

# Task Management Software

.NET Technologies Project

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## Definition

**Task management** is the process of managing a task through its life cycle. It involves planning, testing, tracking and reporting. Task management can help either individuals achieve goals, or groups of individuals collaborate and share knowledge for the accomplishment of collective goals. Tasks are also differentiated by complexity, from low to high.

Effective task management requires managing all aspects of a task, including its status, priority, time, notifications and so on. These can be lumped together broadly into the basic activities of task management.

Managing multiple individual or team tasks may require specialised software, for example workflow or project management software. In fact, many people believe that task management should serve as a foundation for project management activities.

Project managers adhering to task-oriented management have a detailed and up-to-date project schedule, and are usually good at directing team members and moving the project forward.

## Purpose

### **Problems Faced by the manual system:**

The success of any project depends on the coordination between the team apart from the technical skills. It is often observed in the service sector that due to miscommunication and lack of co-ordination, important notices do not reach people, projects are delayed, deadlines are past and customer dissatisfaction arises.

Hence, a need for an automated system arises wherein a company can have its own network from which projects can be assigned separately. Teams are divided project wise and tasks can be distributed amongst them. Any notice regarding the projects can be broadcasted to the whole team. The elaborate timeline of each task can be viewed, giving complete information about the task's lifecycle. The whole team is alerted when any deadline approaches.

To overcome the problems faced in the current manual system, The Task Management Software has been proposed.

## Key Features and Modules:

### Networks

A network is your company's workplace. It includes all the members in your network i.e your workplace whom you can assign tasks or can get assigned. In order to interact with any user in the Task Management Software, it is necessary for him/her to be part of your network.

- **Invites** : In order to add a member to your network, you will be required to enter the email of the new member. After validating the genuineness of the user , an invite will be sent.
- **Members** : The list of the existing members of the network will be known to the users.
- **Profile**: Each member of the network will have his/her own profile which can be viewed by the other members. Personal details about the member and projects shared can be known.

### Projects

A project is a collection of various tasks. Every company has a number of projects to complete. The Task Management Software allows you to add projects and assign members to them from your network. The project admin has the power to give privileges to edit, delete or modify the project in any way to the project members.

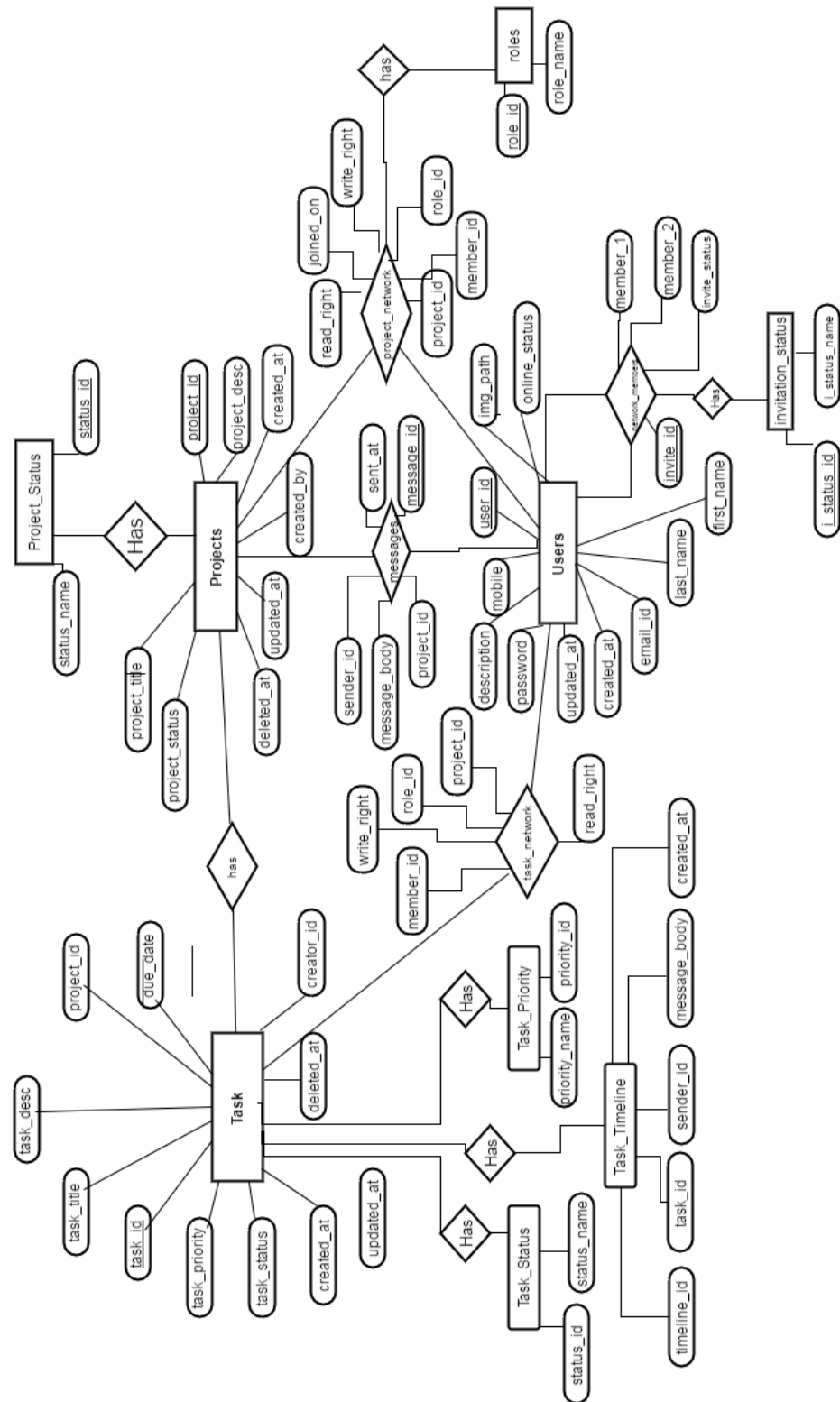
- **Add** : Any user can create a new project and assign members to them, provide edit privileges to them. Only the project admin can delete the project.
- **Access Rights**: The admin can edit the privileges given to the members whether they can read/write any given project.
- **Edit**: Details regarding the project title, description, members, etc can be edited if the required privilege is enabled.
- **Status** : The status of the project whether active, inactive or completed can be changed.

### Tasks

Task is the core module of the Task Management Software. Any member can create a task and assign members from the project network.

- **Create** : Tasks can be created by any user and members can be added only from the project to which the task belongs. Only the admin has the right to close any task.
- **Edit** : Details regarding the task title, description, members, status,priority, etc can be edited.
- **Priority** : The task priority can be set to Very high, High, Medium, Low, None as per the requirement of its delivery.
- **Status** : The status of the task can be set to Active, In progress, Paused, Completed, Closed as per the current working progress of the task.
- **Timeline**: The entire lifecycle of the task can be observed.

## ER Diagram



## Data Dictionary

### ➤ Table Name: users

| Column Name   | Datatype     | Constraints      |
|---------------|--------------|------------------|
| user_id       | varchar(50)  | Primary Key      |
| first_name    | varchar(50)  | Not Null         |
| last_name     | varchar(50)  | Not Null         |
| email_id      | varchar(50)  | Unique, Not Null |
| mobile        | varchar(50)  | Not Null         |
| password      | varchar(50)  | Not Null         |
| description   | varchar(MAX) | -                |
| is_validated  | tinyint      | Not Null         |
| created_at    | datetime     | Not Null         |
| updated_at    | datetime     | -                |
| deleted_at    | datetime     | -                |
| img_path      | varchar(max) | -                |
| online_status | tinyint      | -                |

### ➤ Table Name: user\_verification

| Column Name       | Datatype    | Constraints                    |
|-------------------|-------------|--------------------------------|
| user_id           | varchar(50) | Primary Key, Foreign Key(user) |
| verification_code | varchar(50) | Unique                         |
| created_at        | datetime    | Not Null                       |

## ➤ Table Name: projects

| Column Name    | Datatype     | Constraints                 |
|----------------|--------------|-----------------------------|
| project_id     | varchar(50)  | Primary Key                 |
| project_title  | varchar(50)  | Unique, Not Null            |
| created_by     | varchar(50)  | Not Null, Foreign Key(user) |
| project_desc   | varchar(max) |                             |
| project_status | Int          | Foreign Key(project_status) |
| created_at     | datetime     | Not Null                    |
| updated_at     | datetime     | -                           |
| deleted_at     | datetime     | -                           |

