VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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A File Structures Mini Project Report

on

"TASK MANAGEMEN SYSTEM"

Submitted in Partial fulfillment of the Requirements for the VI Semester of the Degree of

Bachelor of Engineering

In

Information Science & Engineering

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Certificate

This is to certify that the project entitled **"Task Management System"** has been successfully completed by **NIVEDITA (1CR20IS102), RITIK KUMAR SINGH (1CR20IS128), ADITYA PRATAP CHAUHAN (1CR20IS010)** bonafide students of CMR Institute of Technology in partial fulfillment of the requirements for the award of degree of Bachelor of Engineering in **Information Science and Engineering** of the Visvesvaraya Technological University, Belgaum during the academic year 2022-2023. It is certified that all the corrections/suggestions indicated for Internal Assessment have been incorporated in the project report. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

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DECLARATION

We, **NIVEDITA (1CR20IS102), RITIK KUMAR SINGH (1CR20IS128), ADITYA PRATAP CHAUHAN (1CR20IS010)** bonafide students of CMR Institute of Technology, Bangalore, hereby declare that the dissertation entitled, "Hospital Record Management System" has been carried out by us under the guidance of **Prof. Vyshali Rao**, Asst. professor CMRIT, Bangalore, in partial fulfillment of the requirements for the award of the degree of Bachelor of Engineering in Information Science Engineering, of the Visvesvaraya Technological University, Belgaum during the academic year **2022-2023**. The work done in this dissertation report is original has not been submitted for any other degree in any university.

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RITIK KUMAR SINGH (1CR20IS128),
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ABSTRACT

The Task Management System is a software application designed to help users organize and track tasks. It provides functionality to create, manage, and monitor tasks in an efficient manner. The system consists of the following main components:

Task: Represents an individual task with properties such as name, description, and status. It encapsulates the details of a task and provides methods to mark a task as complete.

Task Manager: Manages the collection of tasks. It provides operations to add new tasks, mark tasks as complete, delete tasks, and retrieve the task list. The Task Manager acts as an interface between the user interface and the underlying data.

User Interface: Provides an interactive interface for users to interact with the Task Management System. It allows users to input task details, view the task list, mark tasks as complete, and delete tasks. The user interface can be implemented using a graphical user interface (GUI) framework or a command-line interface (CLI).

Persistence: The system includes functionality to save and load tasks from a file. This ensures that task data is preserved across application sessions. The tasks can be serialized and stored in a file using a suitable format such as JSON or CSV.

The Task Management System simplifies task organization, improves productivity, and facilitates effective task tracking. It can be customized and extended to meet specific requirements and integrated with other systems as needed

Chapter 1

INTRODUCTION

1. Brief History of File Structures

Task management systems have evolved from simple file structures to more sophisticated approaches. Initially, plain text files and basic spreadsheets were used to store task information. Then, structured formats like XML and JSON allowed for hierarchical organization. The advent of databases enabled advanced features like task prioritization and collaboration. Cloud computing facilitated web-based systems for real-time access and collaboration. Today, a combination of file storage and databases is often used, with files stored in cloud-based storage and metadata in databases. Task management systems have continuously adapted to meet user demands for functionality, collaboration, and data management.

Primary Goals for Design of File Structures:

Efficiency: The file structure should provide efficient storage and retrieval of task data. It should minimize storage space requirements and optimize access and search operations.

Organization: The file structure should facilitate the logical organization of tasks. Tasks should be grouped, categorized, or sorted based on attributes like priority, status due date, or assigned user.

Scalability: The file structure should be able to handle a growing number of tasks without significant degradation in performance. It should support efficient insertion, deletion, and modification of tasks as the system scales.

Chapter 2

ABOUT THE PROJECT

1.1 Problem Statement

Write a program in any suitable language of your choice which will Help to manage the task Management System from the given directory and list it out.

