

ABSTRACT

DESIGN AND BUILD BILLING SYSTEM APPLICATION USING DEVOPS LIFE CYCLE DEVELOPMENT METHOD

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Currently a member of business and education at PT. Cah Innovation Technology already uses a computerized system to manage its data using the Microsoft Excel application and other bookkeeping applications. All transactions are entered using a common method and the data has been entered separately, which poses a lot of risk. Therefore, the purpose of this design is to produce a billing system application that can replace the old system. Besides that, it is used as a center for payment methods, reporting, and being able to support other needs in terms of education and business. The development method used is the DevOps Life Cycle with object orientation combined with the BlackBox Testing method and uses the Unified Modeling Language (UML) tools in its design. The results of the research are that the DevOps stage was successfully carried out (build-and-test to deployment), the system was able to detect errors in the program code, the average time for the entire process was 140.75 seconds in the staging environment, with an average deployment time of 2 seconds, while the time required in the production environment takes an average of 35.25 seconds. The test results using BlackBox Testing using Boundary Value Analysis technic have a feasibility value of 98.97%. According to the Likert scale interpretation, the results of testing the Billing System application get the "Very Good" predicate.

Keywords: *Billing System, Unified Modelling Language, DevOps Life Cycle, BlackBox Testing, Boundary Value Analysis*