

Enlistment system



CHAPTER I THE PROBLEM AND ITS BACKGROUND Background of the study

The importance of computer in our society today cannot be overstated.

Almost every area of activity is one way affected by computers. The State University is one of the Educational organization that has been welcoming new technology in almost all of their processes because of the advantages they obtain from the use of computers. The proponents come up with this study to determine the acceptability of the society on the Online Enlistment System and also to find out the effectiveness and efficiency of the proposed system. Online enlistment has become a standard in today's modern schools and universities. Technology has been implemented to make people's lives easier and this system definitely makes it simple for students to go about their enlistment. Objectives of the study 1. To determine the acceptability of the society on the Online Enlistment System 2. To determine the effectiveness and efficiency of the Online Enlistment System Statement of the problem The study sought to determine the acceptability of Online Enlistment System on the Central Luzon State University. Specially, the study attempted to answer the following question: 1. Which of the two ways of enrollment gives the accurate reports? 2. Which is more efficient and effective in terms of generating reports? 3. Which is more accessible and easier to enroll for students? 1 Significance of the study The proponent will conduct this study to develop a new idea and to gather information in developing an Online Enlistment System that will be accepted by the society. It also considers that the application is a user-friendly. The need for personal appearances of the students in the school for their enlistment is not needed anymore and allows them to do this from home. This will also benefit the school because the data is processed with much more ease due to the

automation of certain tasks. When a student enlists online, they would only have to go to school to pay for their tuition fee. And in this situation the student can save more of their money and it will not consume a lot of time in doing so. With an online enlistment system, you can expect to see an increase in student capacity in terms of handling during enrollment days. Additional working days for work on enrolling students and processing their registrations are reduced. Definition of terms Attributes — are the properties of the entity which we want to capture information Cost-Benefit Analysis — An evaluation of cost and benefits that will result from the development and operation of the new system Entity — An object, which is distinguishable or other objects by sets of attributes Flow chart — Visual presentation of Algorithm Gantt chart — Is a horizontal bar chart that shows the same task information as the work plan, but in a graphical way Sloven's Formula — Formula use to evaluate the statistics of the study Scope and Limitation The Online Enlistment System is a helpful tool for the students of CLSU to ease the enrollment process. These will be available online and can be accessed by students and registrar personnel at their homes or wherever there is an internet connection. It will let the students choose the subjects they intended to take for the next semester. And also, they can view their accumulated tuition fee after they have validated the subjects they have chosen. The payment of their tuition fee is not included in the proposed system. 2

CHAPTER II REVIEW OF RELATED LITERATURE Local and Foreign Literature At the beginning of the millennium and the next, we are surrounded by information technology, whether we recognize it or not (Clyde, 2009). Accordingly, satellites transmit new stories, financial transaction, and telephone conversation around the world in less than a second. The

advantages of using IT in a various organizations have been widely acknowledged and appreciated. Schools and libraries are using information technology in many ways. In some, large scale classroom scheduling maximized the likelihood that student can get their desired courses. So far, the most successful computerized method had been developed for special cases such as examination, scheduling, and timetabling meeting the time assignment subject to various constraints. In an uncertain economy, companies are also looking for the most cost efficient production processes. Corporate decision makers are choosing equipment that comes with power saving and environment-friendly functionalities. According to Dianne Betito (2004) in her waste treatment tracking system for Inchen Environmental Inc., manual system using massive paper work can cause redundancy. Operating manually gives the company a lot of problems such s misplaced files and bulky files in the cabinet. Cartyle (2002) stated that a well —designed database system should always have organized data that is quick and easy to retrieve. In addition, the system should accurately record and store data without corruption. The computerized enrollment system for Lord’s Sheperd Academy of Guiguinto, Bulacan aimed to centralize the records of the students with a network interface. In this way, sharing of data can be made possible so that the enrollees need not fall in line for a very long time and spent as much time writing (Caragan, et. al, 2009). 3 CHAPTER III

METHODOLOGY Methods of Research Used The proponents have used the Descriptive Research Method wherein the study is focused on present situations. It involves the recording, description, analysis and the presentation of the present system, composition or processes of phenomena. Under the Descriptive Research Method, the technique used is the Survey

Method, which is otherwise known as normative survey. The results and findings of the study should always be compared with the standards. With the survey method, researchers are able to statistically study the specific areas where the proponents must concentrate. Findings regarding the common practices being done and the methods which are commonly adopted by the school are obtained with the use of the survey method.

