## **ABSTRACT**

## DESIGN AND DESIGN OF A WEBSITE BASED INVENTORY AND LIBRARY RESERVATION SYSTEM FOR BAITUSSALAM VOCATIONAL SCHOOL PEKALONGAN USING THE WATERFALL METHOD

Dwi Alya Artika NIM 21102251

A library is an institution that provides reading collections such as books, magazines, journals and other media that can be accessed by the public for various purposes. The library of SMK Baitussalam Pekalongan in its management and services still uses a manual method, namely by recording the inventory process, borrowing books, and visiting reservations in a ledger that needs to be lined up. This process can make it difficult for library staff to recap annual reports, besides that administrative data will be vulnerable to loss and damage. The purpose of the research is to create a system that enables inventory and reservation in the library of SMK Baitussalam Pekalongan. In addition, the system can provide an onlien book borrowing feature and annual report generation to facilitate library staff in recapitulating reports each year. This research uses the waterfall method, because of its easy and structured implementation. The system that has been designed must be ensured to run well, so it is necessary to test the system. Testing using the blackbox testing method is testing the functionality of the system with the results being 100% successful. The conclusion of this research is that the website-based inventory and reservation system for the SMK Baitussalam Pekalongan library has been successfully developed and implemented to assist officers in the management and service process as well as compiling annual reports.

Keywords: Library, SMK Baitussalam Pekalongan, Waterfall