

CHAPTER I INTRODUCTION

I.1 Research background

Computer science students are expected to be well familiar on programming skills. (Michael McCracken, 2001). But in fact, Programming algorithm is one skill that is difficult to learned. Some study shows that many of the student can not do a simple programming even they have passed their introductory course. From 216 students in 4 different university, the average of students only get 22.89 of 110 points in that test (Michael McCracken, 2001). In the other survey for 188 students in Telkom University, Information System major. The classification students who take algorithm course is 44 %. Many of student confused to answer the question as shown in Figure 1.

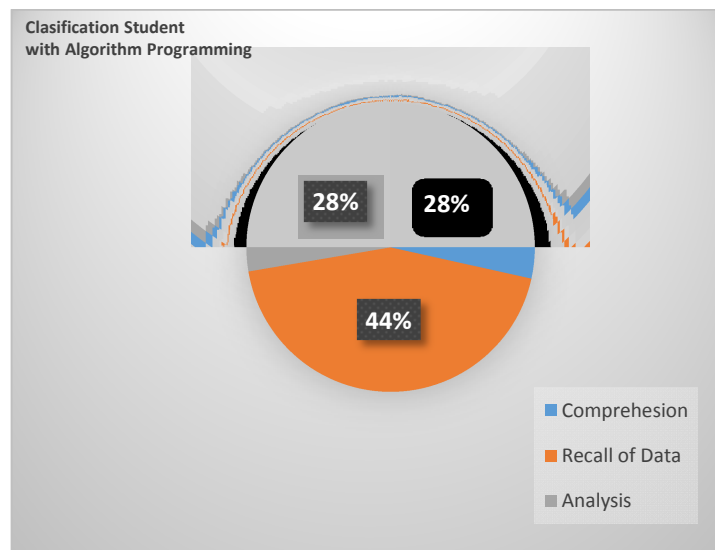


Figure I.1 Chart of classification student

Ineffective of the current learning system is one of many causes to this issue. In an international survey that takes 500 students and lecturers shows many of student feels that learning by trying it by themselves and doing a course programming is more effective than learning in class (Essi Lahtinen, 2005). This clearly shows that student should try and explore by themselves to learning a programming.

To support the learning system, the assessment mechanism is also the important thing to support the learning system, because this mechanism is the core of the learning system (SR Hamidi, 2013). To assess student ability, usually lecturer gives the practical question of programming in quiz, homework or in practice lab (Kirsti Ala-Mutka, 2004). But in that type assessment, students can't see the result, they don't know about the right answer of the given question. That makes this type of assessment has no learning and improvement services (Hamidreza Mahroeian, 2013). According to Dirk Malzahn, the mechanism of assessment should provide the assessment status, learning and improvement services (Malzahn, 2009). In the lecturer side, the problem is about to get the valid result of the assessment. Because many fraud usually occurred during this common assessment method (Kirsti Ala-Mutka, 2004).

Based on the problem that has been mentioned above, author provide a solution to make a learning platform based on heuristic approach in the assessment module, that can provide the assessment status, learning and improvement services so the lecturers can easily measure the ability of their student and the student also easily evaluate their work.

I.2 Identification Research

1. What kind of platform that can be used to measure the ability of the students in programming course ?
2. What kind of platform that can provide the learning and improvement services for student ?

I.3 Research Objective

1. Creating a platform that can be used to measure the ability of student in a programming course.
2. Creating a platform that can provide the reporting status of the student.

I.4 Research Limitationn

1. The learning platform only provide java as a programming language.
2. This research is based on Information System major in Telkom University .

I.5 Research Benefit

This benefit of the research are shows below:.

1. This platform help student to try out their logic to the programming language.
2. This platform can help the lecturer to correctly measure the ability of their student

I.6 Writing systematic

Chapter I Introduction

This chapter contains the description of the research background, Identification research, research objectives, research limitation, research benefit, and writing systematics.

Chapter II Literature Review

This chapter contains literature concerned to the researched problem and reviews the results of previous researches. The second section describes the correlation between concepts becoming the research studies and contributions argumentation. Then, the third section describes the reasons for selecting the methodology.

Chapter III Research Methodology

This chapter describes the detailed research steps include: developing a conceptual model of this research application by identifying and doing operationalization against research variables, as well as designing research systematics that has involved the specified software development methodology.

Chapter IV Analyze and Design

This chapter describes analysis and design for the research application that will be developed. It contains of business requirement, functional requirement, data requirement, and system architecture. Specifically, this

chapter shows how this research application works

Chapter V Implementation and Testing

This chapter describes implementation and testing in which it will show implementation and black-box testing. By this chapter, this application can be known whether it works well or not.

Chapter VI Conclusion and Suggestion

This chapter describes conclusion for all this application and suggestion for next related application development.