Chapter 1

Literature, Books

Chapter 1 The Problem and its Background Introduction As science and technology continues to advance, most of the manual task has been transformed into cybernet operation in order to cope up with the trend of the age. The fast pace makes any invention obsolete in a few years time. Today people at work and in whatever field of the study consider the computer as a huge help. For instance, in storing and printing documents in mathematical operation, a computer could provide fast tracking work within this area, unlike in manual operation wherein access is very limited. Inspired by the continuing effort raised by some pre need agencies in giving opportunities to some people in securing their future, the researchers come up with the idea of conducting a study about thecurrent Library Management Sytem of Asian Development Foundation College. It is designed for the convenience of the management on keeping track and storing information. The proposed system will serve the user in many ways through a speedy, tedious and dependable system. For decades the library of Asian Development Foundation College still follows the traditional system never hindering the production of competitive graduates. But sad to say, a large part of their students hardly visits the library at all. Maybe because it is located at the fifth floor of the six-storied building or preferred books in the library takes effort and time for the hectic scheduled students of ADFC. The researchers planned to develop an Online Library Management System they believe it could be the solution to the problem. It will certainly reduce consumption of time, money, effort and stress. Human errors will be lessened and users, whether students or librarians, will enjoy a more carefree environment making an Online Library Management System highly recommended. 1 Statement of the Problem The

Online Library Management System is exclusively designed for Asian Development Foundation College. It aims to answer the following: 1. What are the problems encountered on the current LibraryManagementSytem? 2. What system may be proposed to improve the current Library Management System of Asian Development Foundation College? 3. What are the inputs needed in developing the Online Library Management System of Asian Development Foundation College? 4. What are the assessments of the respondents on the developed Online Library Management System of Asian Development Foundation College in terms of: a. Contents? b. Usefulness? Theoretical Framework According to Mike Lance Richards " Information Processing Theory, is a concept of information processing states that this theory is primarily concern with the study of memory and on the evaluation of information". Like computer the human mind takes in information and performs operation when needed and retrieval. Having accurate information in conducting the study it will help in the process evaluation primary concern. 2 According to Jean Piaget " Constructivism Theory, knowledge is not about the world but rather constitutive of the world". Knowledge is not a fixed about the individual through his practice of the object constructs it. A person who has the exact knowledge of a certain activity is so much important. When people work collaboratively in an authentic activity they bring their own framework and perspective to the activity. They can see the problems form different perspective and are able to negotiate and generate meaning and solution through shared understanding. 3 According to Charles M. Reigeluth, " Elaboration Theory of Instruction deals with the macro level of instruction. " It is primarily concerned with the sequencing of ideas as

opposed to the individual ideas themselves and examples relating to them. The sequencing of ideas relates to fundamental and representational ideas or core principles. This theory serves as foundation from which more specific maybe developed. 4 The three theories which are the Information Processing, Constructivism and Elaboration Theories, was used by the researcher as basis for their study. First, the Information Processing Theory helps gather accurate information in order to perform their operations. While Constructivism Theory, researchers, works collaboratively in an authentic activity from different perspective that enables them to generate meaning and solution through their shared understanding, while in Elaboration Theory of Instruction, this serves as their foundation in sequencing of ideas that may be developed a more specific and in analyzing of a specific program. Conceptual Framework The basis for conceptualizing the Online Library Management System of Asian Development Foundation College which is proposed by the researchers is that it can help visualize the path that the aforementioned system would be heading to. The researchers used the paradigm shown below which consist of the inputs needed, the process that would take place, and the proposed output of the project. Fig. 1. 1 Schematic Diagram of the development of the Online Library Management System of Asian Development Foundation College Significance of the Study The result of the study on the online room rental and reservation system is significant of the following: To the Institution The study will provide vital information regarding to their Library Management to identify problem relevant to the maintenance, disposal and/or acquisition of needed materials for their institution to make more efficient and effective in meeting customer needs.

