

# Task Manager

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## 1 Introduction

Task Manager is an web-based django application that allows project managers to effectively manage and handle their teams by monitoring and analyzing status of each task allotted to members of the team created.

## 2 Requirements

1. Django 2.1
2. Python 3.6.5
3. Javascript
4. HTML5
5. CSS3
6. Bootstrap 4.2.1
7. JavaScript

## 3 Setup

1. Install all the requirements using python package manager or alternatively you can use Anaconda Package Manager on Windows to install the required packages.
2. Navigate to folder /TaskManager/ and open terminal or command prompt
3. Type python manage.py runserver to start django server
4. Server will be initialized at <http://127.0.0.1:8080>

## 4 Features

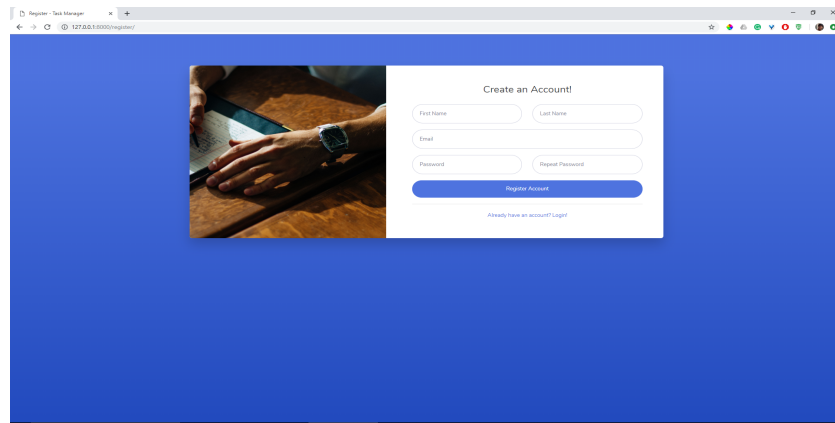
Task Manager has following features which enhances its user experience. You can access following URLs.

1. Login: /login/
2. Register: /register/
3. Profile: /profile/{profile-name}
4. Dashboard: /
5. Settings: /settings/

## 4.1 Authentication System

Task Manager has robust authentication system powered by django's powerful inbuilt authentication system.

### 4.1.1 Register a new User



**Fig. 1.** Registration Form

To register a new user navigate to `/register/` and fill up all the required fields. After registration is complete the user is redirected to login page. Following are the fields in the registration form.

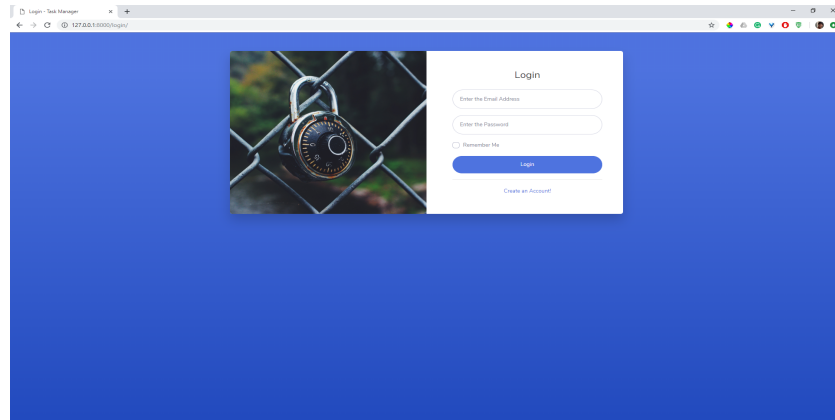
1. First Name
2. Last Name
3. Email
4. Password

**Template:** `register.html`

**View:** `RegisterView`

### 4.1.2 Login for existing User

To login to dashboard navigate to `/login/` and type your registered email address and password. After successful authentication it will redirect you to dashboard.



**Fig. 2.** Login Form

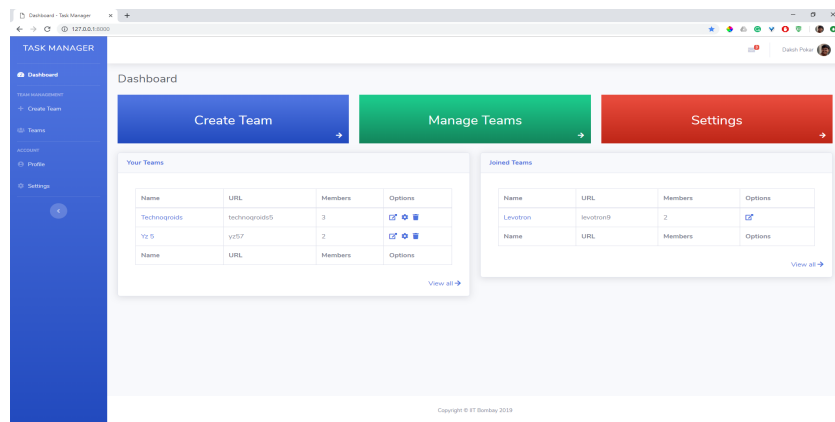
Following are the fields in login form.