## ➤ Table Name: project\_network

| Column Name | Datatype    | Constraints          |
|-------------|-------------|----------------------|
| project_id  | varchar(50) | Foreign Key(project) |
| member_id   | varchar(50) | Foreign Key(user)    |
| role_id     | int         | Foreign Key(roles)   |
| joined_on   | datetime    | -                    |
| read_right  | int         | -                    |
| write_right | int         | -                    |

## ➤ Table Name: project\_status

| Column Name | Datatype    | Constraints |
|-------------|-------------|-------------|
| status_id   | int         | Primary Key |
| status_name | varchar(50) | -           |

## ➤ Table Name: messages

| Column Name  | Datatype    | Constraints                 |
|--------------|-------------|-----------------------------|
| message_id   | int         | Primary Key                 |
| sender_id    | Int         | Foreign key(user), Not Null |
| message_body | int         | Not Null                    |
| sent_at      | datetime    | Not Null                    |
| project_id   | varchar(50) | Foreign Key(project)        |

## ➤ Table Name: network\_members

| Column Name   | Datatype    | Constraints        |
|---------------|-------------|--------------------|
| invite_id     | int         | Primary Key        |
| member_1      | varchar(50) | Foreign Key(user)  |
| member_2      | int         | Foreign Key(roles) |
| project_id    | datetime    | -                  |
| invite_status | int         | -                  |
| created_at    | datetime    | -                  |



## ➤ Table Name: task

| Column Name   | Datatype     | Constraints                          |
|---------------|--------------|--------------------------------------|
| task_id       | varchar(50)  | Primary Key                          |
| task_title    | varchar(50)  | Not Null                             |
| project_id    | varchar(50)  | Foreign key(project), Not Null       |
| creator_id    | varchar(50)  | Unique, Not Null                     |
| task_status   | varchar(50)  | Foreign key(task_status), Not Null   |
| task_priority | varchar(50)  | Foreign key(task_priority), Not Null |
| due_date      | datetime     | Not Null                             |
| created_at    | datetime     | Not Null                             |
| updated_at    | datetime     | -                                    |
| deleted_at    | datetime     | -                                    |
| task_desc     | varchar(max) | -                                    |

## ➤ Table Name: task\_network

| Column Name | Datatype    | Constraints          |
|-------------|-------------|----------------------|
| task_id     | varchar(50) | Foreign Key(project) |
| member_id   | varchar(50) | Foreign Key(user)    |
| role_id     | int         | Foreign Key(roles)   |
| joined_on   | datetime    | -                    |
| read_right  | int         | -                    |
| write_right | int         | -                    |

## ➤ Table Name: task\_priority

| Column Name   | Datatype    | Constraints |
|---------------|-------------|-------------|
| priority_id   | int         | Primary Key |
| priority_name | varchar(50) | -           |

## ➤ Table Name: task\_status

| Column Name | Datatype    | Constraints |
|-------------|-------------|-------------|
| task_id     | int         | Primary Key |
| task_name   | varchar(50) | -           |

## ➤ Table Name: task\_timeline

| Column Name  | Datatype | Constraints                             |
|--------------|----------|---|
| timeline_id  | int      | Primary Key                             |
| task_id      | int      | Foreign key(task_priority),<br>Not Null |
| sender_id    | Int      | Foreign key(user), Not Null             |
| message_body | int      | -                                       |
| created_at   | int      | -                                       |

## ➤ Table Name: invitation\_status

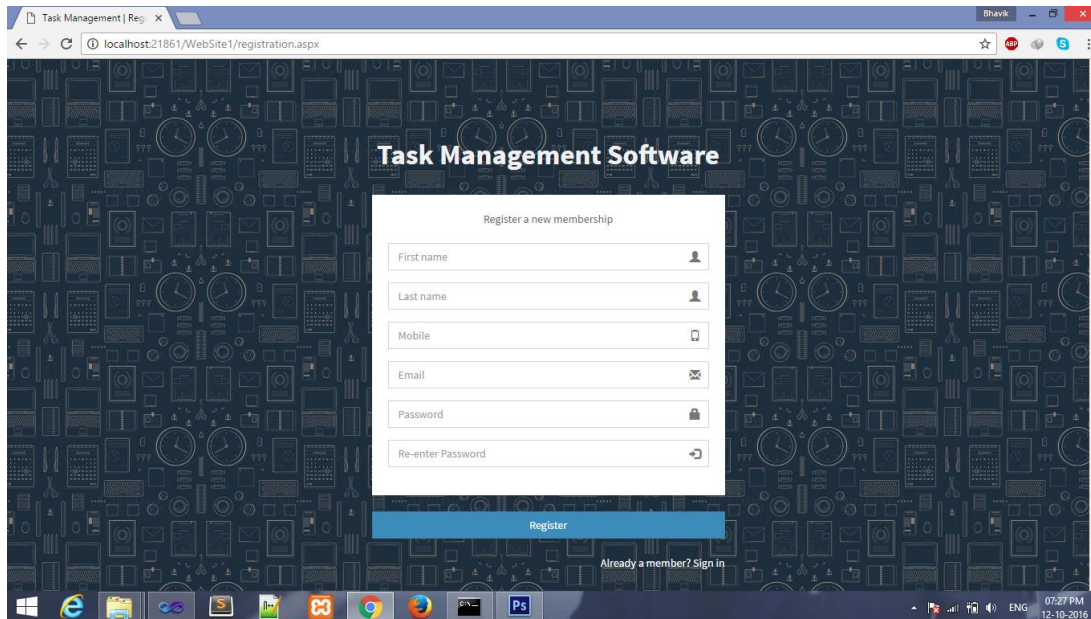
| Column Name   | Datatype    | Constraints |
|---------------|-------------|-------------|
| i_status_id   | int         | Primary Key |
| i_status_name | varchar(50) | -           |

## ➤ Table Name: roles

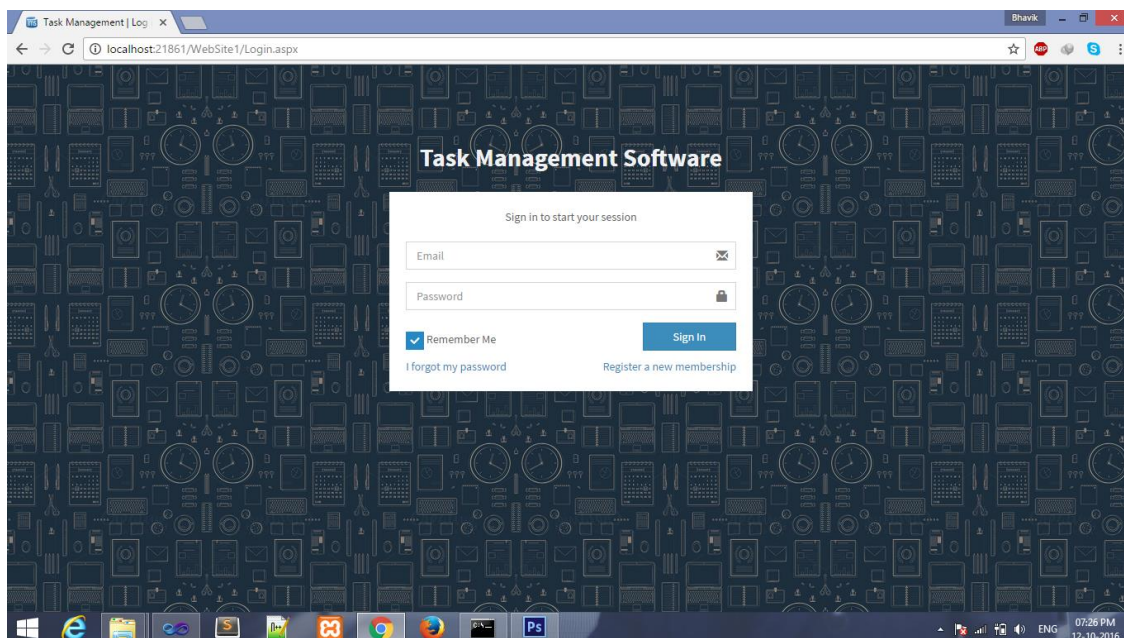
| Column Name | Datatype    | Constraints |
|-------------|-------------|-------------|
| role_id     | int         | Primary Key |
| role_name   | varchar(50) | -           |