1.2 Objective of the project

- Task Organization: Provide a platform for users to create, categorize, and prioritize tasks based on different criteria such as due dates, priorities, and statuses.

- Task Tracking: Enable users to track the progress of their tasks, monitor deadlines, and receive reminders or notifications for upcoming or overdue tasks.

- Collaboration: Facilitate collaboration and team coordination by allowing users to assign tasks to other team members, share task information, and track the overall progress of shared projects.

- Efficiency and Productivity: Improve efficiency and productivity by providing Features such as task filtering, sorting, and searching to quickly access relevant tasks and manage workloads effectively.

- Data Management: Ensure secure storage and retrieval of task data, enabling users to access their tasks from different devices and ensuring data integrity and confidentiality.

- Reporting and Analytics: Generate reports and provide insights on task progress, Completion rates, and team performance to help users make informed decisions and optimize their workflow.

- User-Friendly Interface: Design an intuitive and user-friendly interface that allows easy navigation, task creation, editing, and interaction, making the system accessible to users of varying technical backgrounds.

1.3 Proposed Solution

- Enhanced Task Organization: The solution helps users organize their tasks in a structured manner, allowing them to create, categorize, and prioritize tasks based on different criteria such as due dates, priorities, and statuses. This enhances clarity and enables users to better manage their workload.
- Improved Task Tracking: The solution enables users to track the progress of their tasks, ensuring that deadlines are met and tasks are completed on time. It provides reminders and notifications to keep users informed about upcoming or overdue tasks, helping them stay on top of their responsibilities.
- Increased Productivity: By offering features such as task filtering, sorting, and searching, the solution helps users quickly access relevant tasks and prioritize their work. This boosts productivity by enabling users to focus on critical tasks, eliminate redundancies, and optimize their workflow.

Advantages of Proposed Solution

- Clear Task Visibility: The system provides a centralized platform where all tasks are recorded and easily accessible. This improves task visibility, allowing users to track progress, monitor deadlines, and ensure accountability. It also helps in avoiding task duplication or overlooking important tasks.

- Collaboration and Communication: The system facilitates collaboration among team Members by allowing task assignment, sharing of task-related information, and tracking of task status. This promotes effective communication, coordination, and teamwork, leading to improved project outcomes.

- Prioritization and Focus: The system enables users to prioritize tasks based on their importance, deadlines, or other criteria. This helps in identifying critical tasks and allocating resources accordingly. It also helps users stay focused on high-priority activities, reducing distractions and improving productivity.

- Data Analysis and Reporting: The system provides reporting and analytical capabilities to track task performance, identify trends, and generate insights. This helps in evaluating team and individual productivity, identifying bottlenecks, and making data-driven decision for process improvements.