To the Librarian The librarian of the school library will be greatly benefitted with this Online library Management System because they will no longer need to manually process every transaction and the system automatically load the e-books online once the guest want to read the desired book. The librarian have to do is to input the title of the book, publisher, date of publish and upload the PDF format or Microsoft word format of the book and it will be save to the servers database. To the Students/Instructors They will have a more convenient time in reading books and don't have to come to the school library to borrow or read books instead they will just access the online library management of the said institution from the internet. To the Researchers The researchers are benefited in this study as well mainly for having to develop employability skills, implement a career plan, and hone each skills and participant in career pathway in preparation for the researchers' career in the industry. To the Future Researchers This study can serve as reference to future researchers in conducting similar researches in the future. Scope and Delimitation of the Study The focus of the developer's research is to know the current library management system of Asian Development Foundation College, discover easier ways to improvise the current system and develop a computerized version of it to lessen the burden of work of both students/instructors and of the librarian's. The proposed study is about the development of an Online Library Management System of Asian Development Foundation College. The proposed system has the capability to upload, manage and view e-books online, secure the e-books and make sure that it can only be view and not downloaded by any unauthorized guest or client. A search index is also added for the users to easily track the available

e-books online. With this system the librarian and the other personnel in-charge of the library will have a less stress in work and the clients or students can read e-books anywhere and don't have to get into the school library to borrow or read books. Login account for different users will be created for database security purpose. The users that can access the system are the librarian, assistant librarian, instructors, working students in the library and students of the institution. The system will have a database that includes adding of new e-books, modifying and deleting e-books. The system can able to upload e-books in PDF file or Microsoft Word format. The focus of the developer's research is to know the current Library Management System of Asian Development Foundation College discover easier ways to improve the current system and develop a computerized version of it to lessen the burden of work of both the employees and also the students. Definition of Terms For better understanding of the study, the following terms are operationally and conceptually defined. Administrator- Somebody whose job is to manage the affairs of a business, organization, or institution. 5 Book- Means a list compiled for some formal purpose, such as the details of an estate going to probate, or the contents of a house let furnished. 6 Computer- A high speed electronic machine which, performs logical calculation, process, Storage retrieves programmed information. 7 Data — raw facts that needs to be processed. 8 Information— Processed Data or is a sequence of symbols that can be interpreted as a message. 9 Library- is an organized collection of books, other printed materials, and in some cases special materials such as manuscripts, films and other sources of information. 10 Librarian- Is a person in a library who is responsible for

the management of the books . 11 Library management - is a sub-discipline of institutional management that focuses on specific issues faced by libraries. 12 Management - is the act of getting people together to accomplish desired goals and objectives using available resources efficiently and effectively. 13 Online - indicates a state of connectivity or often refers to the Internet or the World-Wide Web. 14 System - is a set of interacting or interdependent components forming an integrated whole. 15 Software - is a collection of computer programs and related data that provides the instructions for telling a computer what to do and how to do it. 16 Theoretical - Dealing with theory or speculation rather than practical applications. 17 Notes 1http://www. oppapers. com/essays/Abstract-For Online Library Management System/610544, June 26, 2012 2Ibid. 3Ibid. 4http://www. itcompany. com/forums/essays/Online Library Management System/775489, June 26, 2012 5http://www. wikipedia. com 6Ibid. 7Ibid. 8Ibid. 9Ibid. 10Ibid. 11Ibid. 12Ibid. 13Ibid. 14Ibid. 15Ibid. 16Ibid. Chapter II Review of Related Literature & Studies This chapter includes the purpose of the review of the related literature and studies. The chapter highlights literature and studies relevant to the development of the proposed system. Related Literature Foreign According to Irwin O' Brien in his journal entitled " Writing in Production and Library Management System" manual information processing systems are simple and inexpensive if the organizational information requirements are simple and the amount of data to be processed is limited. As information requirements become more complex and the volume of data increases, the speed, accuracy, reliability and economy of using computers for information processing becomes a necessity. It only

takes seconds for a computer to perform millions of data processing functions that human being would take years to complete. In this context, all information provided for by the computer is timely. Also, computers can consistently and accurately process large volumes of data according to complex and repetitive processing procedures for a long period of time without failure. However, except for low volume tasks, electronic information processing is more economically justifiable than manual processing1. According to Davidson and Schneider clarified in their Expert System for Library Applications, that Expert systems need not be complex to function well. They further explained that what is good with simple programs is that they allow modifications to be made by subject areas, by simply changing the databases accessed by the program2. According to Godwin Udo in his journal entitled " Library Management" described that telecommunications technology as a critical organizational asset that can help a institution like school realize important competitive gains in the area of library management. It is little wonder that business experts commonly cite library management as a vital element that can spell the difference between success and failure in today's keenly competitive institutions. 3 Local According to Wilhelma G. Borja, nowadays, computers are popular in the Philippine schools, Offices and homes. Computers make retrieval and searching of information easier and quicker. Needed information, which used to take weeks to get, can be retrieved in a matter of minutes. The author added that the computer aid researchers which, in turn, can help in upgrading the quality of basic education, boost the country's science and technology education programs, and upgrade programs in vocational