## Screenshots

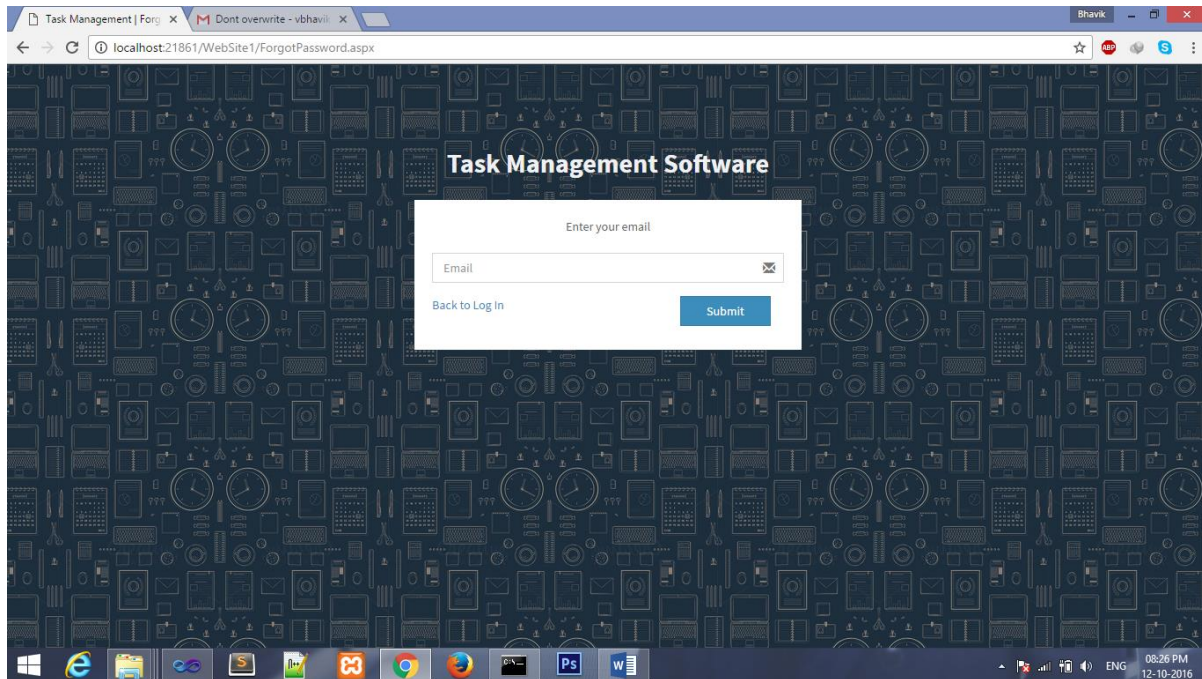
The Registration page for the Task Management Software is as follows, each field is Required Field and gets validated. The Password and Re-enter Password are checked if they are same.



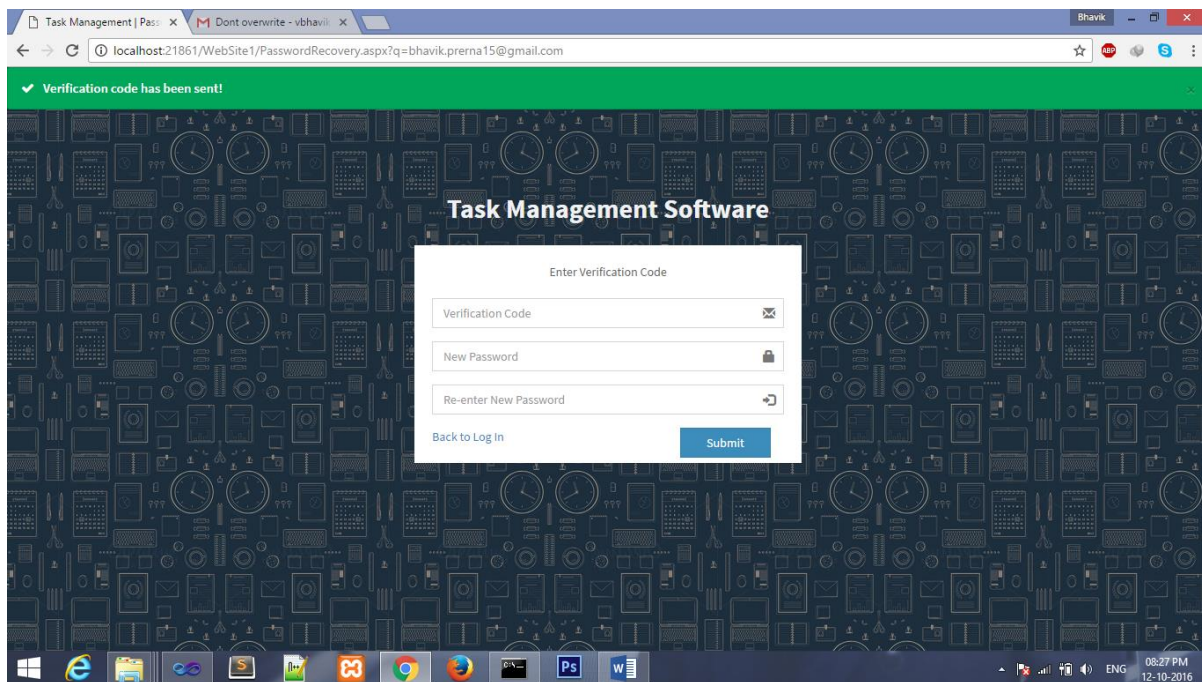
The Login page is as shown. The entered Text in the TextFields are checked in the database whether exist and also if they match. They are required fields. The email format is also checked. The RememberMe cookies are also saved.



The ForgotPassword page is as follows. The user has to enter his email id.

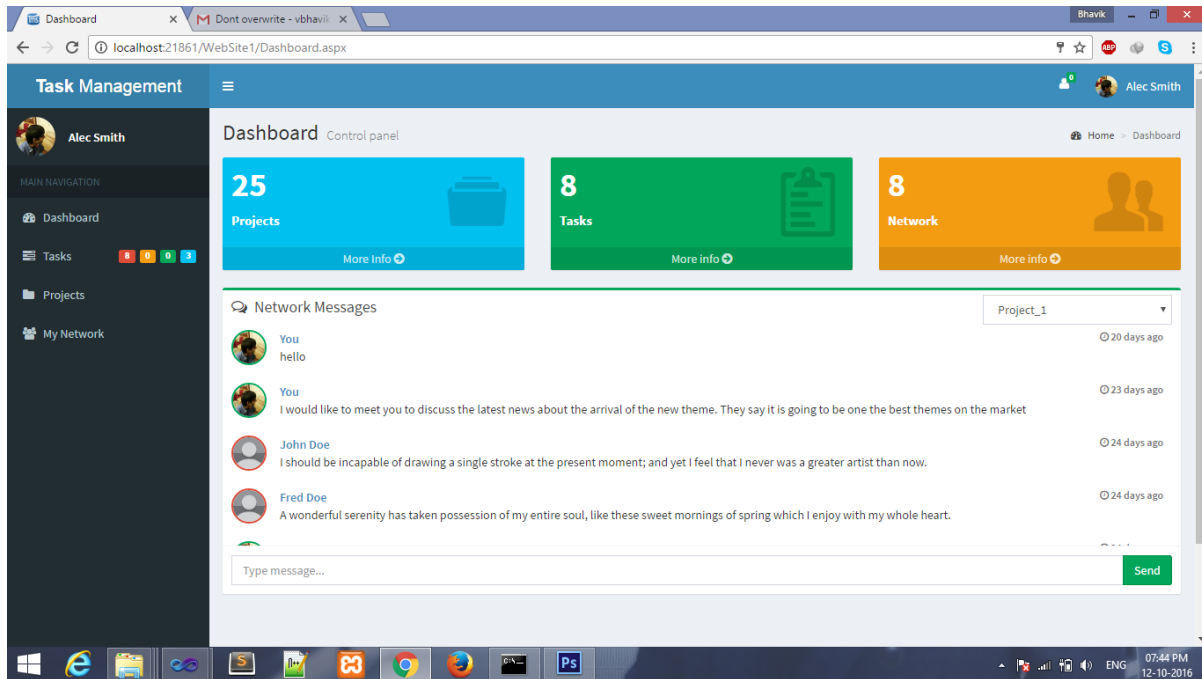


If the entered email is valid, an email containing the verification code is sent. The valid code along with the new password is to be entered.