Chapter 3

CODE

Index code:

```
from tkinter import *

tasks = []

def add_task():
    task_name = task_name_entry.get()
    task_description = task_description_entry.get()
    task_number = len(tasks) + 1
    task = f"Task {task_number}: {task_name}\nDescription: {task_description}\nStatus:
Incomplete\n"
    tasks.append(task)
    update_task_list()
    save_tasks_to_file()
    clear_input_fields()



def view_tasks():
    task_list.delete(0, END)
    if len(tasks) == 0:
        task_list.insert(END, "No tasks found.")
    else:
        for task in tasks:
            task_list.insert(END, task.rstrip())  # Remove trailing newline



def mark_task_complete():
    selected_task_index = task_list.curselection()
    if selected_task_index:
        task_index = selected_task_index[0]
        if 0 <= task_index < len(tasks):
            task = tasks[task_index]
            task = task.replace("Incomplete", "Complete")
            tasks[task_index] = task
            update_task_list()
            save_tasks_to_file()
```

```
def delete_task():
    selected_task_index = task_list.curselection()
    if selected_task_index:
        task_index = selected_task_index[0]
        if 0 <= task_index < len(tasks):
            del tasks[task_index]
            update_task_list()
            save_tasks_to_file()



def clear_input_fields():
    task_name_entry.delete(0, END)
    task_description_entry.delete(0, END)



def save_tasks_to_file():
    with open('tasks.txt', 'w') as file:
        file.writelines(tasks)



def load_tasks_from_file():
    global tasks
    try:
        with open('tasks.txt', 'r') as file:
            tasks = file.readlines()
    except FileNotFoundError:
        tasks = []



def update_task_list():
    view_tasks()

load_tasks_from_file()



# Create the main window
window = Tk()
window.title("Task Management System")
```

```
# Create the task list
task_list = Listbox(window, width=70, height=20)
task_list.pack()



# Create labels and entry fields for task input
task_name_label = Label(window, text="Task Name:")
task_name_label.pack()
task_name_entry = Entry(window, width=50)
task_name_entry.pack()



task_description_label = Label(window, text="Task Description:")
task_description_label.pack()
task_description_entry = Entry(window, width=50)
task_description_entry.pack()



# Create buttons for task management actions
add_button = Button(window, text="Add Task", command=add_task)
add_button.pack()



mark_complete_button = Button(window, text="Mark Task as Complete",
command=mark_task_complete)
mark_complete_button.pack()



delete_button = Button(window, text="Delete Task", command=delete_task)
delete_button.pack()



# Display the tasks initially
update_task_list()



# Run the main window event loop
window.mainloop()
```