1. Email
2. Password

**Template:** login.html

**View:** LoginView

## 4.2 Dashboard



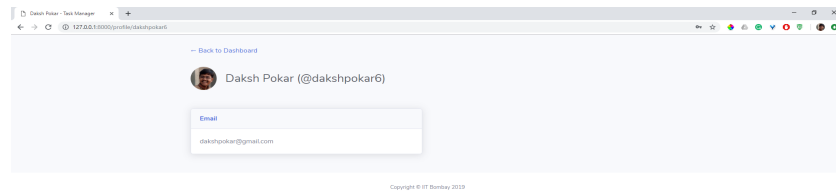
**Fig. 3.** Dashboard

Dashboard displays various options for the user. It has essentials tools for better management of the teams and also each team has their own personalized dashboard.

**Template:** dashboard.html

**View:** Dashboard

### 4.3 Profile



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**Fig. 4.** Profile

Profile page displays the basic information about every user. To open a profile, type, `/profile/{username}/`. This section is visible without logging in using credentials.

**Template:** profile.html

**View:** ProfileView

### 4.4 Settings

Settings page provides facility to edit all the basic information about user. To open settings, type, `/settings/`.

**Template:** settings.html

**View:** SettingsView

The screenshot shows the 'Settings' page of the Task Manager application. The left sidebar contains a navigation menu with options: Dashboard, Team Management, Create Team, Teams, Account, Profile, and Settings (which is highlighted). The main content area is titled 'Settings' and contains several input fields: 'First Name' (with 'Dish' entered), 'Last Name' (with 'Polar' entered), 'Email' (with 'dishpolar@gmail.com' entered), and 'Username' (with 'dishpolar0' entered). There is also a 'Profile Picture' section with a 'Choose File' button and a note 'No file chosen'. An 'Update Profile' button is located to the right of the profile picture section. The footer of the page reads 'Copyright © IT Bombay 2019'.

**Fig. 5.** Settings

## 4.5 Team Management

This allows the project managers to create and manage teams they have joined or created.

### 4.5.1 Creation of Teams

The screenshot shows the 'Create Team' page of the Task Manager application. The left sidebar is the same as in the previous figure, with 'Create Team' highlighted. The main content area is titled 'Create Team' and contains a form with two sections: 'Enter the name of Team' with a 'Team Name' input field, and 'Add Users to Team' with a list of users and a blue plus button to add more. A 'Next' button is located at the bottom right of the form. The footer of the page reads 'Copyright © IT Bombay 2019'.

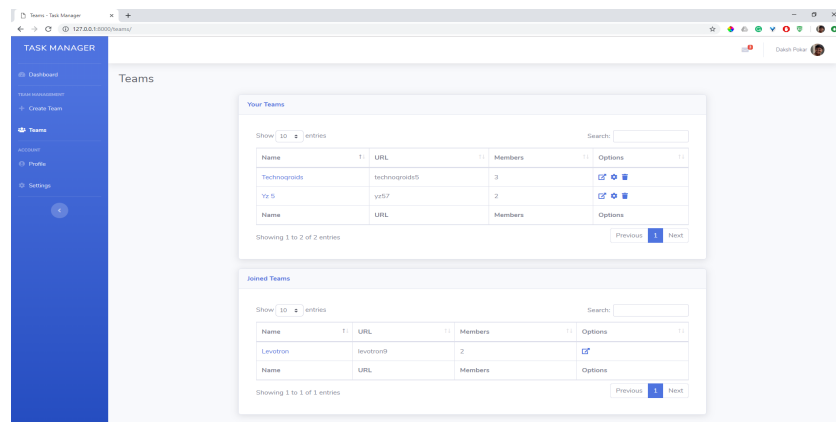
**Fig. 6.** Creation of Team

1. To create a team navigate to `/create-team/` url
2. Enter the name of the team.
3. Click the `+` icon to add a team member.
4. Enter the email address of a registered user.

