BASAVARAJESWARI GROUP OF INSTITUTIONS

Ballari Institute of Technology & Management

AUTONOMOUS INSTITUTE UNDER VISVESVARAYA TECHNOLOGICAL UNIVERSITY JNANASANGAMA,

BELAGAVI 590018

INTERNSHIP

Report On

SIMPLE TASK TRACKER

Submitted in partial fulfillment of the requirements for the award of degree of

Bachelor of Engineering

In

COMPUTER SCIENCE AND ENGINEERING

Submitted by

KAVYA.S

3BR22CS068

Internship Carried Out
By
EZ TRAININGS & TECHNOLOGIES PVT.LTD
HYDERABAD

Internal Guide

Mr. HARIKRISHNA

Assistant Professor ,CSE

External Guide

Mr. V. DILEEP NAGENDRA

Technical Trainer

BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT

NACC Accredited Institution*

(RecognizedbyGovt.ofKarnataka,approvedbyAICTE,NewDelhi&AffiliatedtoVisvesvarayaTechnologicalUniversity,Belagavi)

"JnanaGangotri"Campus,No.873/2,Ballari-HospetRoad,Allipur,Ballar1-583104(Karnataka)(India)Ph:08392–237100/237190,Fax:08392–237197

2024-2025

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certify that the Internship entitled **" SIMPLE TASK TRACKER"** has been successfully completed by **KAVYA.S** bearing USN **3BR22CS068** a bonafide student of Ballari Institute of Technology and Management, Ballari. For the partial fulfillment of the requirements for the **Bachelor's Degree in Computer Science and Engineering** of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, Belagavi during the academic year 2024-2025.

Signature of Internship Co-ordinators

Mr.HARIKRISHNA

Assistant Professor ,CSE

Signature of HOD

Dr. R N KULKARNI

Professor & HOD(CSE)

DECLARATION

I, **KAVYA.S ,** third year student of Computer Science and Engineering, Ballari Institute of Technology, Ballari, declare that Internship entitled SIMPLE TASK TRACKER is a part of Internship Training successfully carried out by **EZ TECHNOLOGIES & TRAININGS PVT.LTD, Hyderabad** at "**BITM, BALLARI".** This report is submitted in partial fulfillment of the requirements for the award of the degree, Bachelor of Engineering in Computer Science and Engineering of the Visvesvaraya Technological University, Belagavi.

Date :08-03-2025 **Signature of the Student**
Place :Ballari

ACKNOWLEDGEMENT

The satisfactions that a company the successful completion of my internship on " Simple task tracker " would be incomplete without the mention of people who made it possible, whose noble gesture, affection, guidance ,encouragement and support crowned my efforts with success. It is my privilege to express my gratitude and respect to all those who inspired me in the completion of my internship.

I am grateful to my respective coordinators "**Mr.HARIKRISHNA (Asst.prof,CSE)**" for their noble gesture ,support co-ordination and valuable suggestions given to me in the completion of Internship.

I also thank **Dr. R N Kulkarni,** HOD , Department of **Computer Science and Engineering** for extending all his valuable support and encouragement.

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CHAPTER-1

COMPANY PROFILE

Company Name : EZ Trainings and Technologies Pvt. Ltd.

Introduction:

EZ Trainings and Technologies Pvt. Ltd. is a dynamic and innovative organization dedicated to providing comprehensive training solutions and expert development services. Established with a vision to bridge the gap between academic learning and industry requirements, we specialize in college trainings for students, focusing on preparing them for successful placements. Additionally, we excel in undertaking development projects, leveraging cutting-edge technologies to bring ideas to life.

Mission:

Our mission is to empower the next generation of professionals by imparting relevant skills and knowledge through specialized training programs. We strive to be a catalyst in the career growth of students and contribute to the technological advancement of businesses through our development projects.

Services:

College Trainings:

- Tailored training programs designed to enhance the employability of students.
- Industry-aligned curriculum covering technical and soft skills.
- Placement assistance and career guidance.

Development Projects:

- End-to-end development services, from ideation to execution.
- Expertise in diverse technologies and frameworks.
- Custom solutions to meet specific business needs.

Locations: Hyderabad | Delhi NCR

At EZ Trainings and Technologies Pvt. Ltd., we believe in transforming potential into excellence

CHAPTER-2

ABSTRACT

This project presents a **Task Manager** application developed using **Streamlit** and **JSON-based storage**, providing an intuitive and interactive platform for managing tasks efficiently. The system allows users to **add, update, delete, and filter tasks** based on their status. It incorporates **form validation** to ensure all required fields are filled before submitting a task and prevents users from selecting **past dates** as deadlines. Tasks are stored in a **JSON file** and displayed in a tabular format using **Pandas**, where the **deadline column shows only dates (excluding time) and is sorted in ascending order**. The application features a **real-time display of the system's current date and time** to improve usability. The update functionality allows users to modify task details, including **status, priority, and assigned personnel**, while ensuring all task IDs are accessible regardless of the current task filter. Additionally, the deletion feature enables seamless task removal. By integrating **Python's Datetime module, structured data handling with Pandas, and an interactive UI with Streamlit**, this Task Manager provides a **lightweight, efficient, and user-friendly** solution for task tracking and organization.