Chapter 4

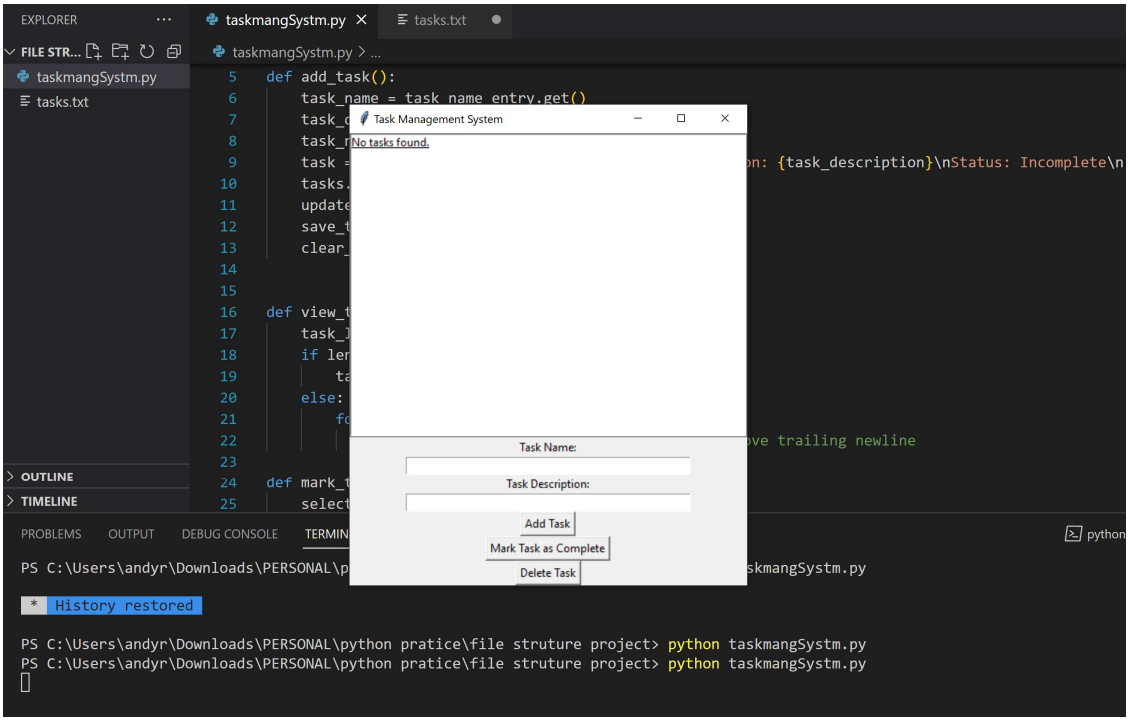
RESULT AND ANALYSIS

4.1 Result

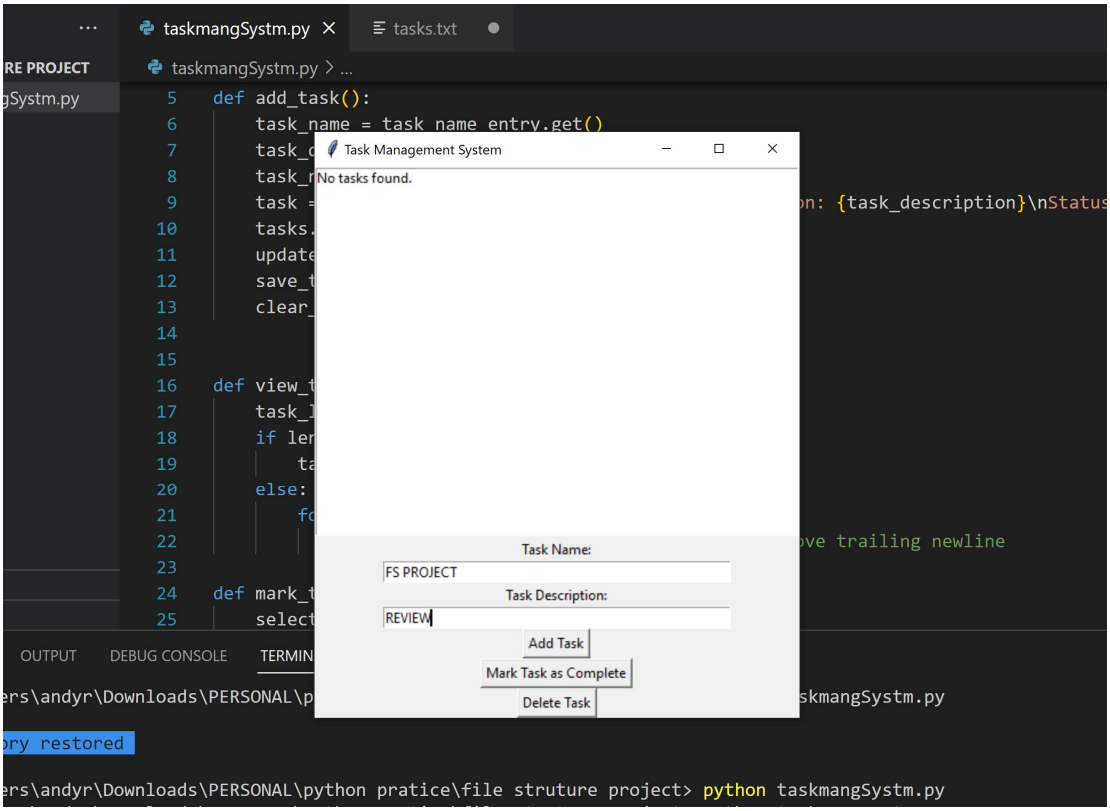
The task management system provides a user-friendly solution to streamline task management processes, improve productivity, foster collaboration, and enable data-driven decision making. It is adaptable to different organizational needs and offers scalability for future growth.