**Template:** `create-team.html`

**View:** `CreateTeamView`

#### 4.5.2 Display all your Teams



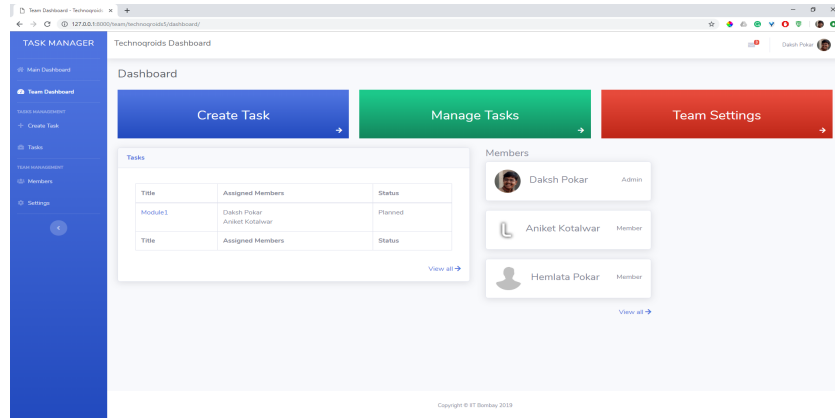
**Fig. 7.** Teams

Navigate to `/teams/` url. This page will display all the teams you created or joined in a tabular form. The table has Four Columns: Name, URL, Members and Options. Options column has 3 links for the teams you created: *Open Team Dashboard*, *Team Settings* and *Delete Team* otherwise options column has one link, *Open Team Dashboard*. You can also search for team using name, member or even member count by using search box at the top-right corner.

**Template:** `teams.html`

**View:** `TeamView`

## 4.6 Team Dashboard



**Fig. 8.** Team Dashboard

Team Dashboard allows us to manage all the tasks related to the particular team. To open team dashboard visit `/team/{team-name}/dashboard/`.

**Template:** `team/dashboard.html`

**View:** `SpecificTeamView`

## 4.7 Task Management

In teams page you will find Task Management which allows us to create and manage tasks

### 4.7.1 Create Task

To create a task go to `/team/{team-name}/create-task/` and enter the title, description, members and status for the task. Description of task can be in HTML format which allows task creator to embed images, videos, or any other links or files.

**Template:** `team/create-task.html`

**View:** `CreateTaskView`

Technogrids Dashboard

### Create Tasks

**Enter the name of Task**

Task Title

**Enter description for the task**

Description: Task Description (Can be in HTML)

Preview:

**Assign Members to Task**

- ☒ Dakh Pokar
- ☐ Aniket Kotahwar
- ☐ Hemanta Pokar

**Status**

- ☒ Planned
- ☐ In Progress
- ☐ Done

Next

Fig. 9. Creation of Task

#### 4.7.2 Display all Tasks

To view all the tasks that are assigned to your team simply visit `/team/{team-url}/tasks/`.

**Template:** team/tasks.html

**View:** TasksView

Technogrids Dashboard

### Tasks

**All Tasks (1)**

Show 10 entries

Title	Date Created	Assigned Members	Created by	Status	Options
Module1	March 9, 2019, 12:34 p.m.	Dakh Pokar Aniket Kotahwar	Dakh Pokar	Planned	<a href="#">Edit</a> <a href="#">Delete</a>

Showing 1 to 1 of 1 entries

Previous 1 Next

**Assigned Tasks**

Title	Date Created	Assigned Members	Created by	Status	Options
Module1	March 9, 2019, 12:34 p.m.	Dakh Pokar Aniket Kotahwar	Dakh Pokar	Planned	<a href="#">Edit</a> <a href="#">Delete</a>

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Fig. 10. Tasks

#### 4.7.3 Display Specific Task



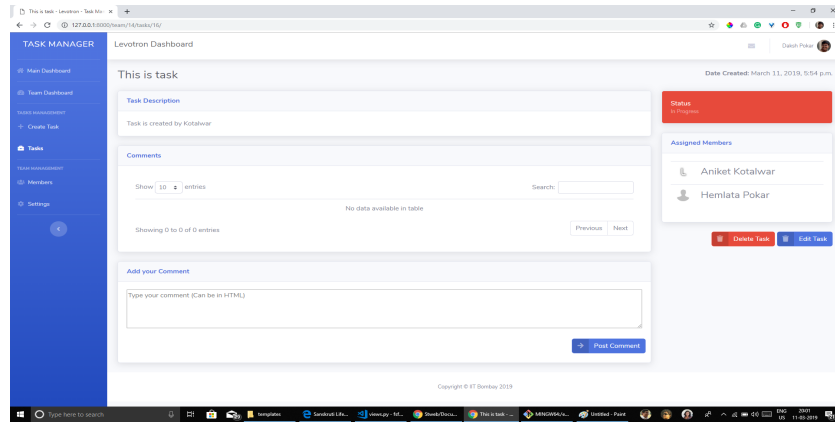


Fig. 11. Specific Task

Allows us to view the created task. To open a specific task visit `/team/{team-url}/task/{task-id}/`

