
DEVELOPMENT OF A BLOOD DONOR AND SEEKER MANAGEMENT SYSTEM FOR HOSPITAL USE

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Abstract

Malaysia's population is growing, and the demand for blood supply from hospitals is increasing. Presently, computer-based blood bank management is not widely used in most of the countries and relies on manually searching individual records, which consumes time. Hospital employees face difficulties identifying blood supply needs because of mistaken, lost, and imprecise blood donation records, especially during the pandemic. Consequently, hospitals have difficulty identifying the urgent need for blood. Staffs or donors need to search for blood donation information one by one, which considerable time. Therefore, this study designed a Blood Donor and Seeker Management System using Microsoft Visual Studio 2019 integrated with Microsoft SQL Server Management Studio 18 to automate the blood bank management, making it faster, easier, and more reliable. This system was developed using the Waterfall model, which is continuous even with errors, saving time. This system enables simplified access to information regarding blood donation, such as supply according to blood group, donation date, and the validity of blood. Additionally, it is a stand-alone system to maintain and generate organised blood transaction reports that enable users to obtain information quickly. This system makes the maintenance of hundreds of thousands of blood donor or seeker records manageable. Consequently, this system provides accurate information on the availability of a blood group, prompting donors to donate blood and replenish the limited stock.

Keywords: *Microsoft Visual Studio 2019, Microsoft SQL Server Management Studio 18, Blood Bank Management System*
