CY-Truck Project: Advanced Data Analysis System for Logistics Management

N.Guihot
E.Szpoper
N.Rayée

Contents

1 Introduction

The CY-Truck project is designed to revolutionize data processing in logistics. The team includes N. Guihot, E. Szpoper, and N. Rayée, each with distinct roles contributing to the project's success.

2 Task Allocation

2.1 N. Guihot - Project Structuring and C Programming

- **Resource Provision**: Identifying and providing essential tools and resources.
- **Task Distribution**: Assigning tasks based on skills and ensuring a balanced workload.
- **Performance Optimization**: Enhancing the efficiency of the C program in execution and memory usage.
- **Data Processing for T and S**: Implementing and optimizing data processing for project parts T and S.
- **Version Management and Documentation**: Setting up version control using Git and creating technical documentation.
- **Data Security**: Implementing secure practices for data handling and storage.
- **Project Report Writing**: Preparing a detailed project report on task distribution, project timeline, and application limitations.

2.2 E. Szpoper - Main Script Management

- **Data Processing for D1 and D2**: Implementing and optimizing data processing for project parts D1 and D2.
- **Script Component Functionality Assurance**: Ensuring effective operation of all script components.
- **Team Meeting Planning and Organization**: Scheduling regular meetings for project updates and planning.
- **Shared Resource Management**: Managing access to shared resources like documents and software tools.
- **Test Automation**: Developing scripts for automated testing of script components.
- **Robustness Testing**: Ensuring the program handles errors and unexpected data inputs effectively.

2.3 N. Rayée - GnuPlot and Graphical Generation

- **Graph Creation for Each Treatment**: Designing and generating graphs for each data treatment.
- **Data Visualization Using Temporary Data Files**: Creating visualizations from interim data files.
- **Documentation and Archiving**: Documenting and archiving all materials, including code and reports.

- **Time and Priority Management**: Using project management tools for tracking deadlines and prioritizing tasks.
- **Code Quality Assurance**: Establishing coding standards and conducting code reviews.
- **Code Review Organization**: Organizing sessions to review code for cleanliness, documentation, and best practices.
- **Delivery Planning and Deadlines**: Setting and adhering to a timeline for different project phases.

3 Project Timeline

3.1 Project Organization

Our project followed a rigorous and structured approach, emphasizing daily progress and continuous communication. We committed to making near-daily deposits to our Git repository, ensuring a consistent and trackable development process. Additionally, we held daily calls via Discord or WhatsApp to discuss progress, address immediate issues, and plan for upcoming tasks. This regular rhythm of coding and communication was crucial for maintaining project momentum and aligning team efforts.

Date	Activity
Day 1: Dec 19	Initial project setup - First commit.
Day 2: Dec 20	Data processing update for D1, performance optimization, and color addition.
Day 3: Dec 21	Implementation of alert management features.
Day 4: Dec 22	Enhancement of graph generation for D1.
Day 5: Dec 23	Implementation of -d1 option.
Day 6: Dec 24	Addition of new features: options processing, D2, and L treatments.
Day 7: Dec 25	Start of -t option development.
Day 9: Dec 27	Completion of -t option.
Day 10: Dec 28	"Almost finished" - Finalizing features.
Day 11: Dec 29	Final additions and adjustments.

4 Functional Limitations

4.1 Unimplemented Features

—

4.2 Operational Issues

While the project has successfully met all the requirements of the specifications as of December 31, 2023, we are continuously working on improving the optimization of treatments D1, D2, and L. These enhancements are focused on increasing efficiency, reducing execution time, and improving memory usage. The current implementation meets the functional requirements, but we aim to achieve even better performance and reliability in these areas.

5 Conclusion

This document outlines the CY-Truck project's task distribution, development timeline, and functional limitations, providing a clear view of our project management and technical challenges.