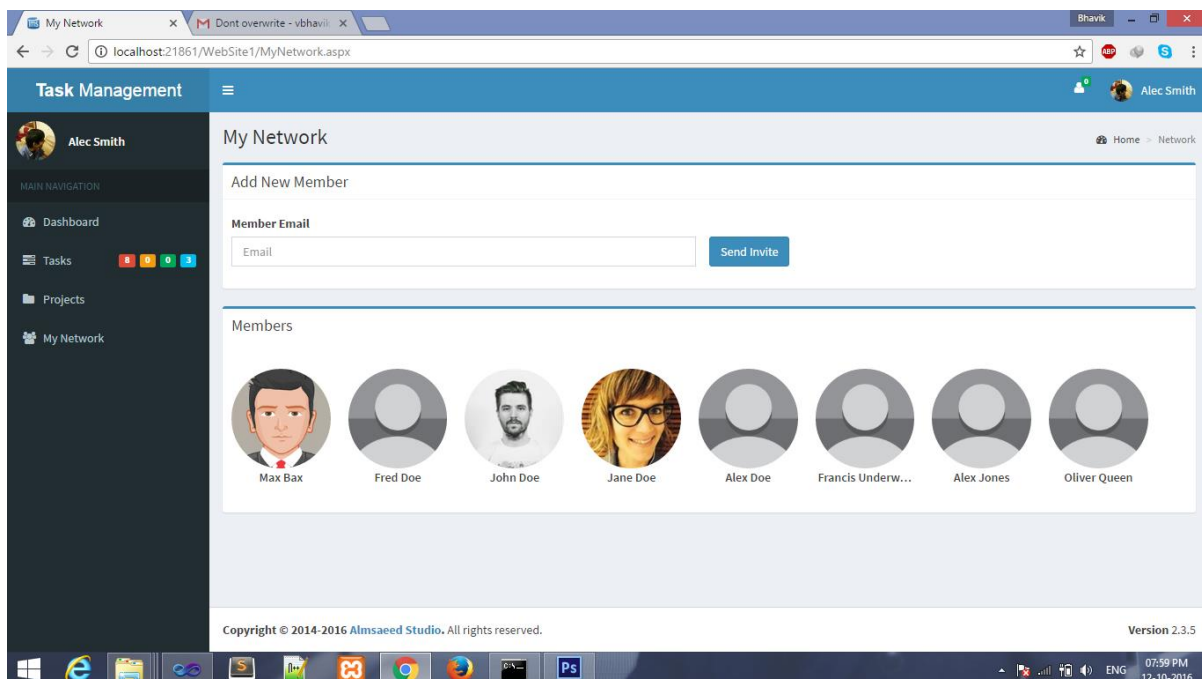




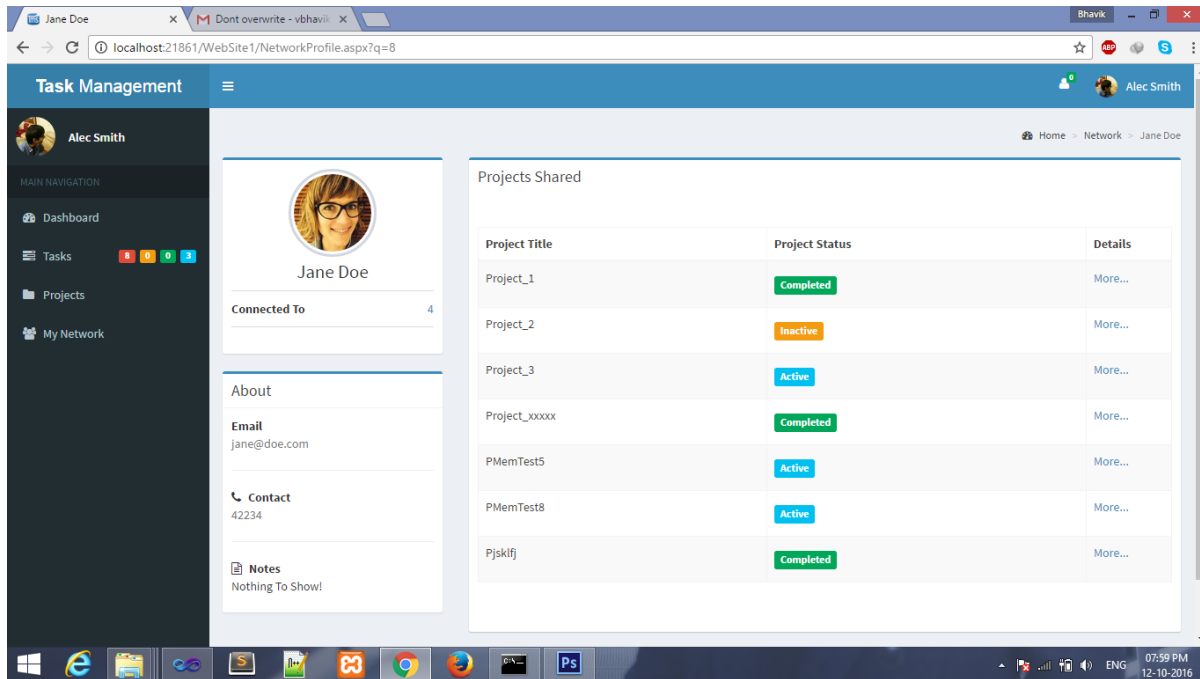
After Logging In successfully, The Dashboard is displayed as followed. The Messages are displayed project wise.



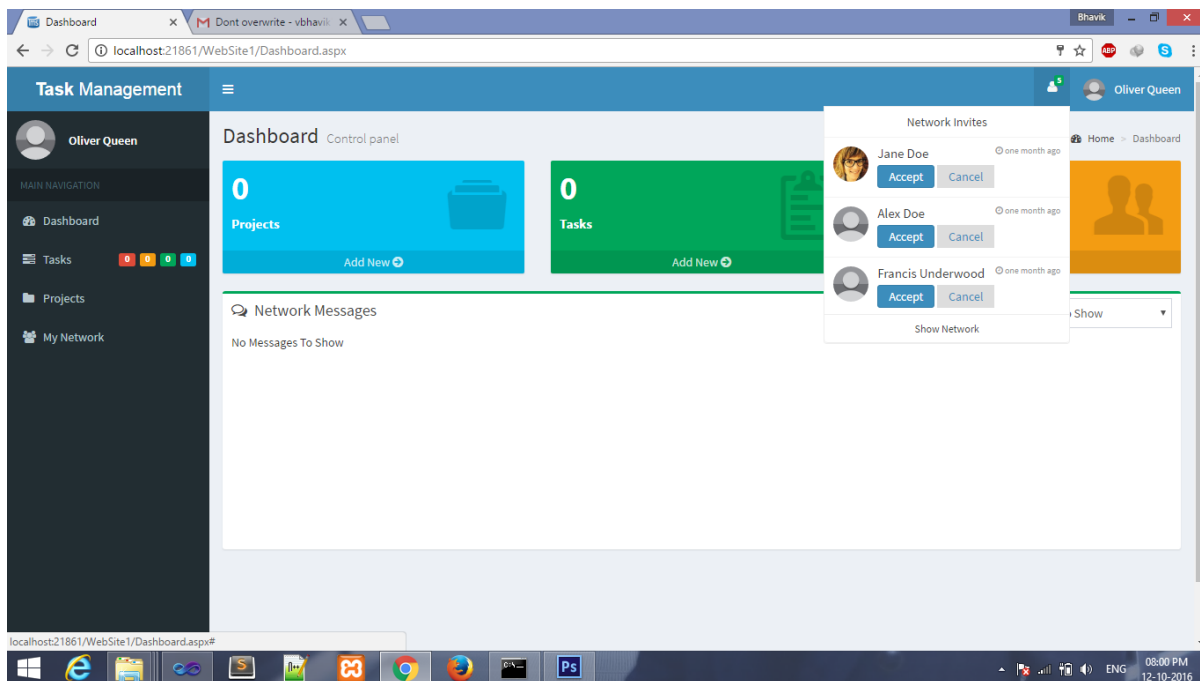
The Network page contains the members present in the network. You can add new members in the Network. The software checks whether the entered user has not already been sent a request and that the user is valid. The user cannot send a request to himself.



