To-Do-App

A console for managing tasks for students.
Here is the Documentation of our To-Do App in the Programming Foundations class

Analysis:

Problem:
As first-year BIT students, we face a challenge with juggling multiple modules, assignments, group projects, and personal study goals. This leads to constant brain overload and decision fatigue, which in turn leads to the following struggles:

• Difficulty in prioritizing the urgency of assignments, leading to effort underestimation.
• Poor Time Management caused by insufficient time allocation, leading to procrastination and last-minute stress
• Low productivity and not good focus as tasks lack clear boundaries & priorities, which causes mental strain during studies.

Impact:

Lack of a centralized system to maximize productivity, especially in first-year students, often leads to:

• Procrastination
• Inefficient study time
• last-minute stress
• Sometimes missed deadlines with projects/assignments.
• Poor Grades

Solution:

Our interactive To-Do-App with task organization provides an effective system and strategic ways to improve productivity by:

• Reducing stress through the clear visualization of tasks and a centralized priority system

Scenario:

Based on our modules, we have different requirements, teams, and group projects. The idea is to put all tasks and deadlines in the console application to manage them in one centralized place.

User stories:

• As a user, I want to add a new task with a title, description, and priority so that I have all my To Do Tasks centralized and easily organized
• As a user, I want to see the "view my tasks" on the console, so that I can immediately get an overview of the workload I have
• As a user, I want to delete old/redundant tasks, so that my task list remains clean and focused only on actionable items.

Use cases:

• Show Menu: Display list of actions in the console: Add Task, View Tasks, Delete, Exit
• Create Tasks – Allow entry of tasks with details: title, description, priority level.
• Show Current Tasks – Display all tasks with clear priority and description.
• Delete tasks – Allow user to permanently remove completed or unwanted tasks from list

Technical Features:

1. Interactive App (console input)
   The application interacts with the user through the console, accepting input and displaying responses in real time. It should provide clear prompts, menus, and feedback to create an engaging and easy-to-use experience.
2. Data validation (input checking)
   The application validates all user input to ensure data integrity and a smooth user experience. Invalid or missing data should be handled gracefully, with clear error messages and opportunities for correction.
3. File processing (read/write)
   The application can read data from and write data to files, allowing users to save and retrieve information. Proper file handling ensures that data is stored securely and can be accessed or updated when needed.

Future Roadmap (for missing features):

• Pomodoro
• Task editing
• Time Tracking
• Due dates & calendar

Team:

Elpidio – Development & Documentation
Lencer – Development, Refactoring & Documentation
Valentina – Development, Refactoring, Branding, Presentation & Documentation