CHAPTER-3

INTRODUCTION OF THE PROJECT

- This is a **Streamlit-based task management application** designed to help users create, track, update, and manage their tasks efficiently.
- The application is built using **Streamlit**, a Python framework that provides an interactive and user-friendly interface.
- Users can **add tasks** by providing a **title, description, assigned person, priority level, and deadline**, ensuring well-organized task management.
- All tasks are **stored in a JSON file**, which eliminates the need for a database while still ensuring data persistence and easy retrieval.
- The system **restricts past dates**, allowing users to select only the current or future dates for task deadlines, preventing outdated entries.
- The application enforces **mandatory field validation**, displaying warnings when required fields are left empty, ensuring all necessary task details are provided.
- Users can **filter tasks based on their status**, such as **Pending, In Progress, or Completed**, making it easier to track ongoing work.
- Tasks can be **updated at any time**, allowing users to modify the **status, priority, or assigned person** as per their changing requirements.
- If a task is no longer needed, users have the option to **delete it from the system**, keeping the task list clean and relevant.
- All tasks are **automatically sorted by deadline** and displayed in a structured table, helping users prioritize their work efficiently.
- The application **dynamically displays the current date and time**, providing real-time information for better scheduling.
- The project **leverages Python, Streamlit for UI, Pandas for data handling, and JSON for data storage**, making it lightweight and efficient.
- This task management system is ideal for **individuals and teams** looking for a **simple, efficient, and easy-to-use** solution for tracking their tasks.

CHAPTER-4

MODULE DESCRIPTION

The project is structured into different functional modules, each handling a specific part of the **Task Management System**. Below is a **module-wise breakdown** of the code, explaining its purpose and functionality.

1. Task Data Management Module

This module handles all operations related to storing and retrieving task data. It ensures that tasks persist even after the program is closed.

- **Functions:**
    - load_tasks(): Loads existing tasks from a JSON file if available.
    - save_tasks(tasks): Saves the updated task list to the JSON file.
    - get_tasks_dataframe(): Converts task data into a **Pandas DataFrame** and formats it for display.

2. Task Management Module

This module deals with task creation, modification, and deletion. It validates inputs and ensures that tasks follow a structured format.

- **Functions:**
    - add_task(): Adds a new task after validating all required fields.
    - update_task(): Modifies existing task details like status, priority, and assignee.
    - delete_task(): Removes a task from storage based on its task ID.

3. User Interface Module (Using Streamlit)

This module provides the **interactive user interface** for task management. It enables users to **add, update, delete, and view tasks** through a graphical interface.

- **Features & Functions:**
    - Displays the **current system time and date** for better tracking.
    - Provides an **input form** (st.form) for adding new tasks.
    - Implements **drop-down filters** to sort tasks based on their status.
    - Uses st.dataframe() for displaying tasks in an **interactive table format**.
    - Allows users to **select and update task details** dynamically.

4. Date & Time Handling Module

This module ensures that deadlines are correctly assigned and prevents past dates from being selected.

- **Functions & Features:**
    - Uses datetime.now() to fetch the **current system time and date**.
    - Restricts past dates in the **deadline selection field** (st.date_input).
    - Displays timestamps to help users **track task deadlines effectively**.

CHAPTER-5

ALGORITHM

1. Start

2. Create the TaskManager class and define the __init__method to initialize an empty task list.

3. Implement the following methods in TaskManager:
   - load_tasks(): Load tasks from a JSON file.
   - save_tasks(): Save tasks to a JSON file.
   - get_tasks_dataframe(): Convert tasks into a DataFrame for display.
   - add_task(): Add a new task with required attributes.
   - update_task(): Modify the status, priority, or assigned person of a task.
   - delete_task(): Remove a task from the list.

4. Create the Task class and define the __init__method to initialize task attributes:
   - task_id, title, description, assigned_to, priority, deadline, status.

5. Display the user menu with options for:
   - Adding a new task
   - Updating a task
   - Deleting a task
   - Filtering tasks
   - Viewing current tasks

6. Enter a loop to prompt the user to select the options:

   If the user selects Option 1 (Add a Task):
   - Prompt for task details (title, description, assigned_to, priority, deadline).
   - Validate inputs and save the task in the JSON file.