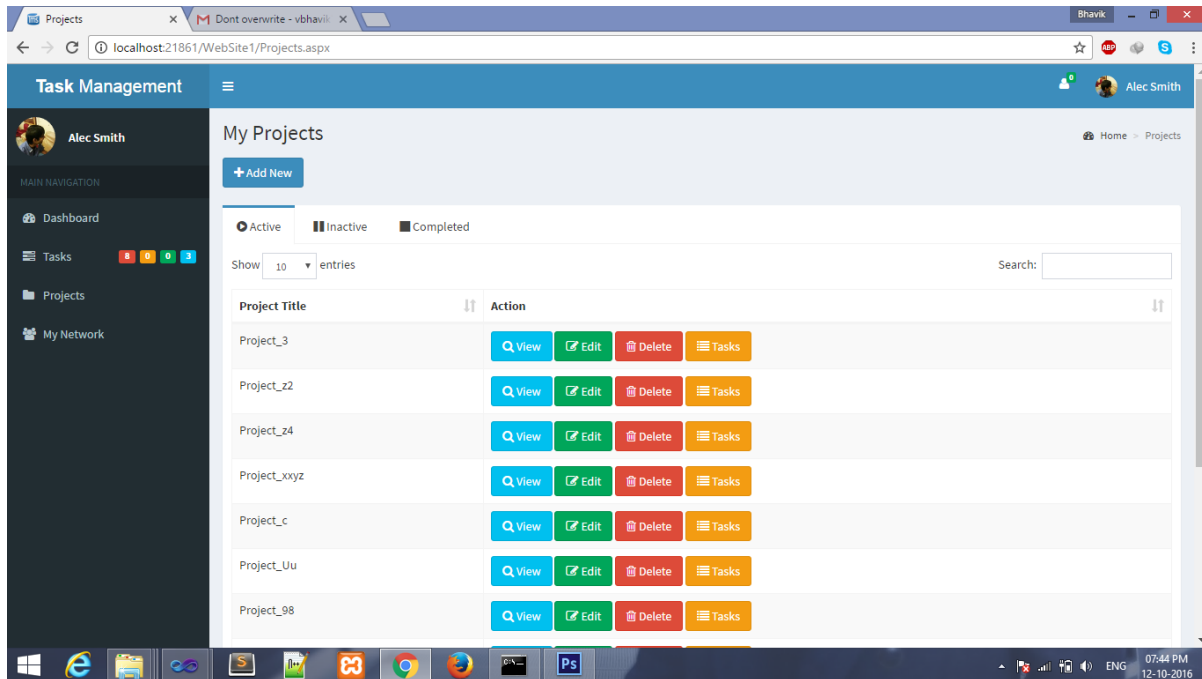
Every user in the network has his/her own network profile which displays personal details along with the Projects shared.



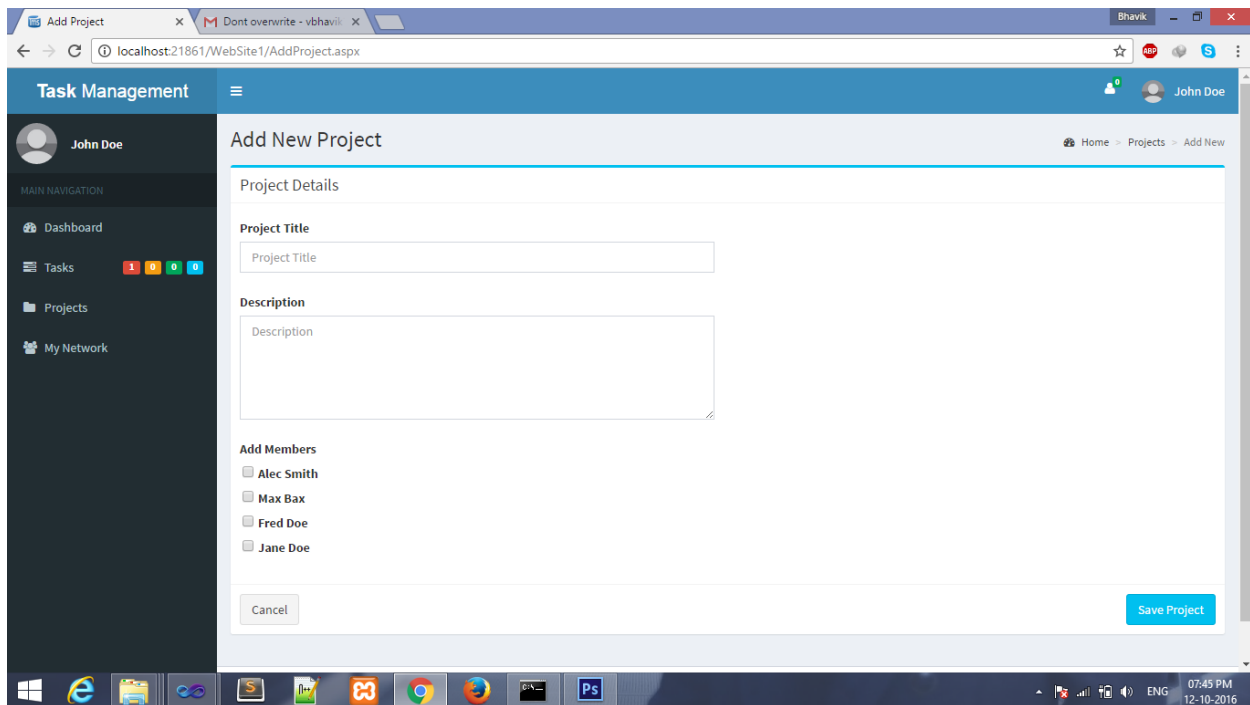
The invites sent to the new members will be received as notifications in the Dashboard.



The Projects page displays the list of Projects which the user is part of.

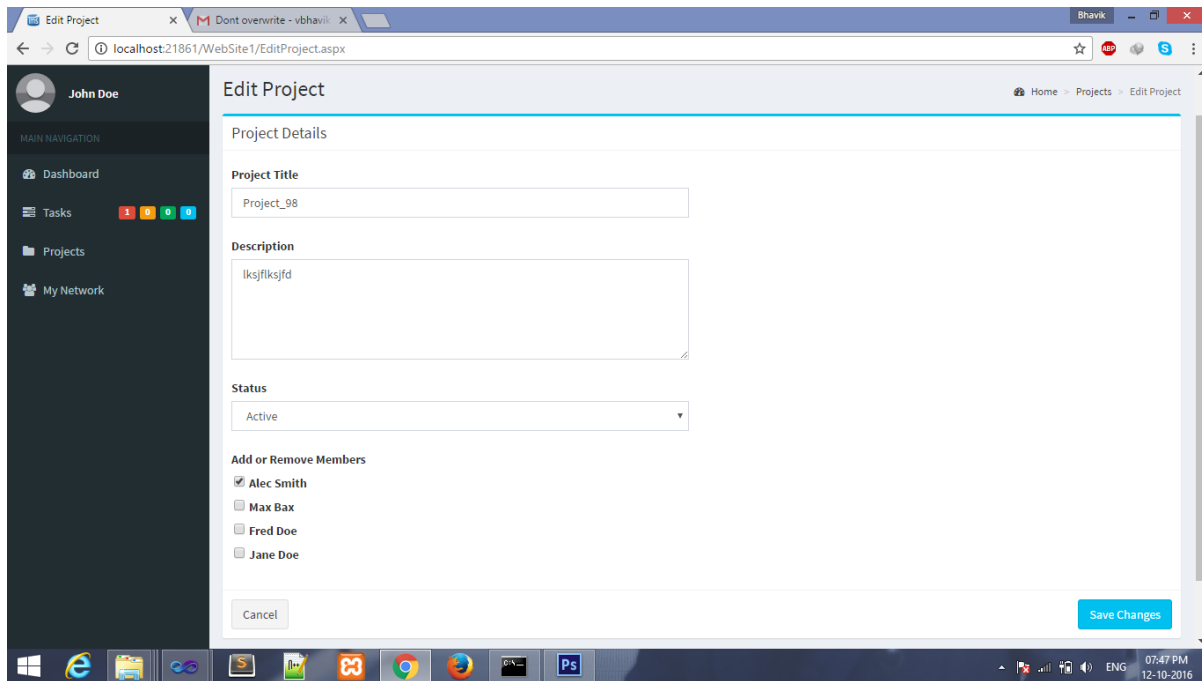


The Add Project page allows you to create new projects and assign members from the existing Network.

