

ABSTRACT

Masta Vape Store Purwokerto faces challenges with its manual ordering system, which often results in delays, data input errors, and difficulties in checking product stock. Therefore, a more efficient and structured website-based ordering system is necessary. The main problems are unsystematic queues and data input, as well as the lack of integration with real-time stock checking. This impacts the effectiveness of customer service. A system that can automatically manage queues to be more orderly and accurate is needed. This study proposes the use of the First In First Out (FIFO) algorithm in the development of a website-based ordering system at Masta Vape Store. The system design was carried out using the Unified Modeling Language (UML) approach, including the creation of use case diagrams, activity diagrams, sequence diagrams, and class diagrams. The system was developed using the Laravel Framework and tested to ensure its functionality runs well. The test results show the system achieved a 100% functional success rate through the blackbox testing method and obtained a usability score of 88.3 (Excellent) using the System Usability Scale (SUS) method. These results prove the effectiveness of the FIFO algorithm and confirm that the system is very easy to use. The system successfully simplifies the queuing process, reduces data input errors, speeds up stock checking, and improves the operational efficiency of Masta Vape Store Purwokerto.

Keywords: FIFO Algorithm, Ordering System, Prototype, Unified Modeling Language (UML), Vape Store, Website-base