Respondents of the study The respondents of the study include the university wherein the proponents prepare a set of carefully prepared and logically ordered questions. This respondent focuses on the students, parents and on the registrar personnel of the school for they are very important in a sense that this study is all about them. (See Table 1. 0) Table 1. 0 Respondents Distribution N = 155 | Position/Status | No. of Respondents | Percentage (%) | | Parents | 50 | 30% | | Registrar Personnel | 5 | 40% | | Students | 100 | 30% | | TOTAL | 155 | 100% |

4 Sampling Design and Technique Sampling may be defined as measuring a small portion of something and then making a general statement about the whole thing. It enables the study of a large, heterogeneous population more economic wise, meaning not too costly, and more realistic and possible to make. The population to be researched upon is quite small; hence scientific sampling is implied to each member of the population since the number of population is attainable for sampling. The proponents decided to use the unstructured random sampling technique since the population is well in the reach of statistical evaluation. To justify the point, the use of Sloven's Formula was utilized in the formula of: $n = \frac{N}{1 + N(e)^2}$ Where: n = sample size N = total population e = level of confidence (. 01 to . 05) Methods used for the propose system The System Development Life Cycle (SDLC) is a framework

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for describing the phases involved in developing and maintaining enlistment systems. Common name for these general phases are Requirements Specification, Project Planning, Design Specification, Implementation and Testing. Requirements Specification In this phase the researcher will review and analyze all the data that will be gathered in order to solve the problem and to identify the scope of the system to be studied, dividing it into its component parts, and then identifying and evaluating its problem, opportunities, constraints, and needs.

a. System Description The project requirements are specified by the customer and validated by the researcher to distinguish the needs of the system. The requirements specification serves as the blueprint of the project. It also states the description of the language to be used functions and capabilities of the system; also it must provide the constraints by which the system must solve. These serves as the starting point of the system.

5 a. Software Project Constraints - The registrar and student interface must support Internet Explorer 5 or Netscape Navigator 5 or Netscape Communicator 5 or any internet browser version 5 and up. The database and application must run on PHP and MySQL.

b. User Stories

1. All (Administrator, Registrar, User)

1. 1 Login Story A login mechanism is required for the Administrator, Registrar and Student users to access the enlistment page. If he/she is a new user, a help button below the login page will explain how they can be registered.

2. Administrator

2. 1 Inserting Schedule Story In inserting schedule, the list of subjects of the chosen semester, a list of sections per semester, a list of instructors, and a list of classrooms should be displayed on the screen. As user insert schedule, first he/she should choose the section. Then type the desired schedule for the section, the classroom number and the instructor in charge of the

subject. 2. 2 Changing User's Password Story To change the user's password, the user should type first the recent password and then type the desired password. The desired password should be re-typed to confirm. 3. View/Edit Student's Profile Story The user will choose a student from the list of students before viewing the student's profile. As the user chose a student, the profile will be displayed and an option to edit the profile should also be displayed. 2. 4 Add/Edit Course Subject List Story Before adding schedule, the administrator or registrar should first add the subject list per semester first. The administrator or registrar cannot delete a semester because as they deleted a semester all information, student's enlistment history will also be deleted. 2. 5 New User Story Username should be an ID Number. The administrator will be in charge of setting the username and an initial password of the new user. 2. 6 Modify Student Enlistment Story Student Enlistment is pre-entered by the student. If there are conflicts in subjects entered, the registrar or the administrator can modify the registration form. 2. 7 Print Enrollment Report Story In printing enrollment report, the administrator and registrar has an option to print it by semester or annually. 2. 8 View/Edit Profile Story The user can edit his/her own personal information. 2. 9 Print Student's Enlistment Form Story The administrator and registrar can print student's enlistment form per student. They can also print in bulk per sections. 2. 10 Access Control The Administrator has the right to set the access control of each user who is using the system. 3. Registrar 3. 1 Inserting Schedule Story In inserting schedule, the list of subjects of the chosen semester, a list of sections per semester, a list of instructors, and a list of classrooms should be displayed on the screen. As user insert schedule, first he/she should choose the section. Then type the

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desired schedule for the section, the classroom number and the instructor in charge of the subject.

