



ERP System for Shuttle Service Management at PT Darpa Ashiya Manunggal

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SIMILARITY INDEX REPORT

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ABSTRACT

PT Darpa Ashiya Manunggal, a company providing employee shuttle services, faced significant operational challenges due to its reliance on manual processes. Activities such as route scheduling, driver work validation through physical logs, Excel invoicing, and financial reporting are done manually, leading to inefficiencies, human error, and decreased client satisfaction. This research aims to design and implement a system.

These problems can be solved with an integrated enterprise resource planning (ERP) system that streamlines business processes, improves data accuracy, and optimises workflows.

This system development process involves use of Supabase as the database, Tailwind CSS for the frontend, and the Django framework for the backend. A web-based application is the final result, integrating multiple modules such as the following: Client portal for route requests and monitoring; Marketing module for cost calculation and optimisation; Human Resources (HR) module for driver assignment and management; Driver portal for digital trip recording and schedule viewing; Finance module for automated payroll, financial reports, and invoicing; and General Management module for workflow approval.

The outcomes of this system deployment show manual operations can be effectively transformed into automated and efficient workflows. Evaluations, both functional and non-functional, on over 300 test scenarios in all modules show that the

system operates continuously, securely, and reliably. The solution effectively solves the company's main problems, improves operational transparency, streamlines up business processes, and offers an effective technology base for the growth in the future.

Keywords: Django, Process Automation, Shuttle Service Management, Enterprise Resource Planning (ERP), and Integrated Information System.

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CHAPTER I

INTRODUCTION

1.1 Background

PT Darpa Ashiya Manunggal is a company that specializes in providing employee shuttle transportation services tailored to client needs. However, behind its services, the company's operations rely heavily on a series of complex and fragmented manual activities in each department. These traditional workflows, documented in the company's business process swimlane diagram, had become a major source of significant efficiency challenges [1]. This reliance on manual processes not only slowed down performance, but also opened up huge opportunities for human error that could cost the company and clients dearly [2]. Operational inefficiencies started from the initial stage of interaction with the client.

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CHAPTER I

INTRODUCTION

CHAPTER II

LITERATUR REVIEW

2.1 Django Framework

In the ERP System for Shuttle Service Management project, Django was used as the main foundation for backend development, including route management, user authorization, driver log validation, and approval flow management between departments such as HR and Finance.

using prepared CSS classes, [is](#) a utility-first framework that enables developers to generate user interfaces (UI) easily and quickly. Without having to handle complicated stylesheet files or write CSS code from scratch, this framework makes it simple to create ERP system interfaces. In this project, Tailwind is used to build frontend interfaces for various

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CHAPTER II

LITERATUR REVIEW

CHAPTER III

SYSTEM ANALYSIS AND DESIGN

This chapter describes in depth the process of analyzing the current system at PT Darpa Ashiya Manunggal, analyzing the requirements for the new system, and the detailed design of the proposed ERP system. This process is the core for the implementation stage which will be explained in the next chapter.

3.1 Conducting System Analysis

Conducting system analysis aims to understand workflows, identify problems, and find points of inefficiency in the company's current operational processes. The current business process at PT Darpa Ashiya Manunggal relies heavily on manual activities and verbal communication

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CHAPTER III

SYSTEM ANALYSIS AND DESIGN

CHAPTER IV

IMPLEMENTATION AND TESTING

This chapter discusses the realization process of the system design described in Chapter III. The first section describes the technical environment used. The second section presents the code implementation details and user interface results for the Client and Marketing modules. The last section presents the testing methodology applied as well as the detailed results of functional and non-functional testing to validate that both modules have met all the defined needs.

4.1 Environment of Implementation

The implementation environment includes all hardware and software used during the development

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CHAPTER IV

IMPLEMENTATION AND TESTING

CHAPTER V

CONCLUSION AND RECOMMENDATIONS

This chapter presents conclusions from the entire ERP System for Shuttle Service Management development project and provides some suggestions for future system development.

5.1 Conclusion

Based on the results of the implementation and comprehensive testing that has been conducted, several key conclusions can be drawn. Rigorous testing of the ERP system for PT Darpa Ashiya Manunggal, which included both quantitative and qualitative analysis, has shown significant success in addressing the company's operational challenges. The system consistently obtained

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CHAPTER V

CONCLUSION AND RECOMMENDATIONS