

## **ABSTRACT**

Testing is one of the most important phases in the software development life cycle. To emphasize this importance, Test Driven Development (TDD) is developed and proposed to be applied in the software development process. TDD method requires developers to determine the business processes first and software design needed as test cases, then implement them by writing the code. One of the benefits of implementing TDD is the high code coverage value, that means all methods and functionalities will be tested. To measure the quality of the written code, code coverage can be used as a metric. The higher code coverage result, it indicates the better the quality of the application. This study aims to determine the impacts of applying the TDD method in the software development process to the code coverage results. To run our experiment, we use a case study that involved the development of a point of sales application, namely dRetail. From the test results, the code coverage values are 99% instruction coverage, 88% branch coverage, 100% coverage for both line and method coverage. This code coverage value is higher than the code coverage value obtained from software development without using the TDD method.

**Keywords:** software testing, test driven development, code coverage.