   If the user selects Option 2 (View Current Tasks):
   - Load tasks from the JSON file.
   - Display tasks in a table format with an option to filter by status.

   If the user selects Option 3 (Update a Task):
   - Prompt for task_id, new_status, new_priority, and new_assigned_to.
   - Update the selected task in the JSON file.

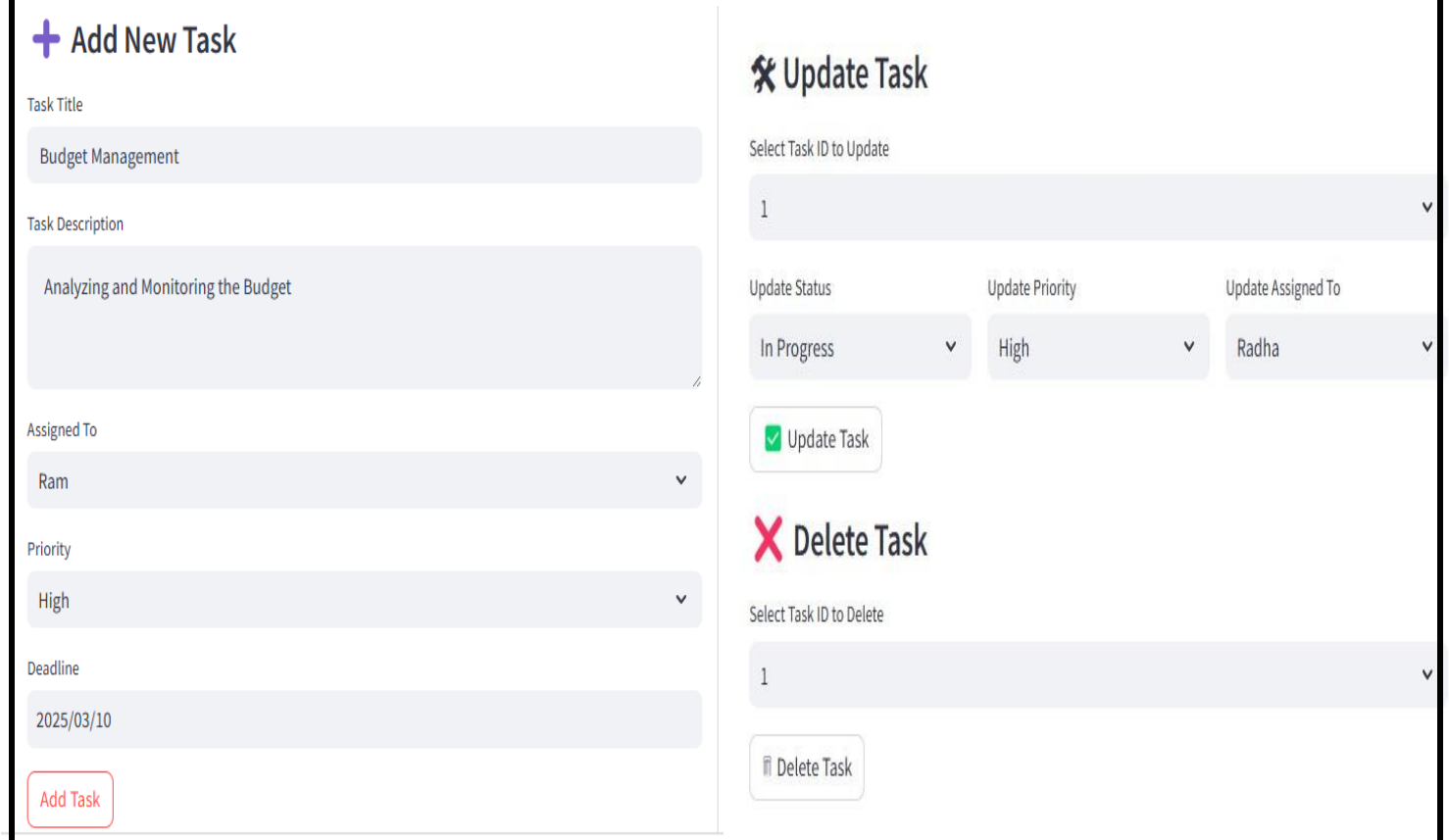
   If the user selects Option 4 (Delete a Task):
   - Prompt for task_id and remove the task from the JSON file.