3. 2 Changing User's Password Story To change the user's password, the user should type first the recent password and then type the desired password. The desired password should be re-typed to confirm.

3. 3 View/Edit Student's Profile Story The user will choose a student from the list of students before viewing the student's profile. As the user chose a student, the profile will be displayed and an option to edit the profile should also be displayed.

3. 4 Add/Edit Course Subject List Story Before adding schedule, the registrar should first add the subject list per semester first. The registrar cannot delete a semester because as they deleted a semester all information, student's enlistment history will also be deleted.

3. 5 New User Story Username should be an ID Number. The administrator will be in charge of setting the username and an initial password of the new user. The registrar can only add new student account.

3. 6 Modify Student Enlistment Story Student Enlistment is pre-entered by the student. If there are conflicts in subjects entered, the administrator and registrar will be in charge of modifying the registration form.

3. 7 Print Enrollment Report Story In printing enrollment report, the administrator and registrar has an option to print it by semester or annually.

3. 8 View/Edit Profile Story The user can edit his/her own personal information.

3. 9 Print Student's Enlistment Form Story The registrar can print student's enlistment form per student. They can also print in bulk per sections.

4. Student (user)

4. 1 Change Password To change the user's password, the user should type first the recent password and then type the desired password. The desired password should be re-typed to confirm.

4. 2 View Course' Subjects List The student can only view their course' subjects list but they cannot edit any subject's information.

4. 3

Enlist in a Subject The student can only enlist in a subject for which they have prerequisites. They cannot enroll for subjects which are not under their course. They can enroll in a subject which is offered under other sections but it should not have conflicts in their other subjects.

4. 4 Print Enlistment Form
The student user can only print her/his own accomplished enlistment form. He/she cannot access other accounts enlistment form.

9 c. Information
Description a. Figure 1. 0 Use Case Diagram d. Function Description Figure 2. 0 Functional Partitioning i. Functional Description Login Function (All Users)
This serves as the access control and security of the system. This requires username and password and managed by the access control. If the username and password is incorrect a message will pop-up and requesting the user to try login again. If username and password correct, it will be taken in the designated menu. Both student and admin/registrar will login in an internet browser.

View Subject Enlisted (Student) This function serves as menu for viewing the enlisted subjects of a student. A student that will use this function can only view his/her enlisted subjects.

Enlist in a Subject (Student) This is the student enlistment page where students will enlist in the subjects offered under their courses. Students can also enlist themselves on subjects under other courses. If the subject schedule conflicts with other schedule a message will appear and advice the student to choose other schedule that will fit in their schedule.

Profile (all Users) This function will store necessary information about the user. The user can edit their profile and they can also change their passwords. These function is available both for registrar/admin and student user. The registrar can view the list of students. They can also edit the student's profile.

Schedule (Registrar/Administrators) This function is only available for the

registrar/administrator account. These is use to add schedule in a subject, edit a schedule and delete a schedule. If a schedule conflicts with another schedule a message will pop-up advising the user to change the room conflict, day and time conflict or teacher conflict.

12 Managing Semester (Registrar/Administrator) These functions as adding a new semester and edit a current semester. The user cannot add a semester if the school year is not specified or created.

Managing Course (Registrar/ Administrator) These functions as the Online Enlistment’s course management. In this section the user can add new course and edit existing course.

Managing Subject (Registrar/ Administrator) In this section the user can add new subject and edit existing subject.

