Chapter 1

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CHAPTER 1

INTRODUCTION

1.1   Introduction

In the current day of modern technologies, many tasks and jobs have started to be done automatically throughout many fields of work. In the academic fields, the system to manage anything related to it has been significantly improved. We can lay out several reasons why this is happening. The first one is the usual suspect, which is globalization. More and more institutions introduce other cultures into their curriculum, such as English language subjects. Globalization results in a more culturally and linguistically diversified population (Miller et al., 2009). Other reasons, such as technological advancement and the research put into better teaching and learning environments, led to many sophisticated systems used daily to manage students, teachers, and the institution's data.

However, there are still some areas that still do crucial and time-consuming tasks manually. One of them is managing the academics of a student. While many institutions have already made sophisticated systems that manage all of a student's data, here in Aceh, Indonesia is still a step behind.

Thus, a web app system for managing students' academics is needed to combat this. This Student Academic Management System will help teachers ease their work, save time, and make sure that students and their parents have access to their data. It is not without a reason why the system will be developed as a web app because the most significant benefit of a website is that it can be accessed by almost every device without the need to install an actual app.

1.2   Problem Background

One institution that still does not have a website to manage students' academic data is SMAS Muhammadiyah, a private high school in Banda Aceh City, Indonesia. For many years now, teachers in SMAS Muhammadiyah have been dealing with report cards that they update each semester manually. While the teachers changing the report cards means that the students or their parents do not have access to their academic data for a while until the teachers completely update it. The report card collection usually happens when a final exam occurs; the students will hand in their report cards before the exam starts. After the final exam finishes, they will get their report cards back on "Report cards distribution day." Nevertheless, it is time-consuming, but there is also a risk of losing the report card and being more vulnerable to human error.

Another problem that they are facing is the tuition management of the students. It is still done manually without a system by confirming to the student's parents/guardians. The parents/guardians will send the teacher the receipt of payment, usually through a messaging app such as WhatsApp. Not only is it cumbersome, but also time-consuming for both parties. The same can be said for attendance checking. SMAS Muhammadiyah still uses an attendance book that is provided for each classroom. This attendance record will be filled in manually by the teacher that teaches that day in that particular classroom. The data of all students is also being kept in multiple files and books, making it decentralized. The timetable that the students use is also manually printed out, and the student needs to write down the schedule/timetable themself.

1.3   Project Aim

This project aims to create an effective solution to enable the institution to convert its manual student management system into a computerized system.

1.4   Project Objectives

The objectives of the project are:

2

a) To identify the requirements of the student academic management system
b) To design the student academic management system based on the Stakeholder's requirement
c) To develop the student academic management system based on the Stakeholder's requirement
d) To test the functionalities of the student academic management system according to stakeholder's requirement

1.5   Project Scope

The scopes of the project are:
a) This project only focused on the conversion of manually managing student data to a website that stores all of the student's data, which can be accessed by teachers, and students.
b) SMAS Muhammadiyah 1 will provide the data that is needed for the system
c) Users in this system are teachers, students, and admins of SMAS Muhammadiyah.

1.6   Project Importance

The project will significantly increase the efficiency of the institution's student management and increase the teacher's productivity. It also provides students and their parent's ease of access to academic data. The proposed automated system will also minimize the risk of human error from all parties involved.

1.7   Report Organization

This PSM 1 report will consist of 5 chapters: Introduction, Literature Review, Methodology, Requirement Analysis and Design, and Conclusion. The introduction chapter consists of an introduction to the project and the problem background, aim, objectives, scope, and importance of the project. In chapter 2, the literature review will mainly discuss the case study with its organizational structure and manual operation. There will also be an analysis of the current system and comparing existing systems.

3

The technology used will also be included in this chapter. In the 3rd chapter, the methodology was chosen for the project, and its justification will be explained. The chosen methodology's phases then will be briefly dissected one by one. In chapter 4, the requirement analysis and design will be laid out. This requirement analysis and design are required before taking the system into the development phase. The 5th chapter, which is the final chapter of this report, will consist of the report's conclusion. This chapter will also include achievements and suggestions so far during the project.

Chapter 1

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