

CHAPTER 4

ANALYSIS AND DESIGN

4.1 Analysis

The problem in creating the application is data. Basic commodities data is obtained by scraping directly from the ministry of trade's website. The data must be processed to get values such as commodity name, price, and dates. The data needs to be processed first into a **linked** list so that it can be applied to statistical calculations and made a chart.

The application will load data from the source (Ministry of Trade's web site). Data retrieved from the source as HTML file. Jsoup library used to parse the HTML file to get the table of basic commodities data. Data obtained that still in form of table insert into linked list. After data stored in linked list price data can be calculated into statistic calculation (mean, median, mode). Data that will be shown in the table are item name, price, and dates. The result of the statistic calculation will be shown below the table. The price data series will be shown on a chart.

4.2 Desain

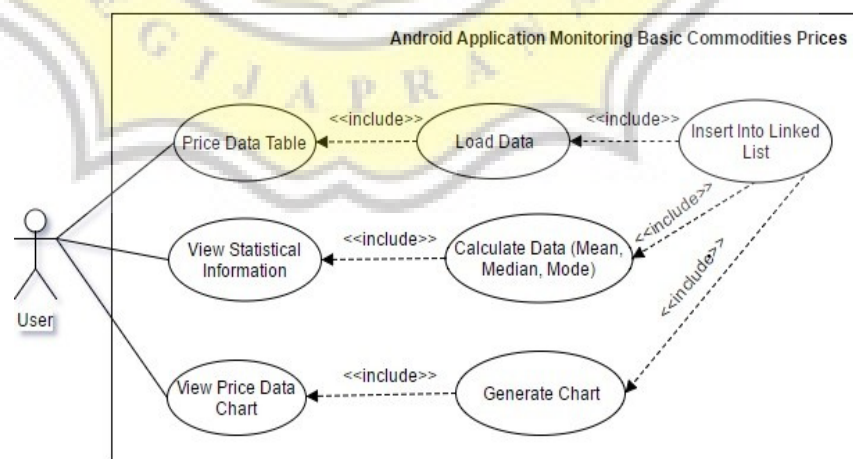


Illustration 4.1: Use Case Diagram

First, the user opens the application. Second, the application automatically connects to the ministry of trade's website. The application connects to the website using Jsoup library to parse HTML file and load data about basic commodities price table. Data retrieved from the website stored into linked list then shows as a table. Data about basic commodities price can proceed it stored into linked list. Data will be shown on the table, the user can view data as the statistical calculation (mean, median, mode). Finally, data about basic commodities price can show as a chart.

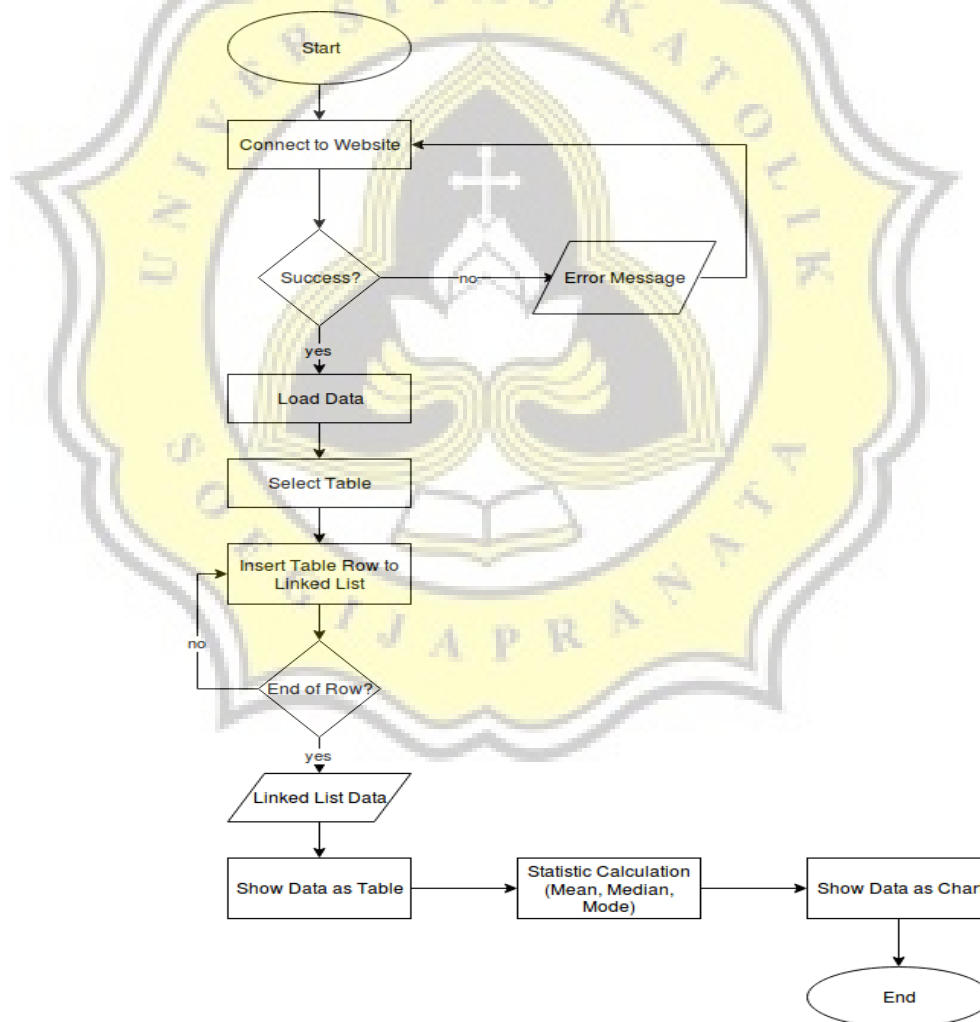


Illustration 4.2: Flowchart

The application starts to connect to the website using “try{} catch (IOException e)” command. The application will show error “catch (IOException e)” with a message if cannot connect to the website. If successfully connect, application will load data as HTML source using “Document doc = Jsoup.connect("http://www.kemendag.go.id/ id/economic-profile/prices/ national-price-table").get()”. The application will select specific table data from HTML source using “Element table = doc.select("table").get(0)”. After select table, insert data into Linked List based on the table row that contains specific basic commodities data until the end of row. Data stored in the Linked List ready to proceed. Linked List that contains basic commodities price data displayed as a table. All of the price data will be calculated using statistical calculations (mean, median, mode) and show below the table. The series of price data can be displayed in graphical form along with dates of the prices.