technical training. 4 In addition to this, Roman D. Asis said that " the manual library management system is simple and in expensive if data requirements are simple and the amounts of data to be processed are limited. As information requirements becomes more complex and the volume of data increases the speed, accuracy, reliability, and economy of using computers for library management system has become a necessity. In other words, the major limitations of manual library management system include its inability to handle large volume of work and its reliance to cumbersome and tedious method. "5 Eugenio F. BansalasofCentral Colleges of the Philippines, during the academic year 2008—2009, Library Director of the Central Colleges of the Philippines has expressed that it is difficult to find materials to help new public library managers cultivate their professional development. Most of the research and writings on library management have focused on academic libraries and only recently has there been more interest in the administration of public libraries. The skill and style of public library managers — the directors, branch managers, and department and service managers who are leading these institutions strongly affects the culture of a public library. Library staff looks to these managers to help them navigate through the rapid changes that are occurring in public libraries as these changes in technology, roles, and user expectations strongly alter their daily routines of public service. Contemporary library managers need a wider array of skills and attributes than their earlier and more traditionalcounterparts and will need to seek continual professional development to remain effective as public libraries transition into the twenty-first century. These managers will also need to distinguish between management andleadership skills and learn

to identify and mentor leaders within their staff who can assist in the transition. 6 Related Studies Foreign According to Tereence Pratt which was cited unpublished undergraduate thesis by Reynaldo Ragrag, that the term computer suggest that its primary purpose is to perform mathematical calculations on to compute in the sense of the word; on the other mechanical aid to make difficult, tedious or dangerous task easier in a universal human. 7 According to Arthur W. Clark cited on the unpublished undergraduate thesis by Michael Sanchez, " the impact of new technology during the period of 1955 — 1975 saw the formation of new public library units and merge of cooperative type organization. In the mid 1970's even more rapid changed has occurred in the areas of automation and computerization and this change is expected to accelerate in decades ahead. Library routines have been increasingly automated by computerized circulation system. "8 According to Johannes Gutenberg " many library functions previously performed manually are now available for automated information storage and retrieval systems. For instance, staff can create their own records and databases. Information retrieval has taken on new dimension, and database searching has become an art within the profession. "9 Local " In exploration, we find new techniques, new knowledge, even develop new substances, gadgets, equipment, processes or procedures, imagination and skill is employed by the researcher. The commodities, new devices, services, in technology are needs of man for a better fuller life which is the concern of the research. These useful arts are the products of the technological environment and the end-user is society in general". The excerpt was stated by Josefina Estolas in her dissertation. 10 Science and technologies are

essential for national development and progress. The State shall give priority to research and development, invention, and their utilization, and to science and technology education since computer power was the critical resource, efficiency of processing became the main goal. Emphasis was placed on automating existing process such as manage and view e-books online, as cited by Jeffrey A. Hernale on the unpublished undergraduate thesis by Francisco D. Salvacion. 11 Libraries in the Philippines started in the late 16th and early 17th century by Spanish religious orders MuseoBiblioteca de Filipinas inaugurated on October 24, 1891 is the forerunner of the National Library of the Philippines March 9, 1990. American Circulating Library was established by the American Circulating Library Association headed by Mrs. Charles Greenleaf. Miss Nellie Young Egbert was the first Librarian of the American Circulating Library in the Philippines. The school of Library and Information studies of the University of the Philippines or UP-SLIS is the oldest library in the Philippines. Formally established in March 1961 as the Institute of Library Science, It can trace its roots to 1914, making it one of the first Library Schools in Asia. It is an independent degree-granting unit of the University of the Philippines Diliman, and offers program in the field of Library and Information Science. Every University Librarian, since the University Library was established in 1922 has grappled with four basic concerns: the book fund, staff development library services and Information Technology. Now, the UP Diliman has trial access to ebrary, an online database of 170, 000 electronic books and other authoritative titles from more than 425 leading publishers and aggregators in various discipline. 12 Notes 1O' Brien, Irwin, Pc Magazine (New York: USA, Feb 12, 1998)Vol. 10July