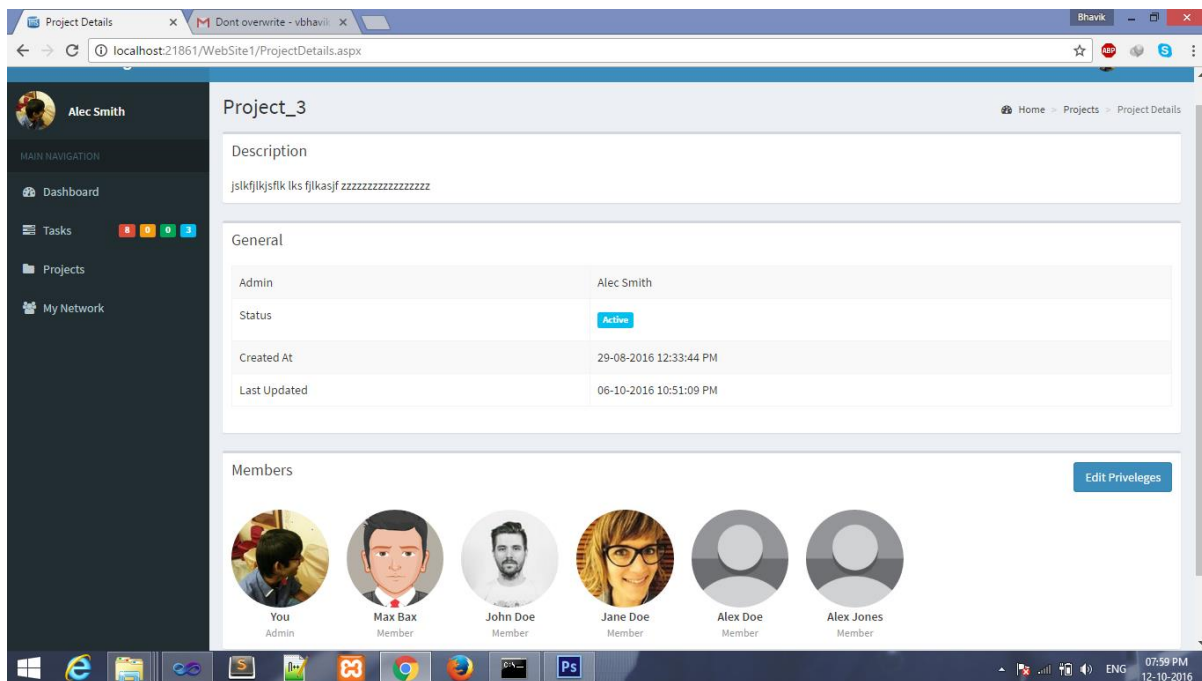




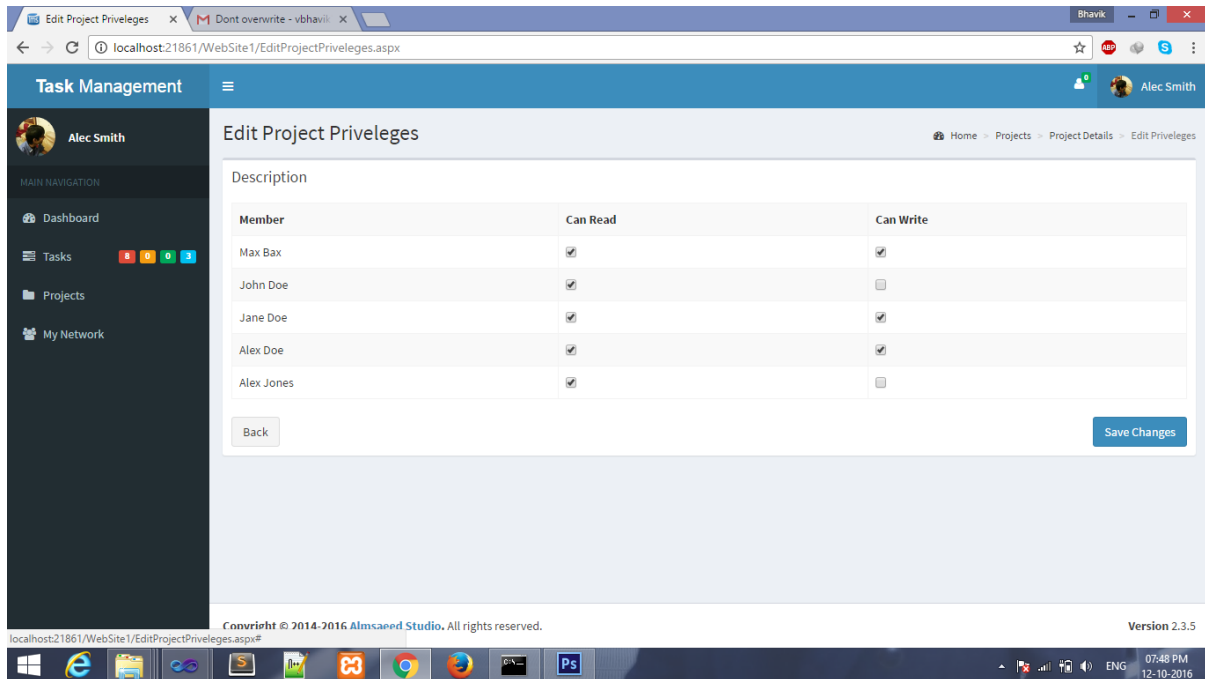
The Edit Project page is used to edit the details regarding the title, members, description, etc. of a particular project.



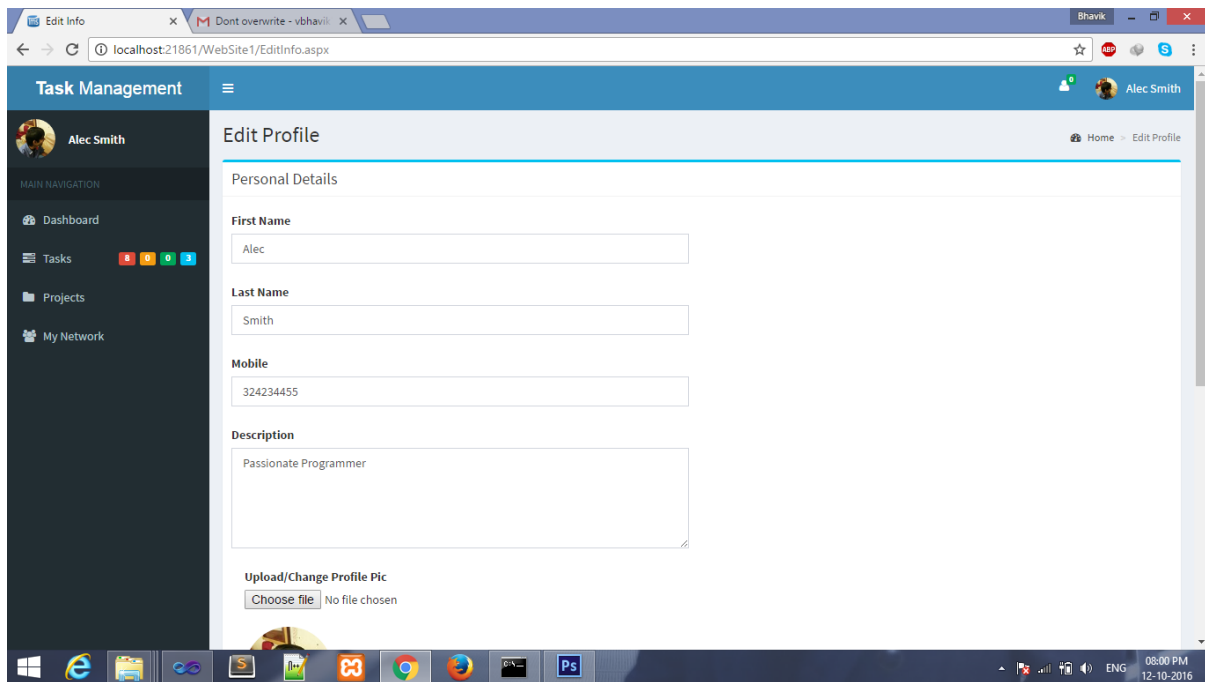
The Project Details gives elaborate information about the selected project such as the status, date of creation, members, etc.



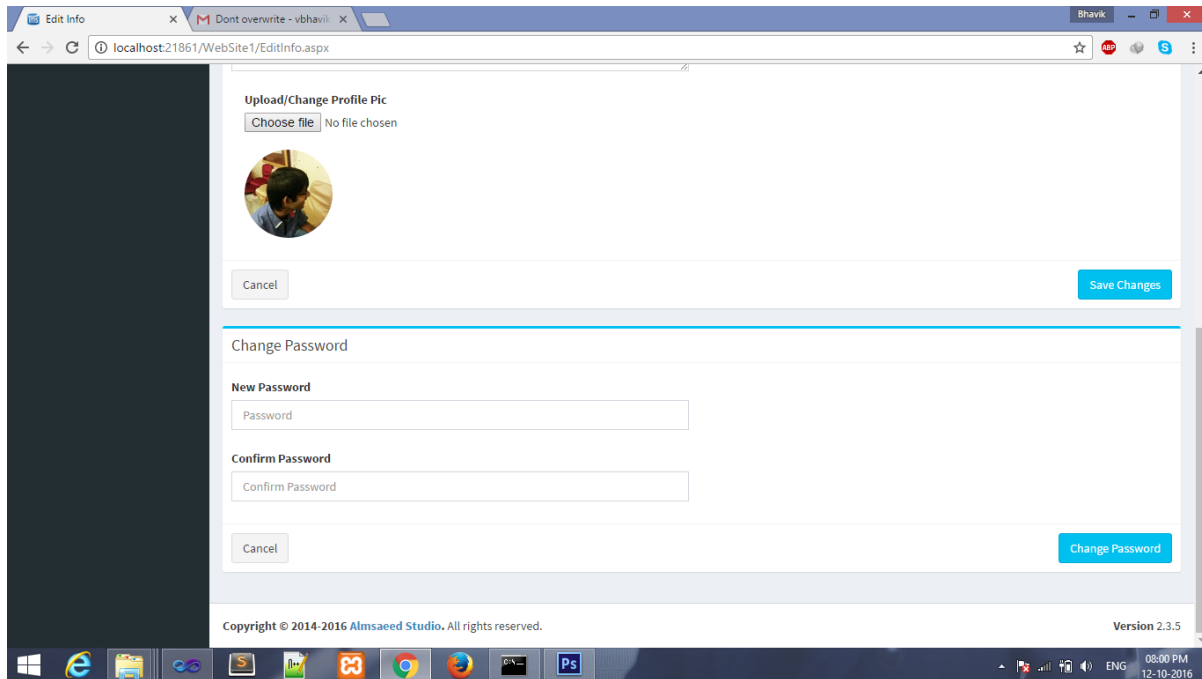
The Edit Privileges is used to grant or revoke read/write permissions to the members in a project.