4.2 Screenshots

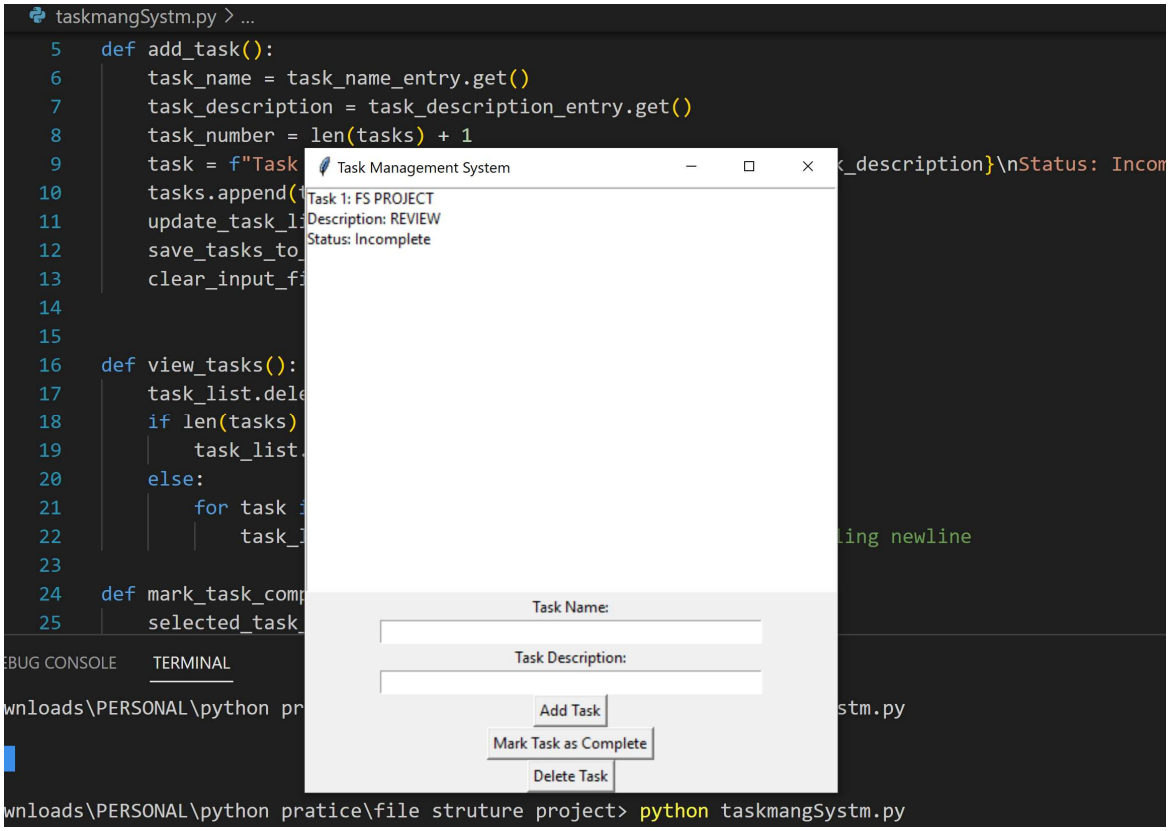
4.2.1 Empty task folder



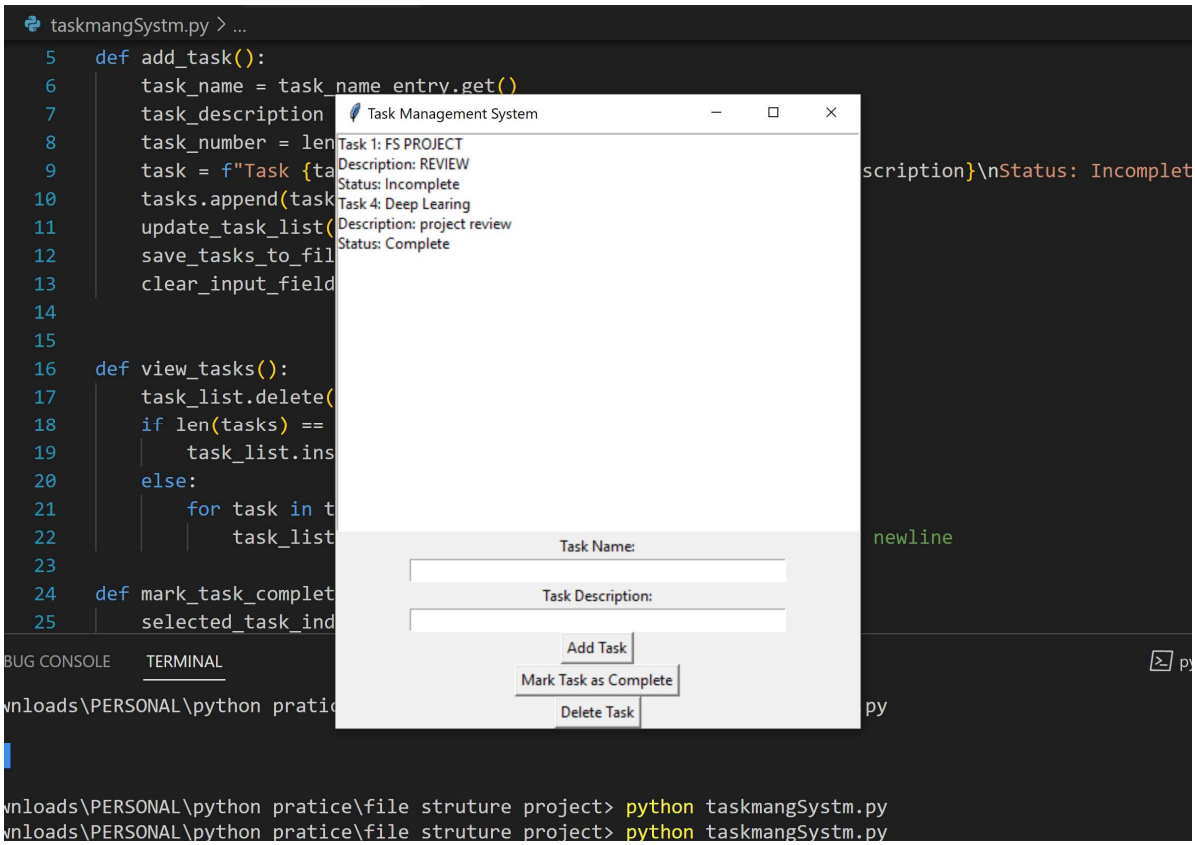
4.2.2 Adding task in folder



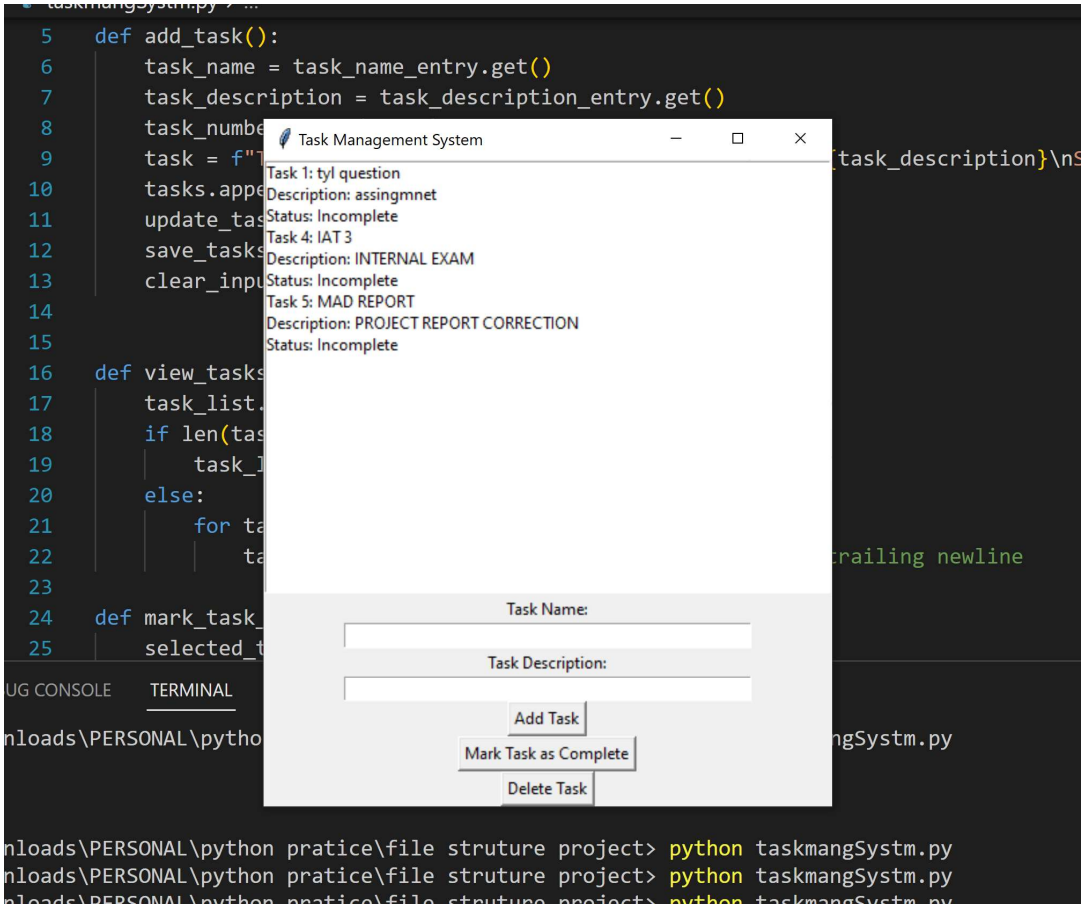