2, 2012 2Davidson and Schneider, Pc Magazine(New York: USA, Dec 10, 1998)Vol. 12 July 2, 2012 3Godwin Udo, Journal(Library Management) pg. 10-15 July 2, 2012 4Ibid. 5Ibid. 6Ibid. 7Tereence Pratt et, al., " A Proposed Online Library Management System for Asian Development Foundation College. " (Unpublished Undergraduate thesisAsian Development Foundation College, 2006) p. 35 July 2, 2012 8Ibid. 9Ibid. 10Josifina Estolaset. al, " Online Library Management System of Asian Development Foundation College" (Unpublished Undergraduate thesis, Asian Development Foundation College, 2006) p. 30July 2, 2012 11Ibid. 12Ibid. Chapter III Methods and Procedures This chapter contains the methods and procedures in preparation for and in developing the Online Library Management System of Asian Development Foundation College. This chapter includes the discussion of research design, research locale of the study, validation of the instruments, research instruments, respondents of the study, research procedures, statistical treatment of data, data gathering technique. Research Design The study used a descriptive survey method of research. A direct inquiry or a personal interview was the tool used in data gathering with a prepared questionnaire as guide, the researchers personally went and ask information about their library management in relation to the proposed Online Library Management System of their institution. It was utilized to get relevant information on the present manual system of the library management so that it could be improved, defining the element of the system quantitatively, describing the nature of the problems encountered in the present manual system and analyzing which best software could be developed to solve the problems cited by the respondents in the study. The researchers use this method

because it is easy and more convenient to use in study. Research Locale of the Study The study was conducted in Asian Development Foundation College located at P. Burgos St. TaclobanCity. This was conducted during the firstsemester of the school year 2012-2013. History A young but notably growing institution, whose birth came into reality because of the conception and effort of a Filipino Chinese family residing in TaclobanCity. The institution serves student populace not only from Tacloban City but also from the entire region. Organized on October 24, 1984 well-timed for the birthday celebration of its President and founder, businessman Santiago Chua, the school began operations with pre-elementary courses. Pupils were then housed in the only two available classrooms. The following year, the institution introduces its elementary department, with a progressive grade level offering. Its first elementary graders were graduated in the year 1990. That same year, parents and supporters of its graduates and pupils manifested their recognition and esteem of the institution's remarkable performance and clamored for the opening of secondary school. Based on their earnest and formal petition, permission to operate was granted by the department of education, culture and sports. Hence, the official establishment of Asian Development Foundation Secondary School in the school year 1990-1991. An unquestionable special feature of such level was the inclusion of complete computer subjects in the curriculum, the very first in region VIII. The offering of undergraduate courses stated in 1994 through a permit to operate approved on April 27 of the same year. Degree courses which are now available include the following; Bachelor of Science in Computer Science, Bachelor of Science in Accountancy, Associate in

Computer Science, Associate in Computer Secretarial, Associate in Commercial Science, Bachelor of Science in Commerce, Major in Banking and Finance, Economics, Management, Accounting Management, Entrepreneurial Management and Legal Management. The Asian Development Foundation continues to advance towards its impressive endeavor through the proficient administration of Chua Family with the support of serious involvement of other school officials. This is manifested by the construction of a new 5-storey building which now houses the Collegiate and Graduate school, in addition to the existing school compound in Bliss, Sagkahan in the ADF-extension at the corner of Salazar and Veteranos Street, all located in the city. Tracking back to its humble beginning, it can be gleaned that the Asian Development Foundation is thinking big as it makes headway towards the fulfillment of its mission as a competent learning institution. Vision Asian Development Foundation College as an educational institution dedicated to the development of able professionals, leaders, progressive, efficient and responsible citizens of the country and the world. Mission Asian Development Foundation College as directed towards the developments of its constituents through: 1. Academic excellence, research community service 2. Optimum access to dynamic intellectual, spiritual, moral, and cultural life, and; 3. Responsive and innovative pursuit for human growth. This is the geographical map of Asian Development Foundation College, the research location where the study was conducted. Fig. 3 Geographical Location of the Research Locale Respondents of the Study The direct respondents of the researchers gathered data about activities of the library are the librarian and her staffs. It is through them that the researchers were able to know the

format of the library's day-to-day work. Another group of respondents were the instructor and student from the different level of each department namely; Computer Science, Commerce & Accountancy, Liberal Arts and Computer Engineering. Research Instruments The research instrument used in the study is a self—structured questionnaire: for the respondents at ADFC campus to gather their opinions about this proposed Online Library Management System for ADFC library. Validation of Instruments With the permission of the chairman of the Computer Science Department at Asian Development Foundation College, the researchers validated the questionnaires at Eastern Visayas State University. The researchers validated the questionnaires by letting the EVSU librarian answer the questionnaire. This procedure was necessary to determine which item on the questionnaire has to be revised or omitted. Research Procedure In order to get the necessary data for the research, the researchers interviewed the librarian of the ADFC campus and distributed the questionnaires to the student respondents of each department and retrieved the questionnaires after the respondents had answered all the questions being asked. The researchers had used three techniques that would really help a lot in developing the Library Management System. One of the techniques is through a format interview, in which the researchers asked the librarian of the library activities, problems and difficulties encountered. Second technique is through questionnaires, which was distributed to the respondents. The third technique is direct observation, in which the researchers observed the operation of the library activities. Statistical Treatment of Data Percentage Formula The formula used was: P=[pic]100