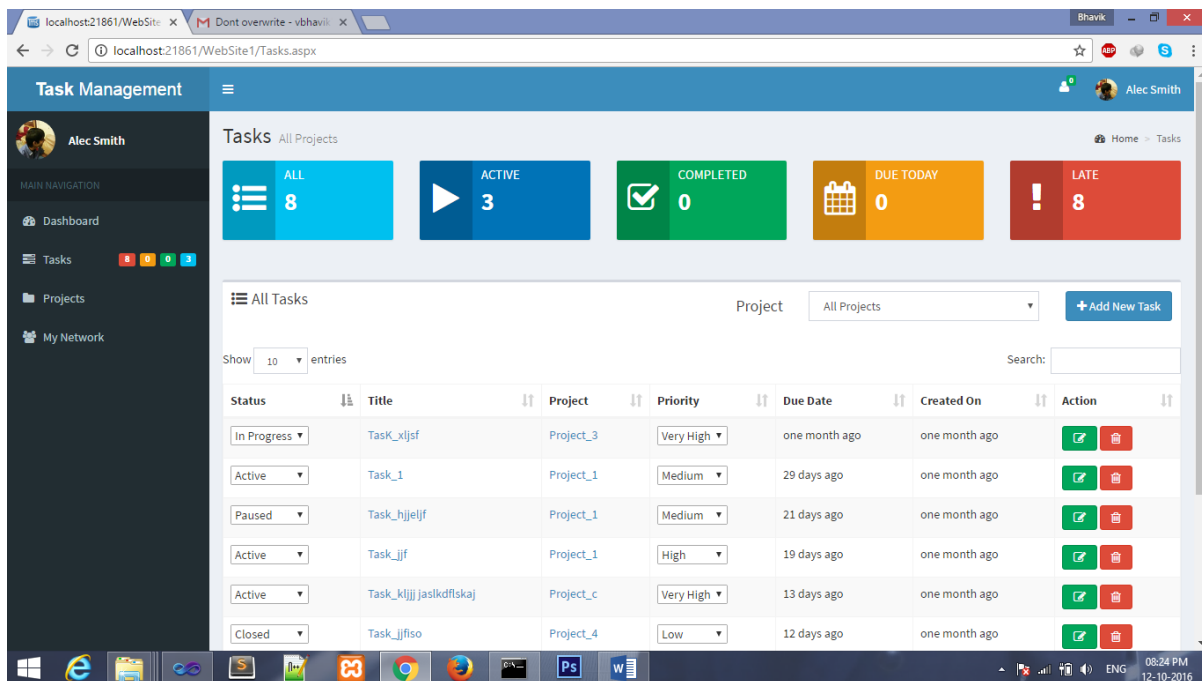
The Edit Profile allows user to update his/her own personal information.



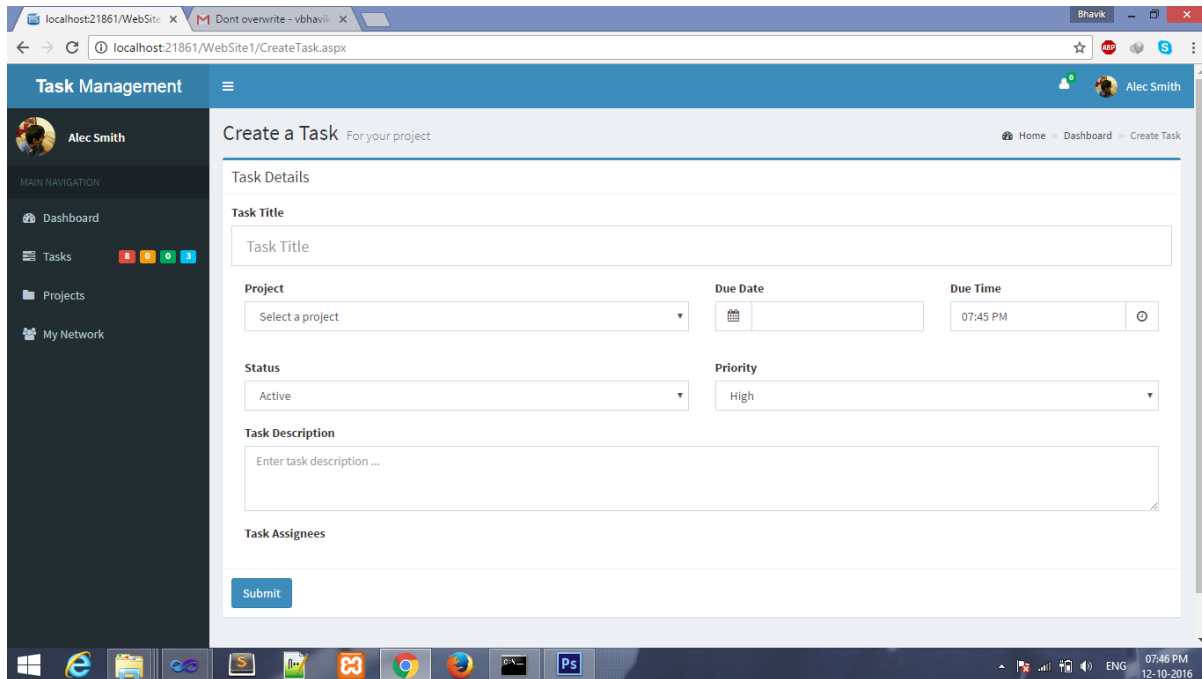
The Edit Profile also allows you to Change Password.



The Tasks Page displays information about the tasks according to different categories such as Active, Completed, Due Today, etc. It also the direct links for Project and Task Details.



The Create Task page allows you to create new task, assign members, projects, status, etc.

