CHAPTER 1

INTRODUCTION

1.1   Background

In the modern business era, success-ness is highly depended on the organization's ability to obtain the data and information promptly, accurately, managed them effectively, and also using it properly in order to support their daily activity. Without the ability to manage the data and the relevant information, those data will only be considered as some liabilities with high effort and maintenance cost, in opposite of being the organizations' assets. This is where information technology comes in handy, to help them organize, form, store, distribute, process the information, and therefore distribute them.

Most of the organizations nowadays have their own data in which are generated by its daily operational works. Those data should be organized and stored in a way that will be processed to be useful information. That is done so that if someday in the future when it is needed, then it will be easy to be tracked and easily retrieved.

Data, let alone, could be considered as useless, unless it has some meaning in it. In database system, the data is integrated in a structured way to ease the interpretation, storing, and therefore manipulate those data to be a form of information. At this point, data should be high-quality, meaning that it should be accurate, complete, timely, consistent, accessible, relevant, and concise.

Database System is a part of information technology which can integrates the information, store, retrieve, and manipulates them efficiently.

The Joseph Wibowo Center for Advanced Learning, Bina Nusantara University (BiNus), a prominent education and institution in information technology and management field, is conducting a program named the Executive Development Program (EDP). This program aims to build the skills of future leaders in organizations. As the proprietor of ISO 9001 certificate, EDP by BiNus always keep their standard up high in order to bring into being a qualified and beneficial graduates.

According to our interview with BiNus Head of Operations Department, EDP's participants have increased in the past year, moreover with the new courses and programs that are planned to be added to the institution. The EDP management wishes to continue to increase the number of participants while also maintaining their data for operational and marketing purposes. For this case, we focus on the business process behind the EDP registration and maintaining those registered participants, which involves 4 divisions:

- Marketing division: responsible for adding new participants to an EDP program
- Finance division: responsible for checking payments made by participants
- Operations division: responsible for maintaining the participants during the ongoing sessions of the EDP program
- Program Coordinator : responsible for program or class initiation

Currently, the process of transferring data is done semi-paper based, with personal data stored on paper, while payment details and absence lists are stored in MS Excel documents and emailed between divisions upon update. With more programs held by EDP and more participants joining the programs, problems began arising, affecting the performance of the staff in completing certain tasks. The problems with the existing system, which are elaborated more specifically in Chapter 3, hinder the divisions in optimizing their work performance. EDP is in need of a solution to ease the work of all three divisions, moreover in combining forces to face the increasing number of participants.

1.2 Scope

The objective of the system is to ease the work of the system users of the system in monitoring and updating participants' data by creating an integrated database application, in which consists of front-end user interface and back-end database, which can be accessed by all four users. In order to achieve the optimum result, the scope of this thesis will only be the participant registration, enrollments, and report generation. In detail, the database application is expected to be able to:

- Add and update the details of EDP participants
- Synchronize data between the three main users (program coordinator, marketing staff, operations staff and finance staff)
- Generate reports for each division, such as number of participants joining a certain program, which participants were already Binusians, what company contributed which participants, etc
- Calculate the total attendance of participants for determining the eligibility of receiving a certificate

1.3   Aims and Benefits

The aim of this thesis is to create a database system, in which will ease the workload of each divisions in EDP, especially regarding the participants of EDP. Thus, there will be certain benefit for both parties involved, they are:

1.3.1   For EDP

Having an integrated database there will bring some benefits to EDP, such as:

1. *Efficient communication flow*. By having a database application, divisions do not have to send files attached in emails among each other in order to get the information needed.
2. *Searching and updating participant's data will be much easier*. By using the search function in the database application, staff would not have to look at each file, and therefore scan through the whole records available in it in order to get and update a participant's data.
3. *Data accessibility.* By having the database application, staff could retrieve the most recent data anytime and anywhere, as long as they are in the Joseph Wibowo Center.

1.3.2   For EDP Participants

Although the system will not be used by the participants of EDP, we plan to modify the registration process to make it more efficient. By having the system store details of EDP participants, participants who have already joined EDP would not have to fill in their personal details all over again in order to join another program of EDP. Instead, they can simply submit the program registration form, and the receipt of payment approval. Indirectly, it eases registration and improves the time needed to enroll them to a program.

1.4   Structure

The structure of our thesis will be divided into 7 chapters, each containing the following materials:

Chapter 1: Introduction

This chapter contains a brief description of the thesis, the background, problems, scope, aims and benefits of the proposed system.

Chapter 2: Theoretical Foundation

This chapter describes the keywords that will be used throughout the thesis, including the definition, methodologies, and the related frameworks.

Chapter 3: Problem Analysis

This chapter defines the business process, information flow, and analysis on the problem faced by the current system.

Chapter 4: Solution Design

This chapter contains the proposed system and application design for back-end users, focusing on the database and its function to support the application logic, in order to be able to supply the front-end users with useful information.

Chapter 5: Testing and Implementation

This chapter's details include user acceptance test, focusing on the system performance

Chapter 6: Evaluation

Further analysis on test results are reported in this chapter, including comparison with the current system, and its advantage over the current system.

Chapter 7: Conclusion

This chapter contains general conclusion of the result of implementing the solution