Weighted mean this was used to determine the respondent's assessments in terms of contents and usefulness of the system. Weighted Mean Formula The qualitative description of the weighted mean was determined using the following scales: | Limits of Scale | Qualitative Description | | 4. 20 — 5. 00 | Strongly Agree(SA) | | 3. 40 — 4. 19 | Agree(A) | | 2. 60 — 3. 39 | Neutral(N) | | 1. 80 — 2. 59 | Disagree(D) | | 1. 00 — 1. 79 | Strongly Disagree(SD) | Chapter IV Presentation, Analysis, and Interpretation In this chapter, the interpretation and analysis of the data gathered from the respondents is being discussed. There are two tables provided to elaborate the explanation about the data gathered. The following is the table that shows the result in the percentage by using the formula: P =[pic]100 where P is the percentage, f is the frequency and n is the total number of respondents. It represents the problem that has been encountered by the students and likewise by the instructors. A total of 390 respondents participated in the survey, 6 from the employee and 384 from the customers. Table 1 Distribution of Responses on the Problems Encountered on the Current Manual Library Management System of ADFC | Problems Encountered | Respondent | Average | Rank | | | (384) | | | | | No. |% | | | | Slow processing of | 197 | 51. 30% | 75. 65% | 3 | | borrowing books | | | | | | Slow retrieval of books | 249 | 64. 85% | 82. 43% | 1 | | Redundancy of work in | 235 | 61. 20% | 80. 6% | 2 | | recording the status of | | | | | | books | | | | | | Bulky and unorganized | 177 | 46. 1% | 73. 05% | 4 | | files of the book | | | | | | records in the library | | | | | | Unsystematic procedures | 78 | 20. 31% | 60. 16% | 5 | | in recording files in | | | | | | the library | | | | | Table 1 show that certain problems do really exist in the current Manual Library Management System of Asian Development

Foundation College. Out of 390 respondents from both staff and students, 197 of them answered Slow processing of borrowing books, 249 of them also said, Slow retrieval of books, 235 of them answered Redundancy of work in recording the status of books, 177 of them answered Bulky and unorganized files of the book records in the library, 78 of them answered Unsystematic procedures in recording files in the library. A total of 390 respondents participated from both students and instructors in the survey. The researcher used the System Development Life Cycle, because it is a common methodology for system in many organizations, featuring several phases that mark the progress of system analysis and design effort. The specific steps and their sequence are meant to be adapted as required in every project. System Development Life Cycle used in an organization is an orderly set of activities conducted and planned for each development project. In fact System Development Life Cycle is a traditional methodology used to develop, maintain, and replaced information systems. Fig. 4. 1 System Development Life Cycle The first phase of the System Development Life Cycle is Project Identification and Selection. This first phase is initializing that before anything, all information must be carried out for identifying and analyzing, its flow or the whole system work well. In this phase, the researchers identify what system to be proposed that will fit to the said establishment. The second phase is Project Initiation and Planning is explained and an argument for continuing with the project is presented; a detailed plan is also developed for conducting the remaining phrases of the System Development Life Cycle for the proposed system. This phase gives its presented data into a detailed form; here the planning of all operation has

been done. In this second phase a detailed plan is developed by the researchers for conducting the remaining phases of the System Development Life Cycle for the proposed system. The third phase is Analysis in which current system is studied and alternative replacement system is proposed. This phase has been utilized to analyze the proposed system is accurate for development or it needs more plans, and it needs critical study to generate initial design to match the said requirements. This phase the researchers analyzed the proposed system if it is accurate to develop and matching the requirements. The fourth phase is Logical Design in which all functional features of the system chosen for development in analysis are described independently in any computer platform. This phase indicated that the system can be tied to any hardware, and it is flexible to be implemented on any hardware and system software. In this phase the researchers decided what features to be added to the system to make it functional and flexible to any hardware and software. The fifth phase is Physical Design. This phase that all plan and structured system designed will convert in a specified programming language so that the designer of various parts of the system can perform its physical operation that is necessary to facilitate and capturing data. The fifth phase is where the researchers or specifically the system designer added the physical design of the system. The sixth phase is Implementation in which the information system is coded, tested, installed, and supported in the organization. This phase is to implement the system specification will now come up into a working system; it will be tested and used. Documentation and program training is finalize during implementation. During this phase the researchers tested and installed the system properly