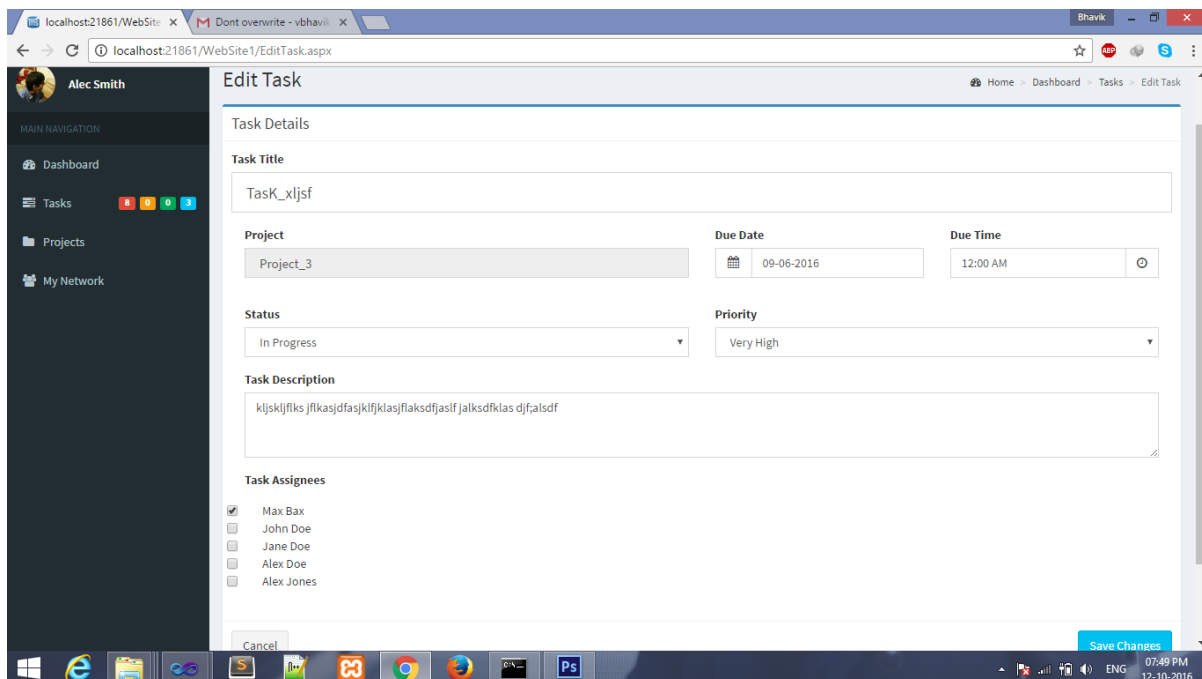


The screenshot shows the 'Create a Task' page in a web application. The page has a dark blue sidebar on the left with the user's profile 'Alec Smith' and navigation links for 'Dashboard', 'Tasks', 'Projects', and 'My Network'. The main content area is titled 'Create a Task' and includes a breadcrumb trail 'Home > Dashboard > Create Task'. The form contains the following fields:

- Task Title:** A text input field with the placeholder 'Task Title'.
- Project:** A dropdown menu with the option 'Select a project'.
- Due Date:** A date picker showing '09-06-2016'.
- Due Time:** A time picker showing '07:45 PM'.
- Status:** A dropdown menu with the option 'Active'.
- Priority:** A dropdown menu with the option 'High'.
- Task Description:** A text area with the placeholder 'Enter task description ...'.
- Task Assignees:** A section for assigning team members, currently empty.

A 'Submit' button is located at the bottom of the form. The browser's address bar shows 'localhost:21861/WebSite1/CreateTask.aspx'.

The Edit Task page allows you to postpone or prepone Due Dates, Task Description and assign tasks to new members.

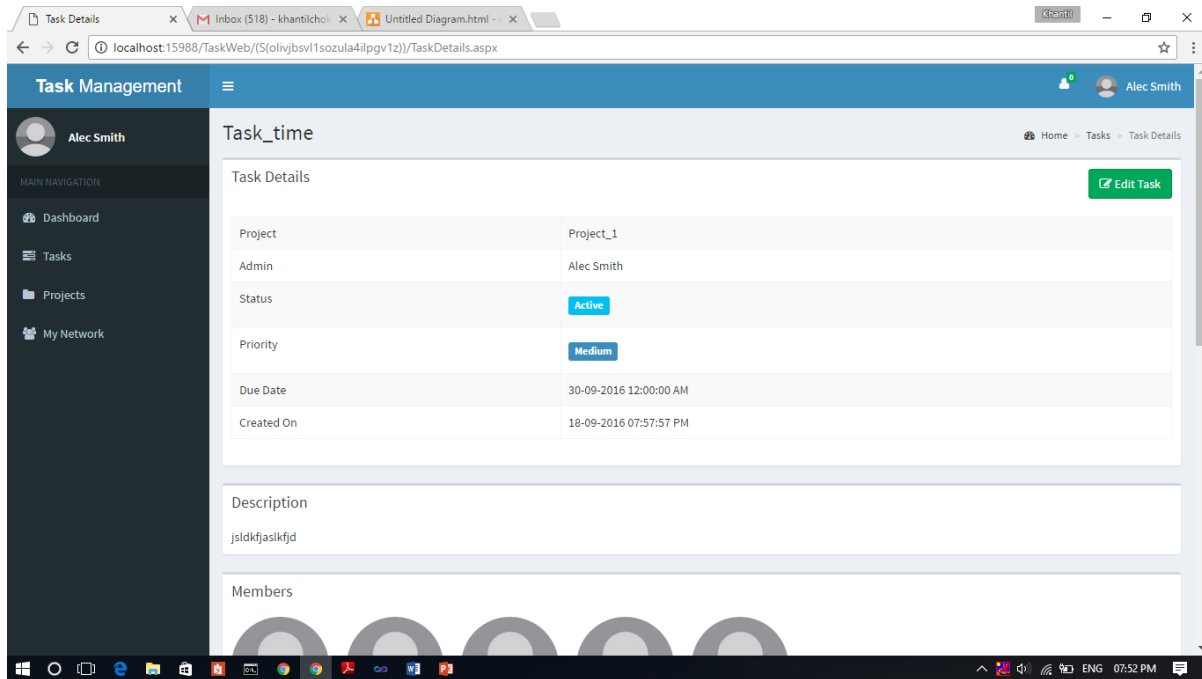


The screenshot shows the 'Edit Task' page in the same web application. The sidebar and breadcrumb trail are identical to the 'Create Task' page. The form contains the following fields:

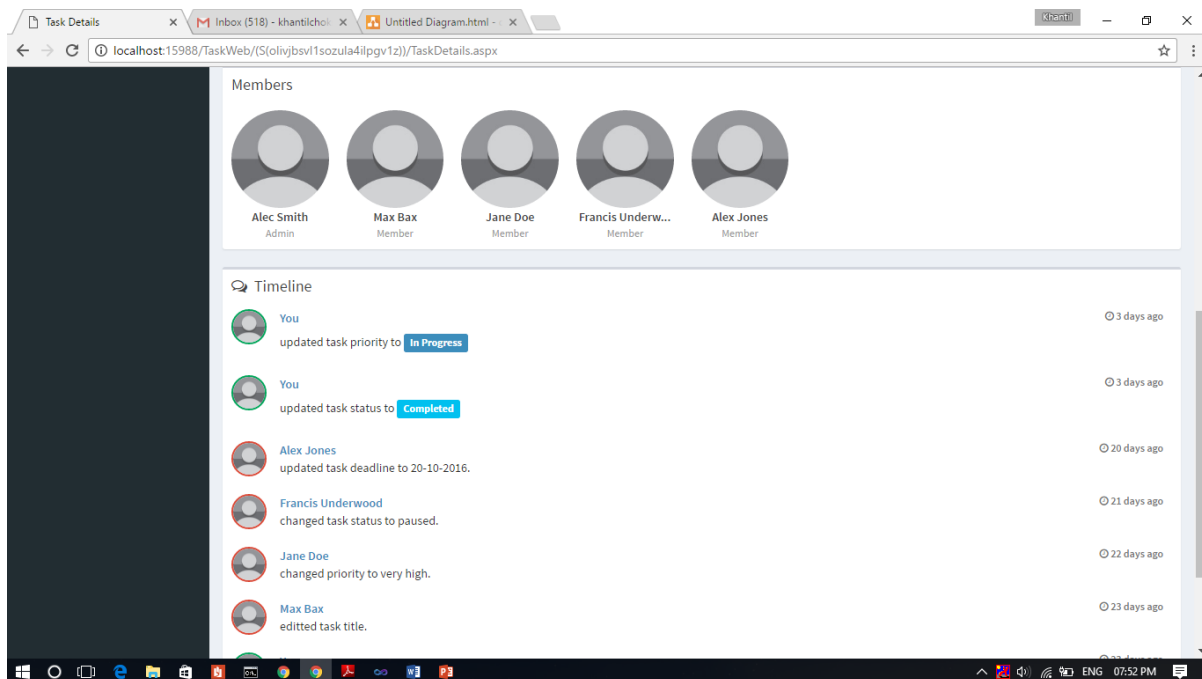
- Task Title:** A text input field containing 'TasK\_xljfsf'.
- Project:** A dropdown menu with the option 'Project\_3'.
- Due Date:** A date picker showing '09-06-2016'.
- Due Time:** A time picker showing '12:00 AM'.
- Status:** A dropdown menu with the option 'In Progress'.
- Priority:** A dropdown menu with the option 'Very High'.
- Task Description:** A text area containing the placeholder text 'kljskljflks jflkasjdfasjkifjklasjflaksdfjaslf jalksdfklas djfalsdf'.
- Task Assignees:** A list of team members with checkboxes: Max Bax (checked), John Doe, Jane Doe, Alex Doe, and Alex Jones.

'Cancel' and 'Save Changes' buttons are located at the bottom of the form. The browser's address bar shows 'localhost:21861/WebSite1/EditTask.aspx'.

The Task Details page displays information regarding the selected task such as Task Title, description, current status, priority with the task Due Date and time.



The Task Timeline gives you the complete log for each and every activity the task members have carried out.



Thank You!