



**PROJECT REPORT**  
**DATA ANALYSIS OF TRANSACTION ITEMS**  
**USING APRIORI ALGORITHM**

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**15.K1.0047**

**Faculty of Computer Science**  
**Soegijapranata Catholic University**  
**2019**

## APPROVAL AND RATIFICATION PAGE

### DATA ANALYSIS OF TRANSACTION ITEMS USING APRIORI ALGORITHM

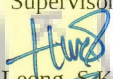
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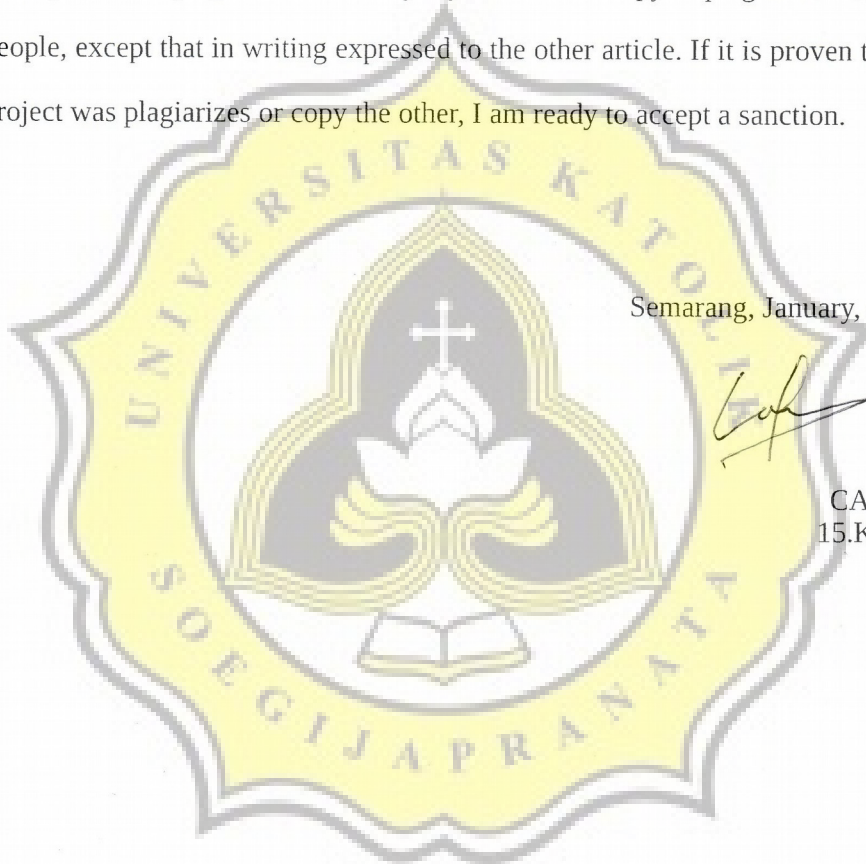
## STATEMENT OF ORIGINALITY

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## ABSTRACT

*On the marketplace transaction activities will definitely occur every day. In a weeks or months the transaction data will certainly be very large. This large transaction data can be utilized as a sales strategy.*

*This research aims to utilize the transaction data to find purchasing patterns from consumer habits. This pattern is useful for creating a system for structuring items according to consumer purchasing habits, and also to increase the stock of items on the items that are most often purchased. With this apriori algorithm to search for purchasing patterns by consumers is very possible to be detected. Besides that this research also added a recommendation feature to find out the relationship between items.*

*The result of this project is the time to find a pattern for 100 transactions is under 2 seconds, while in 1.000 transactions it takes approximately 10 seconds. The accuracy of the search for this best seller item is 100%. After the pattern is calculated, the recommendation system can be utilized.*

*Keyword: data mining, apriori, support, confidence.*

## PREFACE

This project is titled "DATA ANALYSIS OF TRANSACTION ITEMS USING APRIORI ALGORITHM". This project will finding consumer purchasing patterns based on items transactions. This project is consists into 6 chapters:

Chapter I discusses Background, Scope, and Objective in utilizing this Apriori Algorithm.

Chapter II is a Literature Study where inserting 8 journals about the Apriori Algorithm will be used as a reference in this project. In the last paragraph there is what is the difference of this project from other existing projects.

Chapter III discusses Research Methodology. Here there are 5 methods for the project flow.

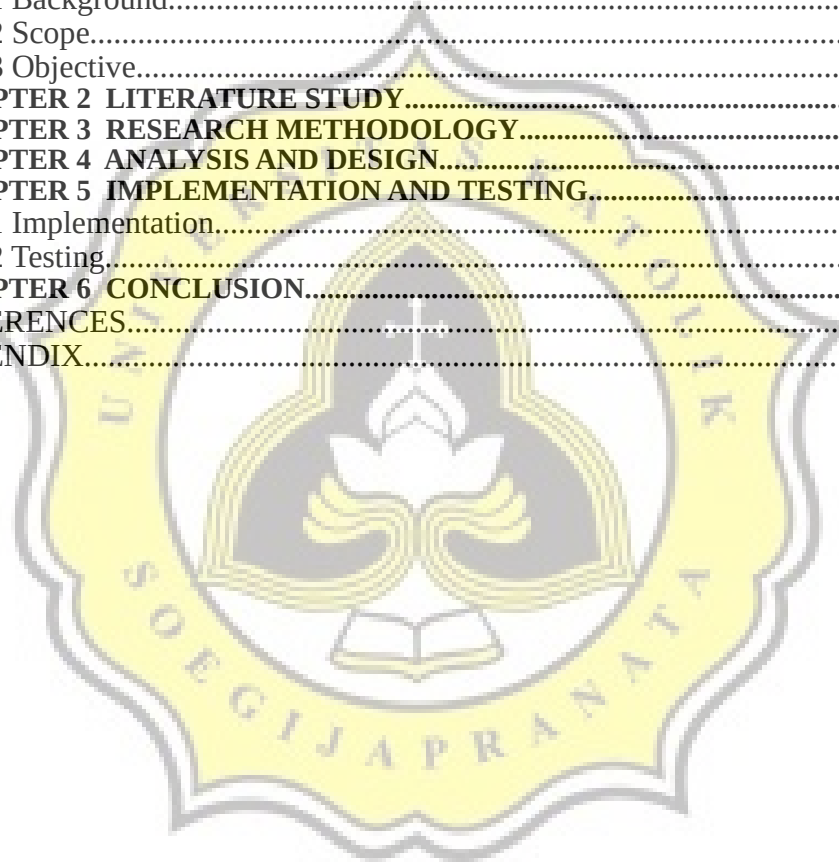
Chapter IV is Analysis and Design, contains work methods and examples of the use of this apriori algorithm. In the Design section there is a schema of the item transaction table and flowchart of this project.

Chapter V explains about Implementation and Testing. Here explains about the important parts of the program technically, starting from inputting data, determining Support, each Iteration, to the Recommendation system. Then Testing contains the results of the program trial.

Chapter VI contains the Conclusion of this program where the answer is Scope from Chapter I, and there are also suggestions for future research.

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