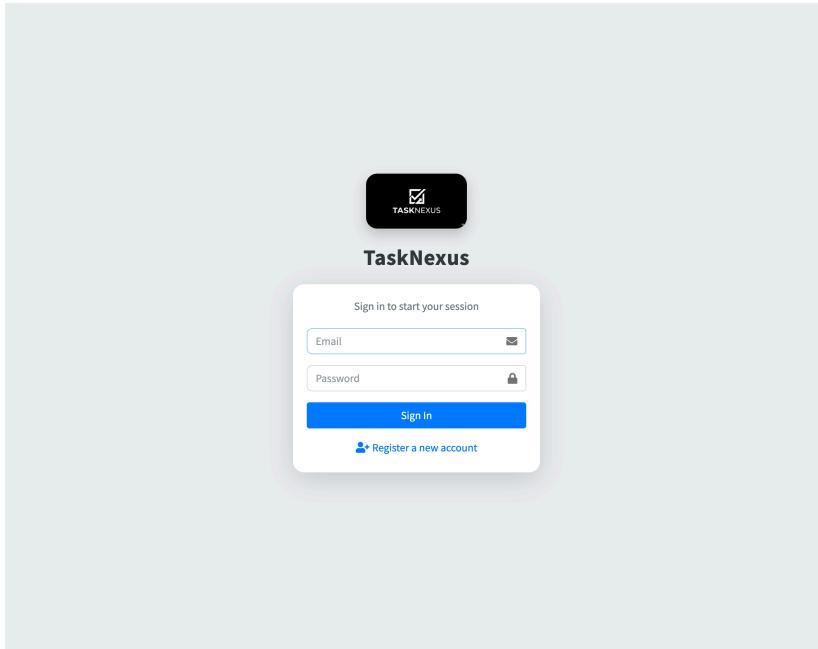
4. Permission Matrix Summary

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)

The screenshot shows the TaskNexus admin dashboard. On the left is a dark sidebar with navigation icons. The main area is titled "Dashboard" and features four summary cards: "TOTAL PROJECTS 6" (with a gear icon), "TOTAL TASKS 19" (with a checklist icon), "TOTAL USERS 17" (with a user icon), and "ACTIVE TASKS 12" (with a checkmark icon). Below these cards is a "Quick Actions" section with three buttons: "Add Project" (blue), "Add Task" (green), and "Add User" (yellow). The footer contains copyright information "Copyright © 2025 TaskNexus. All rights reserved." and a "Version 1.0.0" link.

3. Projects List (/viewProject)

The screenshot shows the TaskNexus project management interface. At the top right, there is a user account dropdown for 'admin@tasknexus.com'. Below the header, there's a search bar with placeholder text 'Search by name or description...', a 'Search' button, and a 'Clear' button. A large blue 'Add Project' button is located at the top right of the main content area. The main content is a table listing five projects:

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	

At the bottom left, it says 'Copyright © 2025 TaskNexus. All rights reserved.' and at the bottom right, 'Version 1.0.0'.

4. Add/Edit Project (/addProject)

The screenshot shows the TaskNexus project creation interface. At the top right, there is a user account dropdown for 'admin@tasknexus.com'. Below the header, there's a 'Add Project' button. The main content is a form titled 'Add Project' with the following fields:

- Project Name:** A text input field with placeholder text 'Enter project name'.
- Description:** A text input field with placeholder text 'Project description'.
- Project Manager:** A dropdown menu with placeholder text '-- Select Project Manager --'.
- Project Status:** A dropdown menu with 'Planning' selected.
- Team Members:** A dropdown menu containing names: Sarah Johnson, Michael Chen, Emily Rodriguez, David Kim, and Jessica Martinez. A note below the menu says 'Hold Ctrl/Cmd to select multiple members'.

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

The screenshot shows the 'Project Detail' page for the project 'E-Commerce Platform Redesign'. The page is organized into several sections:

- Project Information:** Includes fields for Name (E-Commerce Platform Redesign), Description (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.), Status (IN_PROGRESS), Project Manager (Sarah Johnson), and Created (10/31/2024, 8:00:00 PM). A 'Edit Project' button is located in the top right.
- Team Members:** A list of team members: TM2, Jessica Martinez, Emily Rodriguez, Michael Chen, and TM1. Each team member has a red 'X' icon to their right. Below this is a 'Add Team Member' input field with the placeholder '-- Select User to Add --' and a 'Add' button.
- Tasks:** A section titled 'Task Progress' shows a progress bar at 0%. Below it is a table of tasks:

Task Name	Status	Priority	Assigned To	Actions
Design new homepage layout	IN_PROGRESS	HIGH	Michael Chen	edit
Implement payment gateway integration	TODO	HIGH	Emily Rodriguez	edit
Optimize product search functionality	IN_PROGRESS	MEDIUM	Jessica Martinez	edit
Design responsive mobile checkout	BLOCKED	MEDIUM	Michael Chen	edit

A 'Add Task' button is located at the top right of the Tasks section.

At the bottom of the page, there is a dark footer bar with the text 'Copyright © 2025 TaskNexus. All rights reserved.' and 'Version 1.0.0'.