Generate Reports (Registrar/Administrator) In this section the registrar/administrator can print enlistment report. They can choose either by semester or annual report.

Access Control (Administrator) The administrator will control the level of access for each type of user. As the user login, the user type will identify the level of access and trigger the appropriate menu to be displayed. If the username and password can’t be verified the user will return to login page and an error message will appear.

User Management All user accounts were managed by the admin/registrar. Only the administrator user can set up other accounts and registrar accounts. The registrar can only add student accounts. This function has three options which include add user account, edit user account and delete user account. As the user delete a user account a verification is required if the account will be deleted. Same as if the user account will be updated.

13 Project Planning a. Table 2. 0 Project Tasks and Scheduling Gantt chart |

TASK NAME	JAN	FEB	MAR	APR	Employee 1	12, 000	2, 000	1, 000	15, 000	Employee 2	12, 000	2, 000	1, 000	15, 000	30, 000

Yearly Cost (x12):	360, 000	Purchase of system	275, 760
Monthly costs:		Web-hosting cost	2, 660
		Maintenance cost	3, 000
		Electricity cost	190. 08
			5, 850 (300w x 9 hours / 1000) x 3. 52/kWh
Savings per month:		Cost from employees	30, 000
Less: Monthly costs	5, 850		24, 150
Investment		Savings	24, 150
ROI	8. 758%	Investment	275, 760

15 Design Specification Data Design Figure 3. 0

Enhanced Entity Relationship Diagram The diagram below is the Entity Relationship Diagram. It has four entities namely USER ACCOUNT, COURSE, SUBJECT and SECTION. USER ACCOUNT has two types: Student and Registrar or Administrator. Each entity has its own attributes. Figure 4. 0 Flow chart:

Scheduling 17 References: A. Dennis, B. Wixom and D. Tegarden. 2005. “

Systems Analysis and Design with UML Version 2. 0". Leyh Publishing, USA.

Kho, R.(1986). "Practical concepts using relational databases". Boston:

Institute for Responsive Education Zerchykov, R.(1982). A review of the

literature and an annotated bibliography on managing decline in school

systems. ----- User View Courses List Change Password Add /Edit

Schedule View Schedule Print by Section Print by Course Print Schedule

Extension Points: Report type is entered. extends extends extends extends

extends extends extends Student Registrar Add/Edit Course View/Search

Subjects List Add/Edit Subject View Students List Add/Edit User Edit/View

Student Profile Print by Section Print by Course Print by Year Print Enlistment

Report Extension Points: Report type is entered. Print Student Enlistment

Form Extension Points: Print option is entered Print by Section Print by

Student Enlist in a Subject Edit Student Enlistment Form View Semester: SY

List Add/Edit Semester: SY Edit/View Registrar Profile BASC Online Enlistment

System Login Student Registrar View Enlisted Subject Enlistment Profile A
View Profile Change Password Administrator B Generate Report A Semester
Management Add/Edit Semester Course Management Add/Edit Course
Subject Management Add/Edit Subject Search Subject Student Profile
Management Edit Profile Profile Edit Profile Change Password Add/Edit
Schedule Delete Schedule Schedule Management Access Control Generate
Report B Semester Management Add/Edit Semester Course Management
Add/Edit Course Subject Management Add/Edit Subject Search Subject
Student Profile Management Edit Profile Profile Edit Profile Change Password
Add/Edit Schedule Delete Schedule Schedule Management User
Management Update User Account Delete User Account Create User Account
Slots M M 1 1 M 1 User_Role Status Password User_ID has has Year Address
B_day ID_No. Last_Name Middle_Name First_Name STUDENTS Gender Name
Enlist in Pass Availability Subj_ID SUBJECT Status has 1 M Department
Course_ID Course_Name COURSE Not_Taken INC Fail USER ACCOUNT Day
Time Teacher Room SECTION End Print Schedule No Yes Is there an
Instructor conflict? No Yes No Is there a room conflict? Yes Is there a time
conflict? Input Instructor Input Room Input Time Start Sched_ID Subj_Name M
1 has No_of_Units