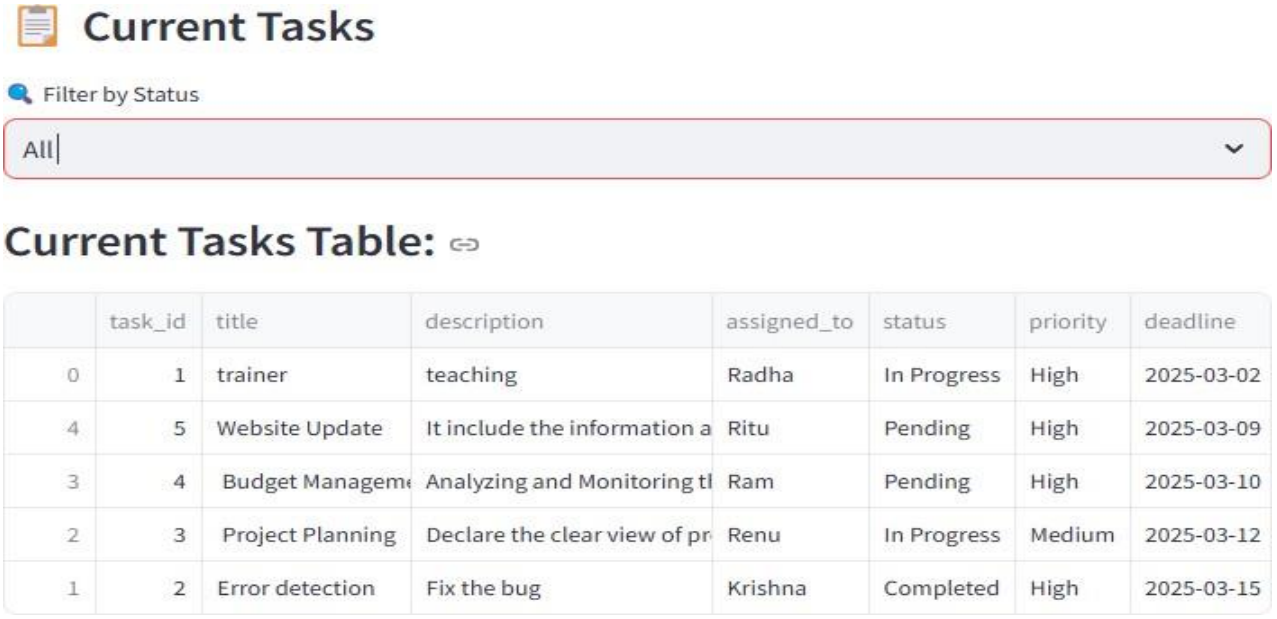
   If the user selects Option 5 (Filter Tasks by Status) or Option 6 (Display All Tasks):
   - Filter tasks based on status (Pending, In Progress, Completed).
   - Show details such as task ID, title, assigned person, priority, deadline, and status.

7. Repeat or Exit
   Continue looping until the user chooses to exit

CHAPTER-6

OUTPUTS





	task_id	title	description	assigned_to	status	priority	deadline
0	1	trainer	teaching	Radha	In Progress	High	2025-03-02
4	5	Website Update	It include the information a	Ritu	Pending	High	2025-03-09
3	4	Budget Manageme	Analyzing and Monitoring tl	Ram	Pending	High	2025-03-10
2	3	Project Planning	Declare the clear view of pr	Renu	In Progress	Medium	2025-03-12
1	2	Error detection	Fix the bug	Krishna	Completed	High	2025-03-15

Current Tasks

Filter by Status

Pending

Current Tasks Table:

	task_id	title	description	assigned_to	status	priority	deadline
4	5	Website Update	It include the information a	Ritu	Pending	High	2025-03-09
3	4	Budget Manageme	Analyzing and Monitoring tl	Ram	Pending	High	2025-03-10

Current Tasks

Filter by Status

In Progress

Current Tasks Table:

	task_id	title	description	assigned_to	status	priority	deadline
0	1	trainer	teaching	Radha	In Progress	High	2025-03-02
2	3	Project Planning	Declare the clear view of pr	Renu	In Progress	Medium	2025-03-12

Current Tasks

Filter by Status

Completed

Current Tasks Table:

	task_id	title	description	assigned_to	status	priority	deadline
1	2	Error detection	Fix the bug	Krishna	Completed	High	2025-03-15

CHAPTER-7

CONCLUSION:

The Task Manager project provides an efficient way to manage tasks by allowing users to add, update, delete, and filter tasks. It ensures data persistence by storing tasks in a JSON file, enabling easy retrieval and modification. Users can assign tasks, set priorities, and track deadlines for better organization. The system allows filtering tasks based on their status, making it easier to track progress. A structured DataFrame representation improves readability and task management. Task validation prevents errors and ensures accurate input. The update feature allows for flexibility in modifying task details as needed. The project follows a user-friendly, menu-driven approach for smooth navigation. It is scalable and adaptable for both personal and team-based management. Overall, it enhances productivity by offering a reliable and structured task-tracking solution.

CHAPTER-8

REFERENCES

- **https://github.com/prathyu15**
- **https://chat.openai.com/**