and come up to a working system. The researchers finalized the program training and documentation. The final phase is Maintenance where in performance of efficiency and effectiveness is determined. This was the time consuming and effort devoted, just to maintain its capability of performance as desired; so when an error arises the team who made the project will do the changes. By using this cycle the sequence of the following phases can be easily understood, and error will be easily detected if there are any problems. For this cycle helps a lot in this job in a specified assignment. Table 2 Distribution of Responses of the Input Needed to Develop the New System | Inputs Needed | Employees (6) | Rank | | | No. |% | | | Book Title | 6 | 100% | 4 | | Book Author | 4 | 66. 7% | 9 | | Book Subject | 6 | 100% | 4 | | Search by Title | 6 | 100% | 4 | | Search by Author | 6 | 100% | 4 | | Search by Subject | 6 | 100% | 4 | | Book issued/Borrowed | 5 | 83. 3% | 8 | | Availabilty of the book | 6 | 100% | 4 | | Book Quantity | 6 | 100% | 4 | Table 2 uses the percentage formula P =[pic]100. A total of 6 respondents from the employees participated in the survey. It represents the possible inputs needed by the respondents and the staff in the proposed system. It shows that all criteria given through the inputs are needed in the system. Table 3. 1 Assessment of the Respondents on the Usefulness of the Online Library Management System of Asian Development Foundation College | Usefulness of the System | Employee | Interpretation | | 1. The system will reduce the burden | | | | of work of the staffs and management. | 5. 0 | SA | | 2. The system allows for a faster and | | SA | | more accurate data processing. | 4. 75 | | | 3. The Online Library Management | | | | System is more efficient than the | 4. 17 | A | | manual system. | | | | 4. The system is user friendly. | 3. 84 |

A | | Overall Weight Mean | 4. 44 | SA | Table 3. 1 represents the usefulness of the newly proposed system in Asian Development Foundation College and based from the evaluation of respondents' answers, two criteria were interpreted as Strongly Agree (SA). " The system will reduce the burden of work of the staffs and management" got the highest rank with an average of mean of 5. 00; followed by the criterion " The system allows for a faster and more accurate data processing. " with an average mean of 4. 75. On the other hand, the two other criterions were interpreted as Agree (A). The criterion " The Online Library Management System is more efficient than the manual system" has an average mean of 4. 17 meanwhile the criterion. " The system is user friendly" gained an average mean of 3. 84. Table 3. 2 Assessment of the Respondents on Content of the Online Library Management System of Asian Development Foundation College | Content of the Computerized Sales and | | | | Inventory System | Employee | Interpretation | | 1. The system contains the necessary | | | | information of the " Library management in | | | | ADFC, Tacloban City. | 4. 1 | A | | 2. The system is easy to access. | 4. 5 | SA | | 3. The necessary information is well | | | | presented and organized. | 5. 00 | SA | | | | | | Overall Weight Mean | 4. 53 | SA | Table 3. 2 shows the result the results on the assessment of the respondents in relation to the content of the newly proposed system. And based from the table, the criterion " The necessary information is well presented and organized" has the highest remark which is 5. 00 and is interpreted as Strongly Agree (SA). Next to it is " The system is easy to access" which got an average mean of 4. 5 and interpreted as Strongly Agree (SA). Last in rank which only got an average mean of 4. 1 is " The

system contains the necessary information of the " Library Management" in Asian Development Foundation College, Tacloban City and is interpreted as Agree (A) by the respondents. Based from the overall weighted mean it is interpreted as Strongly Agree (SA) and got an average mean of 4. 53.

CHAPTER V Technical Requirements This Chapter presents the requirements that would be needed to develop the system. These requirements are called technical requirements because these require a lot of skill and training to be able to come up with them. These requirements include. Project Rationale, Project Objectives, Project Description, Constraints of the System, Project Team Organization, Table of Activities, Activity Network, Gantt Chart, Pert Chart, Data Flow Diagram, System Flowchart, Input Process Output Chart, Program Flowchart, Training Plan, Test Plan, Security Plan, Maintenance Plan, Screen Design and Source Codes. Project Rationale It is been observed that the users and operators anticipate for future development, keeping in mind that technology is not a goal in itself but rather a means to an end of manual operations. At the library of Asian Development Foundation College, manual procedures were still observed, thus the team proposed to computerized the process making the purpose of reducing human errors to eventually increase the efficiency. The rationale behind this research focuses on the appropriate application that will help possibly in managing the library as well as giving appropriate answers to the questions needed in maintaining the data about books, borrowing and returning of books, and providing the students a list of available of books in the library. Project Objectives The Online Library Management System of Asian Development Foundation College's main objective is to provide library functions and services to students or faculty

