

# CHAPTER 1

## INTRODUCTION

### 1.1 Background

The sentence is the smallest unit of language that reveals whole of mind is, either by written or oral [Alwi, 1998]. It is a part of statement that has a minimal structure of subject and predicate, has intonation and is meaningful [Finoza, 2003]. Sentence has several constituent elements or sintaksis elements (word position or word role) consists of subject (S), predicate (P), object (O), description (K).

It is important to understand those elements in order to make the sentence correctly. The correct sentence is very important while the writer write a scientific works. Scientific work is an articles of science which presents a fact and written according to a good and correct writing methodology [Arifin, 2003:1]. In Indonesian language it must regard to the EYD (*Ejaan Yang Disempurnakan*) rule. But sometimes the writer is difficult to make a correct sentence because of difficulties in analyzing the sentence.

Actually, there is an algorithm that can be used to help the writer resolving the case above namely CYK algorithm. This algorithm is helping analyzing the sentence to find those constituent elements. But, it needs a lot time and efforts if the cyk algorithm is done manually. it will be more helpful if this algorithm implemented by using an application. So the writer can analyzing sentences instantly. By using this application, the writer can make a correct sentence easily and write a good scientific paper.

## 1.2 Scope

This project was created with Java Programming Language. Array is used as data structure and CYK (Cocke Younger Kasami) algorithm as iterative algorithm. Scope in this project are:

1. How to identify each word, is it subject, predicate, object, or description using the CYK algorithm.
2. How to recognizing the word that has changed because of the affix.
3. How to display the result attractively.

## 1.3 Objective

The purpose of this project is to build an application that can be used to separating a sentence into its constituent elements by using CYK algorithm. This application can helping analyze the sentence, so the writer can make a correct sentence easily and write a good scientific paper.

