

CHAPTER 3

RESEARCH METHODOLOGY

This chapter provides explanation of the methods used to run programs and the datasets used.

3.1 Research Design

‘To run this project requires several datasets and also tools used in the process of analyzing service performance.

3.1.1 Collection Datasets

The data that used is taken from icon+ SBU Regional Medan sales monitoring data. The data consists of client product data from each sales, installation prices, and the terminating address of these products.

3.1.2 Tools

In this project, some software and supporting tools are needed:

- Visual Studio Code as editor software for typing code and executing the program.
- Golang as programming language used for applications.
- Elasticsearch for database.
- Postman for application to run services and checking authentication tokens.
- Mux in golang for HTTP request multiplexer.
- JMeter for detecting the time response from client to server.
- Go-elasticsearch for connection between the application and the database

3.1.3 Methods

There are few methods that used for analyzing this project. Almost all the methods used are taken from the library in Golang. Here are the details of those methods.

- AES method for the encryption and decryption data.
- JWT for Golang for the token authentication.

- MD5 for encrypting password from user account and store it to database.

3.2 Research Process

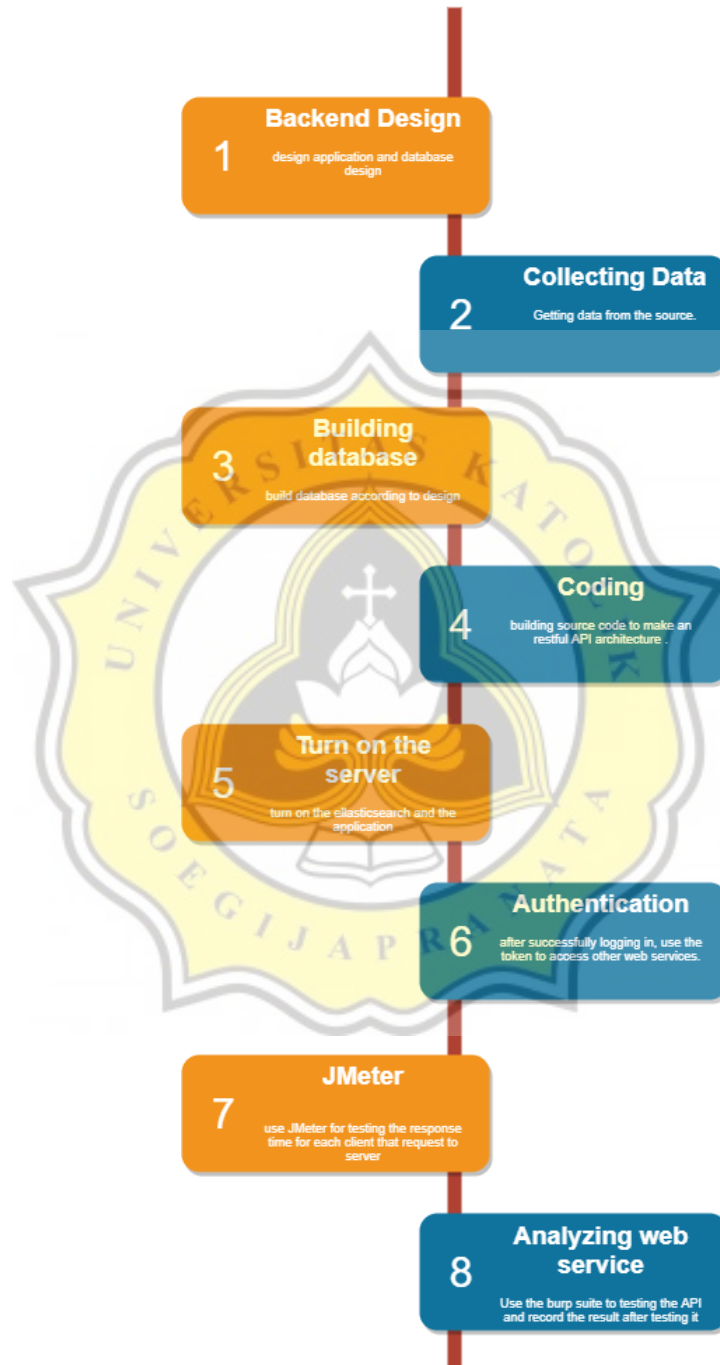


Illustration 3.1: Project diagram

The flow above shows how to analyze in this project. Data that is used can be any data that will be adjusted to the design of the database itself. For the server creation section of this project, only use local server.