members of the school. Another is to allow a faster and more accurate processing of data to reduce the librarian and her staff's burden of work. Necessary book information must be presented well and organized to add user friendliness to its users. Access to the system must be easy but must not compromise the system's security. Project Description The system was designed and developed primarily for maintaining records of books present in the library and its details. Book information are entered in Book inventory and students or faculty members who borrow or return books are entered in student and faculty registry together with their personal information. To grant access to a guest the system asks for information necessary for validation like Id number etc... Books stored in the system can be viewed online. Search filter features are present to guide users on searching books. Information about the student or faculty members was also provided. Constraints of the System The Online Library Management System of Asian Development Foundation College does not generate receipts after every transaction. Because of the library's rules and regulations the system cannot do reservations, another is, students can only borrow one book at a time. Project Team Organization " Ego less Team Structure" The group decided to have an ego less team structure in order to build a fair and unbiased project making. They decided this in order that each member will participate or will develop their initiative for the project making all the members of the group were assigned as team leader, programmer, system analyst, encoder and researcher. Figure 5. 1 Team Organizational Structure Job Description System Analyst — The one who responsible in analyzing the development of the system and suggest some improvements. Leader - The one who leads

and organizes the group. Programmer — The one who is responsible in translating the system plan into program that can be understood and interpreted by the computer. Encoder — The one who is responsible for encoding any type of data into the computer, specially the data for the documentation of the study. Researcher — The one who is responsible in researching and collecting data needed in the research. Table of Activities Table 1 | | | Duration | Date | Date | Predecessor | | ID | Name | In Weeks | Started | Finished | | | A | System Planning | 0. 4 | 06/19/12 | 06/23/12 | | | | Selection of research topic | 0. 1 | 06/19/12 | 06/20/12 | | | A1 | | | | | | | | Library research | 0. 3 | 06/20/12 | 06/23/12 | A | | A2 | | | | | | | | System Analysis | 2. 1 | 06/25/12 | 07/10/12 | | | B | | | | | | | | Interview | 0. 2 | 06/25/12 | 06/27/12 | A2 | | B1 | | | | | | | | Documentation | 1. 5 | 06/28/12 | 07/10/12 | B1 | | B2 | | | | | | | | System Design | 3. 4 | 07/12/12 | 08/06/12 | | | C | | | | | | | | Interface Design | 2 | 07/12/12 | 07/26/12 | B1 | | C1 | | | | | | | | Database Design | 1. 3 | 07/27/12 | 08/06/12 | C1 | | C2 | | | | | | | | System Implementation | 4. 3 | 08/07/12 | 09/17/12 | | | D | | | | | | | | Program Coding | 3 | 08/07/12 | 08/28/12 | B2, C2 | | D1 | | | | | | | | System Testing | 0. 3 | 08/29/12 | 09/01/12 | D1 | | D2 | | | | | | | | System Debugging | 2. 2 | 09/02/12 | 09/18/12 | D2 | | D3 | | | | | | Time Estimation in Weeks Table 2 | | Time estimate in | | | | | | | ID | Weeks | ET | TE | TL | Slack | Critical | | O | R | P |(O + 4R + P) 6 | | | Time | Path | | | | | | | | | | | | | A1 | 0. 1 | 0. 1 | 0. 1 | 0. 1 | 0. 1 | 0. 1 | 0 | (| | | | | | | | | | | | | A2 | 0. 1 | 0. 3 | 0. 5 | 0. 3 | 0. 4 | 0. 4 | 0 | (| | | | | | | | | | | | B1 | 0. 2 | 0. 2 | 0. 4 | 0. 2 | 0. 6 | 0. 6 | 0 | (| | | | | | | | | | | | | B2 | 1. 3 | 1. 5 | 1. 6 | 1. 5 | 2. 1 | 2. 1 | 0 | (| | | | | | | | | | | | | | | | | | | | | C1 | 1. 5 | 2 | 2. 2 | 2 | 2. 6 | 3. 8 | 1. 2 | x | | | | | | | | | | | | | | | | 1. 5 | 1. 3 | 3. 9 | 5. 1 | 1. 2 | x | |

C2 | 1 | 1. 3 | | | | | | | | | | | | | | | | | | | | | D1 | 3 | 3 | 3. 1 | 3 | 5. 1 | 5. 1 | 0 | | | | | | |

| | | | |(| | D2 | 0. 3 | 0. 3 | 0. 3 | 0. 3 | 5. 4 | 5. 4 | 0 |(| | | | | | | | | | | | | | | | | | | | |

| | | D3 | 2 | 2. 2 | 2. 4 | 2. 2 | 7. 6 | 7. 6 | 0 |(| | | | | | | | | | | | Activity Network

