Application of Information Technology in Building and Implementing a Patient Management Program for Tan Lac General Hospital, Hoa Binh

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***Abstract*—This thesis describes the development of a patient management program for Tan Lac General Hospital in Hoa Binh, Vietnam. The program includes functions for managing hospital staff, patient information, and medical procedures. The author successfully implemented a system that manages patient records, medical services, and billing processes, among other functionalities. The system was developed using VB.NET and SQL Server, and it includes detailed use cases for various medical procedures and patient management tasks. The author also designed and implemented a range of database tables to support the system's operations. Future work includes expanding the system to include additional functionalities such as drug management, insurance management, and equipment management.**

***Index Terms*—patient management, VB.NET, UML, database, use case**

I. Introduction

The thesis focuses on the development of a patient management system for Tan Lac General Hospital, incorporating various functional modules such as staff management, patient information, and medical procedures. The author utilized VB.NET and SQL Server for the implementation. The system aims to improve the efficiency of patient management at the hospital. The author identified the need for a comprehensive system that can manage patient records, medical services, and billing processes. The system was designed to address the challenges faced by the hospital in managing patient information and medical procedures [1]. Published books on the methods and subject of this project provide context for this English summary [7], [8], [9].

II. Methods

The methods section details the development process, including the identification of system components, use case analysis, and database design. The author used UML for modeling and VB.NET for the implementation, with SQL Server as the database management system. The author identified the system's components through a thorough analysis of the hospital's needs and existing processes. Use case analysis was conducted to understand the various scenarios in which the system would be used. The database design was based on the identified use cases and the need to support the system's functionalities. The author also developed a range of use cases to support the system's functionalities, including patient record management, medical service management, and billing management [1].

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III. Results

The system successfully managed staff and patient information, medical procedures, and billing processes. It included features such as patient record management, medical service management, and billing management. The author also developed a range of use cases to support the system's functionalities. The system was implemented using VB.NET and SQL Server, and it included a range of database tables to support the system's operations. The author tested the system by simulating various scenarios, including patient registration, medical service requests, and billing processes. The system was found to be functional and capable of managing the hospital's patient information and medical procedures [1].

IV. Discussion

The developed system was designed to improve the efficiency of patient management at Tan Lac General Hospital. Future work includes expanding the system to include additional functionalities such as drug management, insurance management, and equipment management. The author identified several limitations in the current system, including the need for more detailed patient information and the lack of integration with other hospital systems. The author also noted that the system could benefit from further testing and validation to ensure its reliability and effectiveness. The author hopes to continue developing the system to address these limitations and improve the hospital's patient management processes [1].

V. Conclusion

The system was successfully implemented, but the author hopes for further improvements based on feedback. The author plans to expand the system to include additional functionalities such as drug management, insurance management, and equipment management. The author also hopes to continue testing and validating the system to ensure its reliability and effectiveness. The author believes that the system can

significantly improve the efficiency of patient management at Tan Lac General Hospital [1].

References

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