CHAPTER 3
RESEARCH METHODOLOGY

The steps in this project are:

3.1 Data collection

The dataset used in this research is loan application data from customers of the Prosperous Savings and Loan Cooperative. The data used is loan data from 2016 to 2019. The parameters used in the dataset are Gender, Loan Application / Submission, Prospective Customer Salary, Payment Period, Interest, and Guarantee. In total, there are 694 data that will be used in this study.

3.2 Data processing

In data processing process, there are some data that are changed to another data type so that it can be processed in the coding section. For the parameter of gender, the male data is changed to number 1 and for female data it is changed to number 2. For the guarantee parameter, the K data is changed to number 3 and for NK data it is changed to number 4. The purpose of changing the data is so that the dataset can be used in the Implementation process.

3.3 Implementation

Next is to implement the Naive Bayes algorithm. The training data that has been processed is entered into the program which will later be used to classify the testing data. The programming language used to implement the Naive Bayes algorithm in this study is the Python programming language.

3.4 Testing

At this stage the testing process is carried out three times. In the first and second tests, there is data sharing, namely in the first test using 300 training data and the second testing using 600 training data. Both tests use 94 testing data and are analyzed using precision, recall, and accuracy methods. The third test will be analyzed using the K-Fold Cross Validation method.

3.5 Analysis

At this stage an analysis will be carried out regarding the previous stage, namely the testing stage. At this stage an analysis will be carried out regarding the level of program accuracy in classifying of each test and also evaluating the performance of the program.

3.6 Report Making

The last stage is writing a report which aims to summarize the stages of completion of this research.