4.2.3 Added task in folder



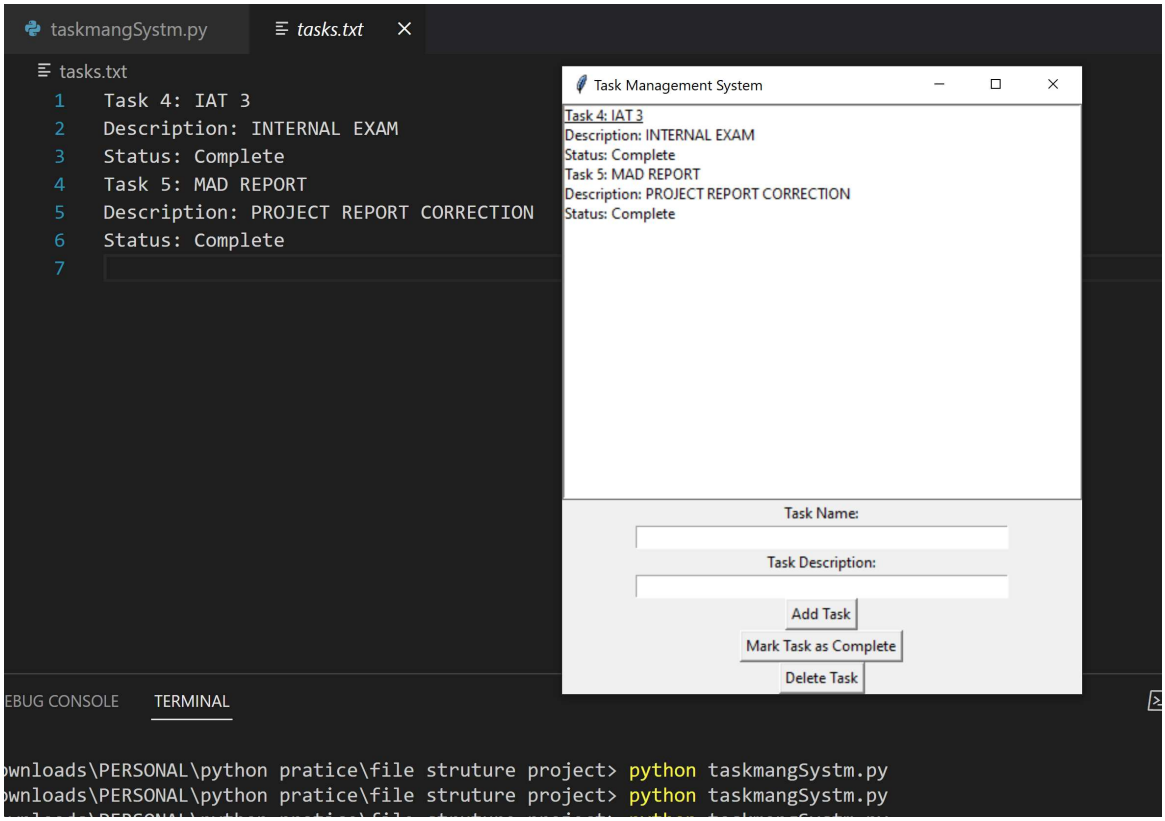
4.2.4 Marked as complete



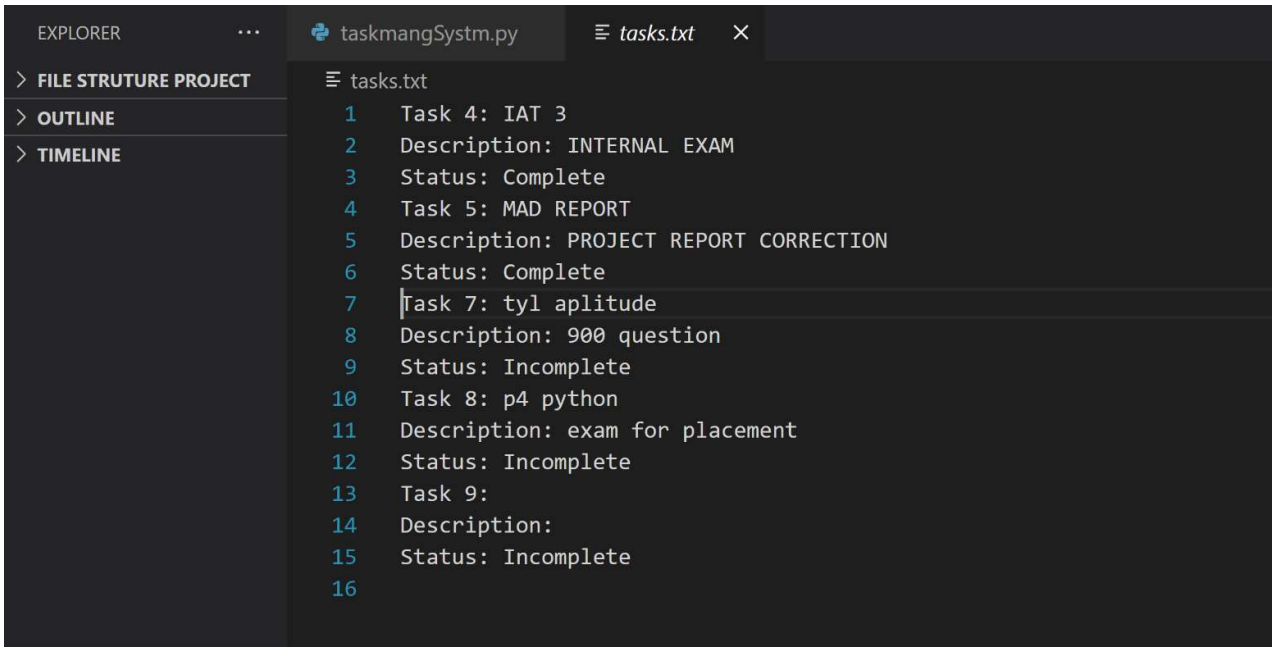
4.2.5 Task is still in Incomplete



4.2.6 Task Deleted



4.2.7 record are saving in text file



Chapter 5

CONCLUSION

The task management system provides a user-friendly solution to streamline task management processes, improve productivity, foster collaboration, and enable data-driven decision making. It is adaptable to different organizational needs and offers scalability for future growth.

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