CPU COLLEGE OF ENGINEERING WEB APPLICATION

SOFTWARE (CPU CoEWAS)

A Research Report

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By

Jay P. Alegata

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CHAPTER I

INTRODUCTION

Background of the Study

The evolution of technology has brought significant improvements on how information was communicated. In businesses, for example, products are advertised through newspapers and television in order to present various goods for its target customers. Nowadays, the concept of Tim Berners-Lee where information can be shared across various networks greatly shifted our way of doing business. New products are now advertised in the web environment and through e-commerce, customers can just order online and have their goods delivered. The internet has grown rapidly that almost any transaction can be facilitated.

The CPU College of Engineering was born some 70 years ago when Dr. Harland Stuart initiated the offering of a general engineering course. In 1945, Prof. Juan Sornito was appointed Dean of the College with only 27 enrollees. After four years, with the help of Prof. James Lester Knox, the college has produced the pioneer batch of Bachelor of Science in Civil Engineering. Through the years, the college has proven itself to become known and become competitive with other universities here in the Visayas and even in the National Capital Region (NCR). Currently, it has seven engineering departments, namely; Civil Engineering (1945), Mechanical Engineering (1955), Chemical Engineering (1956), Electrical Engineering (1957) and Electronics and Communications Engineering (1993). In 2000, it started offering Bachelor of Science in Software Engineering, the first in the Philippines, to compete with the need for developing quality

software applications. Five years later, it has opened a new course and the first in the Philippines, the Bachelor of Science in Packaging Engineering. For years, the college has grown significantly and received numerous awards and recognition here and abroad due to its initiative to send faculty members to international trainings in the USA, Australia, and other countries. It has produced numerous amounts of graduates currently working here and abroad.

These achievements of the College have helped engineering graduates develop confidence and motivate them to compete globally. However, the College of Engineering has no means of advertising these achievements to engineering alumni and lacks marketing to prospective students since its birth. The offering of the two new courses (Software and Packaging Engineering) is a big leap for the college because these courses are pioneered here in the Visayas. There might be prospective students in the other parts of the country who will be interested to enroll in such courses if only they are aware of it. Currently, the college is having difficulty in competing with other colleges such as Nursing that the enrolment has started decreasing. Most of the graduating high school students would prefer taking up Nursing because of the opportunities abroad, thus, resulting to decrease in enrolment. One of the problems might be the lack of awareness of students with regards to the practice of engineering and/or what engineering people do. Another issue is the lack of means for the faculty of the college to set-up their own personal homepage to show their competencies within each of the engineering courses. It will give the students the confidence to enroll in the college of engineering if they know that the faculty of the college has been exposed to international trainings. Since the birth of the college, it has produced hundreds of graduates working both locally and abroad.

Currently, the university published the Link Newsletter to update the alumni of the current events here in CPU and the existence of the CPU website (www.cpu.edu.ph) that details the activities of the university.

The initiative of various universities to utilize technology through the development of a university website is a way to link with their alumni. The De La Salle University – College of Engineering in Manila (www.dlsu.edu.ph), for example, is considered to be one of the best universities in the country that offers undergraduate and graduate courses in the field of engineering. Their website has adopted green as the university color. College admissions are also provided for quick access which can be downloaded directly from the website. However, the current website of DLSU-Manila, specifically on the College of Engineering, seemed to be lack of news updates about the events in the College. Since the courses are integrated into the university website, the flexibility of each college to display essential information is limited. Even the individual engineering courses lack information about subjects that will be taken per semester, current achievements and scholarships offering, vague description of the course content and activities conducted by the students. Ateneo De Manila University (ADMU) (www.admu.edu.ph) is one of the leading schools in the country for upper middle class students. The website for the computer engineering course displays the overview of the course and the number of years it will take students to graduate. It does not provide, however, essential information about the list of subjects offered per semesters, completed/on-going projects of the students, linkages to big computer industries, researches conducted by the students and faculty, personal information of the faculty members teaching the subject, and other essential information. Some of those items are

displayed on a separate link and it is not included in the department's website. Even Berkeley College of Engineering (http://www.coe.berkeley.edu) which is currently the number one (1) university in the field of Engineering surpassing the Massachusetts Institute of Technology which is currently in number 2 develop a website for its use. The current website of the college has provided essential information specifically for prospective and current students, alumni, parents and friends of Berkeley who needs information about the current events in the college. It has also provided the current news and events that the college has been involved in. It has provided links to the current researches conducted by the students and faculty to showcase their contribution to the society. The college has emphasized the projects made by the students in which they showcase the completed projects of their students. The website of Berkeley Engineering has provided essential information about the college though there might be some minor improvements specifically on the interactivity of the site. The site can have forums to discuss issues related to engineering and technology so that other students can explore new ideas.

However, on the part of the College of Engineering, it hasn't done anything yet to send updates to their engineering alumni by developing such website. In fact, the alumni would like to know how the College has been doing for the past years and what happened to the popular engineering activities they participated such as the "Teatro Enhinyero" and the Engineering College Day. In addition to that, there might be a possibility of getting some funds on specialized projects of students. For example, a group of ECE graduates working in a semiconductor company in Cavite will sponsor a design project for ECE students to develop. Job opportunities can also become a possibility for newly

engineering graduates if they can make contacts with those engineering alumni who might have been occupying managerial positions. It will also facilitate the current six-year engineering program of the college to encourage more on-the-job trainees since there are a lot of graduates who are connected with many engineering industries.

Objectives of the Study

General Objective

The general objective of the study is to develop a web-based software application for the CPU College of Engineering that facilitate means of advertising the college, providing awareness of engineering and making contacts with engineering alumni.

Specific Objectives

The specific objectives of the research address the need to develop a web-based software application for the CPU College of Engineering which aimed to:

1. To describe the web application software according to its functionalities, essential features and its product scope;

2. To develop a system that allows the College of Engineering to market the college to prospective high school students as to increase enrolment;

3. To design the architectural framework of the web application and describe the physical environment in which it will work as defined;

4. To justify the design and development approaches made in the resulting software product in order to increase its performance during operation;

5. To utilize a customized tool for making online updates to the news and announcements as well as the other web components.

Scope and Limitation of the Study

The study will focus on the development of a web application that advertise the CPU College of Engineering and its seven (7) undergraduate programs, namely; Civil Engineering, Chemical Engineering, Mechanical Engineering, Electrical Engineering and Electronics and Communications Engineering, Software Engineering, and Packaging Engineering. The web application will cover mainly the website for the College of Engineering and some dynamic pages intended to the Dean, Department Heads, Engineering Faculty and Staff. It will allow the Dean, selected Staffs and the respective Department Heads to make announcements and make modifications to the news item that they want to publish. Full-time faculty will have individual log-ins for information updates and modifications to their own personal homepages. However, the uploading of files such as making file attachments is not included due to security reasons and viruses.

The study will utilize a web server and a file server of the University Computer Services Center (UCSC) to manage essential information for the web application. After the development, the web application will reside in the UCSC but modifications to the application can be performed locally after a successful log-in. Maintenance of the application will be handled by the researcher as needed due to the availability of the UCSC personnel.