Analysis and Design of a Computer Business Information System

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***Abstract*—This thesis analyzes and designs a business information system for computer sales, focusing on the system architecture, data flow diagrams, and database management using Microsoft Active Data Objects 2.7. The work includes the design of various modules and the implementation of data access and manipulation through Visual Basic 6.0. The system is designed to manage the sales process, including procurement, sales, revenue reporting, and import/export reporting. The research highlights the use of structured analysis methods and the implementation of specific functions in Visual Basic 6.0. The system has been partially implemented, with some modules completed but others left unfinished due to time constraints. The author expresses a desire to further develop the system using object-oriented analysis and design techniques, as well as more advanced database management systems in the future.**

***Index Terms*—business information system, data flow diagram, Visual Basic 6.0, Active Data Objects, database management**

I. Introduction

The thesis introduces the concept of a business information system, its components, and the roles of system analysts and designers. It discusses analysis methods, including decomposition and data flow analysis, and provides a detailed design of the system, particularly focusing on the sales process, including procurement, sales, revenue reporting, and import/export reporting. The work emphasizes the importance of structured analysis methods in the design and implementation of such systems. The author also highlights the significance of understanding various programming languages, with Visual Basic 6.0 being a key focus. [1]

II. Methods

The methods section describes the analysis techniques used, such as decomposition and data flow analysis, and the design of the system using data flow diagrams (DFD). The implementation details include the use of Microsoft Active Data Objects 2.7 for database interaction and data manipulation through Visual Basic 6.0. The author explains the use of ADO DataControl and Object Interface for connecting to the database, as well as the use of Connection and Recordset objects for data access and manipulation. The system is designed to manage the sales process, with specific modules for procurement, sales, revenue reporting, and import/export reporting. [1]

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III. Results

The results include the design of various modules and the implementation of data access and manipulation. The system is designed to manage the sales process, including procurement, sales, revenue reporting, and import/export reporting. The author has implemented some modules, such as updating customer and supplier information, and creating purchase orders. However, due to time constraints, the system is not fully completed, and some functionalities are still missing. The author acknowledges the limitations of the current implementation and expresses a desire to further develop the system using more advanced techniques and tools. [1]

IV. Discussion

The discussion focuses on the system's architecture and the implementation of data access and manipulation using Visual Basic 6.0. The system is designed to support the sales process, with specific modules for procurement, sales, revenue reporting, and import/export reporting. The author discusses the advantages and limitations of the current implementation, highlighting the need for further development. The author suggests using object-oriented analysis and design techniques, as well as more advanced database management systems, to improve the system's functionality and robustness. [1]

V. Conclusion

The conclusion summarizes the design and implementation of the computer business information system, highlighting the use of Visual Basic 6.0 and Microsoft Active Data Objects 2.7 for database interaction and data manipulation. The author expresses a desire to further develop the system using more advanced techniques and tools, such as object-oriented analysis and design, and the use of SQLServer 2005 for database management. The author also acknowledges the limitations of the current implementation and expresses gratitude for the feedback and support received during the project. [1]

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