**Template:** `team/specific-task.html`

**View:** `SpecificTaskView`

#### 4.7.4 Comment section of each task

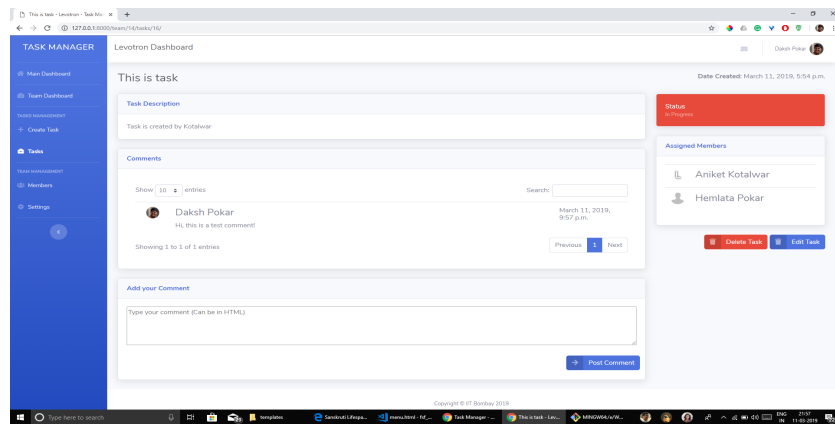


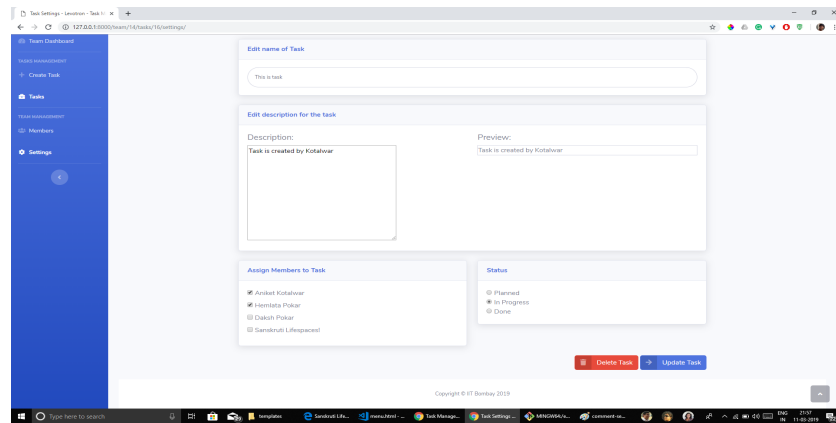
Fig. 12. Comment Section in Task

Allows us to comment on specific task. To comment on a specific task visit `/team/{team-url}/task/{task-id}/`

**Template:** `team/specific-task.html`

**View:** `SpecificTaskView`

#### 4.7.5 Editing a Task



**Fig. 13.** Task Settings

Allows us to edit the created task. To edit a specific task visit `/team/{team-url}/task/{task-id}/settings/`

**Template:** `team/task-settings.html`

**View:** `TaskSettings`

### 4.8 Team Management

Provides all the functionalities to manage the team effectively.

#### 4.8.1 Display Members of Team

Displays list of members in the team along with their status.