6. Tasks List (/viewTask)

The screenshot shows a web-based task management application. At the top right, there is a user account dropdown for 'admin@tasknexus.com'. Below the header is a search bar with dropdown filters for 'Projects' (set to 'All'), 'All Assignees', 'All Statuses', 'All Priorities', and a 'Clear' button. A prominent blue 'Add Task' button is located in the top right corner of the main content area.

The main content is a table listing five tasks:

ID	DESCRIPTION	PROJECT	PRIORITY	STATUS	ASSIGNED TO	DEADLINE	ACTIONS
1	Create wireframes and high-fidelity mockups for the new e-commerce homepage. Focus on improving product discoverability and reducing bounce rate. Include responsive designs for mobile, tablet, and desktop.	E-Commerce Platform Redesign	HIGH	IN_PROGRESS	Michael Chen	12/20/2024, 5:00:00 PM OVERDUE	
2	Integrate Stripe payment gateway API for secure checkout process. Include support for credit cards, debit cards, and digital wallets. Ensure PCI compliance and implement proper error handling.	E-Commerce Platform Redesign	HIGH	TODO	Emily Rodriguez	12/25/2024, 5:00:00 PM OVERDUE	
3	Enhance the product search with filters, sorting options, and autocomplete suggestions. Implement Elasticsearch for better search performance and relevance ranking.	E-Commerce Platform Redesign	MEDIUM	IN_PROGRESS	Jessica Martinez	12/18/2024, 5:00:00 PM OVERDUE	
4	Initialize the mobile banking app repository with proper folder structure, configure Git workflows, and set up continuous integration/deployment pipeline using Jenkins.	Mobile Banking App	HIGH	COMPLETED	PM1	12/5/2024, 5:00:00 PM	
5	Create user flows and wireframes for login, registration, password reset, and biometric authentication features. Include security best practices and accessibility considerations.	Mobile Banking App	HIGH	IN_PROGRESS	Emily Rodriguez	12/15/2024, 5:00:00 PM OVERDUE	

At the bottom of the table, there is a navigation bar with page numbers (1, 2, 3, 4) and arrows. The footer contains copyright information: 'Copyright © 2025 TaskNexus. All rights reserved.' and 'Version 1.0.0'.

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

The screenshot shows the TaskNexus application interface for viewing a task detail. The top navigation bar includes a user icon, email (admin@tasknexus.com), and account dropdown. The main content area has a sidebar with icons for Home, Tasks, Projects, and People.

Task Information:

- Name: Design new homepage layout
- Description: Create wireframes and high-fidelity mockups for the new e-commerce homepage. Focus on improving product discoverability and reducing bounce rate. Include responsive designs for mobile, tablet, and desktop.
- Project: E-Commerce Platform Redesign
- Priority: HIGH
- Status: IN_PROGRESS
- Assigned To: Michael Chen
- Deadline: 12/20/2024, 5:00:00 PM (OVERDUE)
- Created: 11/4/2024, 7:00:00 PM

A yellow callout box at the bottom of the information section says "⚠ This task is overdue!"

Comments:

- Bobo (Admin User) - 12/11/2025, 11:24:31 PM:
I've reviewed the wireframes and they look solid. One concern: the checkout button placement might cause accidental clicks on mobile. Should we add a confirmation step?
- Michael Chen (11/10/2024, 2:20:00 PM):
The initial homepage design looks great! I suggest we add a hero section with featured products and improve the color contrast for better accessibility. Can we also consider adding a "New Arrivals" section?

Add a comment...

Attachments:

- visualisation.png (172.15 KB) [Download](#) [Delete](#)
- homepage_wireframes_v2.pdf (2.34 MB) [Download](#) [Delete](#)

Choose file [Browse](#)
[Upload Attachment](#)

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8. User Management - Admin (/viewUser)

The screenshot shows the 'Users' page of the TaskNexus application. At the top right, it displays the email 'admin@tasknexus.com' and 'User Account'. On the left is a dark sidebar with icons for Home, Projects, Tasks, and Users. The main area has a header 'Users' and a sub-header 'All Users'. A blue button 'Add User' is at the top right. Below is a table with columns: NAME, EMAIL, REGISTERED, and ACTIONS. The table lists five users: Sarah Johnson, Michael Chen, Emily Rodriguez, David Kim, and Jessica Martinez, all marked as 'Registered'. Each user row has 'Edit' and 'Delete' buttons in the ACTIONS column. At the bottom are navigation links and a copyright notice 'Copyright © 2025 TaskNexus. All rights reserved.' and a version 'Version 1.0.0'.

9. Add/Edit Task (/addTask)

The screenshot shows the 'Add Task' page. At the top right, it displays the email 'admin@tasknexus.com' and 'User Account'. On the left is a dark sidebar with icons for Home, Projects, Tasks, and Users. The main area has a header 'Add Task' and a sub-header 'Task Name *'. It contains fields for 'Task Name' (with placeholder 'Enter task name (3-200 characters)') and 'Description' (with placeholder 'Task description'). Below these are sections for 'Project' (dropdown 'Select Project'), 'Priority' (dropdown 'Select Priority'), 'Deadline' (date input 'mm/dd/yyyy, --::--'), 'Status' (dropdown 'To Do'), and 'Assign To' (dropdown 'Select User'). At the bottom are 'Submit' and 'Cancel' buttons. The footer includes a copyright notice 'Copyright © 2025 TaskNexus. All rights reserved.' and a version 'Version 1.0.0'.