

CHAPTER 3

RESEARCH METHODOLOGY

This project is using an incremental approach. These are the steps of the project:

1. Search and collect references about CYK algorithm and array data structure used in this project.

This project get some article titled “*Analisis Perbandingan Algoritma LCP dan Algoritma CYK Untuk Memeriksa Pola Kalimat Baku Bahasa Indonesia*” and “*Translasi Context-Free Grammar Menjadi Parsing Tree Berbasis Algoritma Cocke-Younger-Kasami*”. Those article help this project to get references about the CYK algorithm.

2. Analyze the problems and make a plan to do the project.

After studies the references above, the analysis step is began. The analysis must be cover some problems like how to separate the sentence into words, how to recognize if there is a subject, predicate, object, or description, and how to get it back and display it at the end. To separate the sentence, using space as a reference. To recognize the elements, characteristic of the elements is compared of each word. The index of array will be saved every time it finds an element.

3. Implement the data structure and algorithm.

The implement step is started by separating the sentence into words. Those words will be inserted into the CYK matrix table to be analyzed. The analysis process is to find a characteristic of a word. The index of matched word will be saved to be called later.

4. Make user interface.

The program is presented attractively so the user not bored with how it looks.

5. Test all the functions in this project.

The program will be tested to make sure the completeness of the program. It test the accuracy of deciding all of the elements of a sentence.

