

Mini Task Manager

BASH PROJECT

Bash Scripting Project - Requirements Document

Project Overview

Build a complete Task Management System using Bash scripting. The system should allow users to manage their daily tasks through an interactive terminal menu with full CRUD operations and reports.

Data Storage

- All tasks must be stored in a single text file (e.g. tasks.txt)
- Each task is stored as one line with fields separated by a delimiter
- Required fields per task:

ID (unique, auto-generated) Title Priority (high / medium / low) Due Date
Status (pending / in-progress / done)

Core Requirements (CRUD)

- 1 Add Task** - User enters title, priority, and due date. The system auto-generates a unique ID and sets status to 'pending'.
- 2 List Tasks** - Display all tasks in a formatted table. Support filtering by status or priority.
- 3 Update Task** - User selects a task by ID and can modify title, priority, due date, or status.
- 4 Delete Task** - User selects a task by ID. Ask for confirmation before deleting.
- 5 Search** - Search tasks by keyword in the title field.

Interactive Menu

- The script must present a main menu when launched (using select or numbered options)
- After each operation, return to the main menu until the user chooses to exit

Reports

- 1 Task Summary** - Show count of tasks per status (pending, in-progress, done).
- 2 Overdue Tasks** - List all tasks where the due date has passed and status is not 'done'.
- 3 Priority Report** - List tasks grouped by priority level.

Input Validation

- Task title must not be empty
- Priority must be one of: high, medium, low
- Date must be in a valid format (e.g. YYYY-MM-DD)
- ID must exist before update or delete operations

Bonus Features (Extra Credit)

OPTIONAL

- Colored output using tput or ANSI escape codes
- Export tasks to a CSV file
- Regex-based advanced search
- Sort tasks by date or priority

Tools & Commands You May Need

`awk`

Field processing & formatting

`sed`

In-place editing & deletion

`grep`

Searching & filtering

`date`

Date handling & comparison

`read / select`

User input & menus

Submission: Submit a single .sh file that runs directly with: `bash task_manager.sh`

Make sure your script is well-commented and organized into functions.