**Template:** `team/members.html`

**View:** `MembersView`

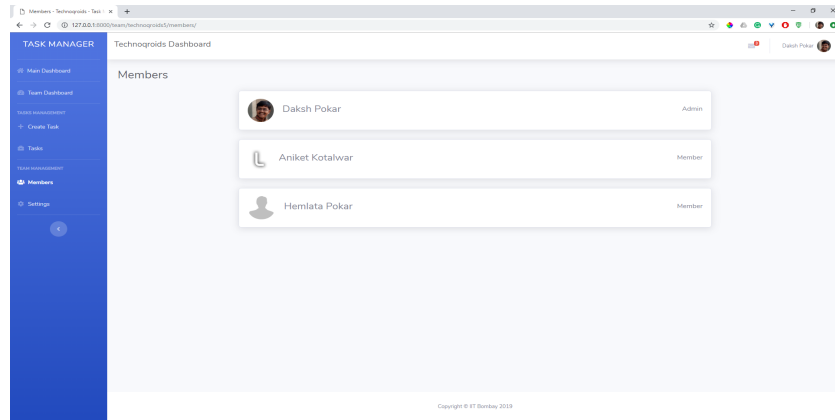


Fig. 14. Members

#### 4.8.2 Team Settings

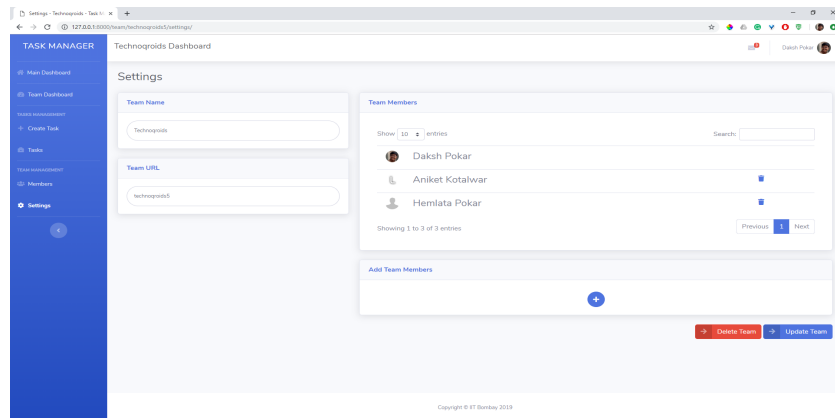


Fig. 15. Team Settings

Allows admin of the team to edit Team Name or Team URL. Along with that it allows admin to add or remove members from team. Also admins can delete team.

**Template:** team/settings.html

**View:** TeamSettingsView

## 5 Table Structure

### 5.1 UserProfile

Fields: *user(User)*, *username* and *profile\_picture*

### 5.2 Teams

Fields: *id*, *name*, *url*, *admin(UserProfile)*, *members(UserProfile)*

### 5.3 Task

Fields: *id*, *belongs\_to(Teams)*, *title*, *created\_by(UserProfile)*, *desc*, *assigned\_members(UserProfile)*, *status*, *date\_created*, *url*

### 5.4 Comments

Fields: *id*, *date\_generated*, *message*, *task(Task)*, *user(UserProfile)*

### 5.5 MessageNotification

Fields: *id*, *user(UserProfile)*, *comment(Comments)*, *task*, *unread*

## 6 Test Cases

### 6.1 Case 1: Creating Team with Symbols in Name and a no additional members

**Expected Output:**

Team creation successful with only the creator as the member.

**Actual Output:**

Team is created successfully and team dashboard is opened successfully. For verification, a task was also added.

**Result:** *Pass*

### 6.2 Case 2: Trying to open a team using URL to which current user is not member

**Expected Output:**

Will result in 404 error.

**Actual Output:**

Resulted in 404 error and a redirect link for dashboard is provided.

**Result:** *Pass*

**6.3 Case 3: Trying to delete members from team using URL without being admin of team****Expected Output:**

Will not allow to perform that action.

**Actual Output:**

Action was discarded and page was redirected to dashboard.

**Result:** *Pass*

**6.4 Case 4: Adding a team member already added to the team in Team Settings****Expected Output:**

There will be no action.

**Actual Output:**

There was no action as user is already in the team.

**Result:** *Pass*

**6.5 Case 5: Attempting to delete a task created by another user who is not admin.****Expected Output:**

Will not discard the request.

**Actual Output:**

The request was discarded and user was redirected to dashboard.

**Result:** *Pass*

## 7 Scope for Improvement

1. An alert system to notify users.
2. A public team page.
3. Loading pages dynamically without reloading.
4. Team Invite Code System.
5. Adding more details in Profile Section for each user.
6. Adding graphs in Team Dashboard to display insights from the completed tasks.
7. Using Spam Filter to classify spam comments in the Comment Section of a Task.
8. Ability for task creators to add custom labels to each task instead of common three.
9. Adding more improvements to current message notification system.
10. Real-time comment section in each task.
11. A spam filter for task description.

**Link to GitHub repository:**

[https://github.com/dakshpokar/fsf\\_2019\\_screening\\_task1](https://github.com/dakshpokar/fsf_2019_screening_task1)