# Project Title

**Smart Study Planner: A Task Organizer with Reminders**

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# Problem Statement

Many students experience difficulty in managing multiple school tasks such as assignments, projects, and exams. Poor organization often leads to missed deadlines, increased stress, and lower academic performance. Although there are many productivity applications available, most of them are either too complex or not specifically designed for students' academic needs. Students need a simple, lightweight, and student-focused task planner that helps them stay organized, track deadlines, and receive timely reminders. This project aims to solve this problem by providing an easy-to-use study planner that improves time management and reduces academic stress.

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# Project Objectives

1. To design and develop a user-friendly task management application for students.
2. To allow users to create, view, edit, and delete academic tasks easily.
3. To integrate a reminder system that notifies users before task deadlines.
4. To implement data storage using **JSON/CSV file handling** to ensure tasks are saved and loaded correctly.
5. To improve students' productivity by helping them prioritize and organize their academic responsibilities.

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# Planned Features

- Add new tasks with a title, category, deadline, and optional notes.
- Edit existing tasks to update details such as deadlines or descriptions.
- Delete tasks that are no longer needed.
- Categorize tasks (Assignment, Project, Quiz, Exam, Personal Study, etc.).
- Automatic sorting of tasks based on deadline and category.
- Reminder notifications for tasks that are due soon.
- Save tasks to a **JSON or CSV file** and load them when the program starts.

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# Planned Inputs and Outputs

## Inputs:

- Task Name
- Category (Assignment, Project, Exam, etc.)
- Deadline (Date and Time)
- Notes/Description

## Outputs:

- A displayed list of upcoming tasks sorted by date and category.
- Pop-up or console reminders for tasks approaching their deadline.
- A JSON/CSV file that permanently stores all tasks.

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### Logic Plan (Pseudocode)

```
# Load tasks from file
def load_tasks():
    open JSON/CSV file
    read data
    convert data to task list
    return task_list

# Save tasks to file
def save_tasks(task_list):
    convert task_list to JSON/CSV format
    write data to file

# Add a new task
def add_task(task_list):
    task_name = input("Enter task name: ")
    category = input("Enter category: ")
    deadline = input("Enter deadline: ")
    notes = input("Enter notes: ")

    new_task = {
        "name": task_name,
        "category": category,
        "deadline": deadline,
        "notes": notes
```

```
    }

    task_list.append(new_task)

# View tasks
def view_tasks(task_list):
    sort task_list by deadline
    display each task

# Edit an existing task
def edit_task(task_list):
    display list of tasks
    choice = input("Select task to edit: ")

    selected_task = task_list[choice]

    update fields (name/category/deadline/notes)
    save changes

# Delete a task
def delete_task(task_list):
    display list of tasks
    choice = input("Select task to delete: ")
    remove selected task from task_list

# Check upcoming deadlines
def show_reminders(task_list):
    for each task in task_list:
        if task deadline is near:
            display reminder message

# Main program
def main():
    task_list = load_tasks()

    while True:
        print menu:
            1. Add Task
            2. View Tasks
            3. Edit Task
            4. Delete Task
            5. Save and Exit

        choice = input("Enter choice: ")
```

```
        if choice == "1":
            add_task(task_list)
        elif choice == "2":
            view_tasks(task_list)
        elif choice == "3":
            edit_task(task_list)
        elif choice == "4":
            delete_task(task_list)
        elif choice == "5":
            save_tasks(task_list)
            break
        else:
            print("Invalid option. Try again.")

# Run program
main()
```