**Task Manager System Overview**

Our Task Manager System is a Python-based application that aids in task management according to five departments. It relies on a MySQL database to store task and user data.

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**Features**

**User Authentication and Authorization**

* User Sign-Up and Login: Users can securely create accounts and log in.

**User Management**

* Admin Capabilities: Admins can perform CRUD operations on users, including creating, viewing, updating, and deleting user information.
* Role-based Access: Different roles like admin, manager, and employee have distinct permissions within the system.

**Department Management**

* Department Creation: Users can be assigned to departments such as sales, marketing, HR, finance, and operations during account creation.
* Department Tasks: Managers have access to view tasks assigned to users in different departments.

**Task Management**

* Task Creation: Users can create tasks with descriptions, assignees, and due dates.
* Task Editing: Modification of task details like assignments, due dates, and descriptions.
* Task Deletion: Users can delete tasks they've created or have permissions for.
* Mark Tasks as Done: Functionality to mark tasks as completed.

**Reporting and Analytics**

* Task Status Reports: Generate reports showcasing task statuses - completed and pending tasks.
* Task Metrics: Calculate and display statistics like completion percentages, overdue tasks, etc.

**Email Notifications**

* Task Assignment Notifications: Automatic email notifications sent when a task is assigned.
* Reminder Emails: Alerts for upcoming due dates or overdue tasks.

**Getting Started (Prerequisites)**

1. Python installation.
2. MySQL server installation (<https://dev.mysql.com/downloads/installer/>)

***\*\*\* Please notice to remove all your old database in MySQL if the program prompts an error that it cannot connect to the database\*\*\****

1. pwinput() installation: Execute pip install pwinput in the terminal.
2. Replace the database password located in databasePassword.py with your own used during MySQL server initiation.

**Running the Program**

* Execute python main.py in the terminal to launch the application.
* The program will automatically create the required tables if they don’t exist
* There will be two options: Login and Quit. The default login information are.

username: admin

password: pA1@

The following are the features the user can have access to according to their role.

|  |  |  |  |
| --- | --- | --- | --- |
| Role | Admin | Manager | Employee |
| List tasks | ✓ | ✓ | ✓ |
| Assign task | ✓ | ✓ |  |
| Delete task | ✓ | ✓ |  |
| Mark task as done | ✓ | ✓ |  |
| Edit task details | ✓ | ✓ |  |
| Generate report | ✓ | ✓ |  |
| Manage user | ✓ |  |  |
| View department tasks |  | ✓ |  |