Gantt chart [pic] PERT Chart Data Flow Diagram Admin User System

Flowchart [pic] Program Flowchart [pic] [pic] Training Plan The developers

are willing to give ten hours of training to the system's administrators or

other users. Before the training starts the developers would need two

computer sets (networked) with complete system requirements. For the first

two hours the training would focus on the system's installation procedures;

the next two would cover server management and maintenance, the next

two hours is for MySQL database management and the last four hours are for

the system's general operating procedures. Training will cover: 1. Installation

of required hardware and software. 2. Server management and

maintenance. 3. MySQL database management. 4. System's general

operating procedures Test Plan Testing is an element of verification denoting

the determination of the properties and the characteristics of equipment or

components by technical means, including functional operation, and

application of established test principles and procedures. System testing is

the stage of implementation, which aims at ensuring that the system works

accurately and efficiently before actual operation commences. No program

or system design is perfect, communication between the user and the

designer is not always complete or clear. All this can result in errors. Security

Plan The system is accessed only by enrolled students and faculty members

of Asian Development Foundation College. The system will be accessed

through inputting the student's Id number or faculty member's name and

password. Access to the system by guest without the said necessary inputs will be denied. To secure the system's database, a corporate password shall be registered to the local host server. Maintenance Plan The team will conduct trainings to administrators regarding on the system's database and server maintenance. They will keep in touch in case bugs or glitches are discovered. They will also provide a user's manual to give administrators better understanding of the system's functions. Screen Design Chapter VI Summary of Findings, Conclusion and Recommendations Summary of Findings Based on observations, the developers found out that the present Library Management System of Asian Development Foundation College still maintains its functionality but with continuous data gathering and analysis they also found out that some obstructions are present. One is its accessibility, because the ADFC library is located at the fifth floor of the building and is exhausting going up and down. Time is also wasted when student's scan books never knowing what they are looking for. These current problems were the developers' focus to appraise and lead to development of the ADFC's Online Library Management System. Conclusion From a proper analysis of the proposed Online Library Management System, it can be safely concluded that this application is working properly and meets the users' requirements. The problems, which existed in the manual system, have been reduced to a large extent. The Online Library Management System will not only improve the efficiency but will also reduce stress thereby improving human functionality. Based from the findings, the researchers confidently conclude the following after a thorough analysis for the present system. 1. That the present manual system will be improved through the development

of the Online Library Management System that will provide a faster, easier and more reliable way of information retrieval. 2. That the proposed system will eliminate redundancy of work therefore lesser time will be wasted. 3. Students will now be convinced to visit the library because of the system's improved accessibility. Recommendations Based on the findings, and conclusions of the study, the researchers highly recommend the following: 1. Access to the system should be limited only for the administrators (librarian) and users (students/instructors) of ADFC to avoid tampering or unscrupulous act that will change the integrity of the records. 2. Because the library is located on the fifth floor of ADFC, it is advisable to install the OLMS on computers at the ground floor of the building especially on the computer laboratories. 3. Since the coverage of the proposed system is limited. It is advisable that similar studies should be conducted and expanded so that it could provide better and more reliable systems for the next generation of students. APPENDICES Appendix A Letter of Permission to Conduct a Study General Operating Procedures Log-in 1. Enter your Username. 2. Enter your Password. 3. Click the " LOGIN" button to enter OLMS. Book Management 1. Click the " View" button to view the book. 2. Click the " Edit" button to edit the book. 3. To view book management. 4. To view ebooks. 5. To register new accounts 6. To view logs. 7. To add new books. 8. To log-out the system Online Library 1. To download books. 2. To view books. 3. Type here to search books. Add books 1. Enter the book title. 2. Enter the book edition. 3. Enter book quantity. 4. Enter the book author. 5. Enter the book category. 6. Click " Add" button to add new category. 7. Click " Choose File" button to select what book to upload. 8. Save and Cancel button. [pic] -----------------------

Feedback Online Library Management System of Asian Development Foundation College OUTPUT âž¢ Conducting Researches âž¢ Interview âž¢ Observation âž¢ Questionnaires âž¢ Analysis âž¢ Designing âž¢ Programming âž¢ Debugging âž¢ Testing PROCESS âž¢ Problems encountered by the management âž¢ Downloaded Materials âž¢ Books âž¢ Hardware and Software INPUTS Where: P= Percentage f = frequency n = no. of Respondents x =[pic] Where: x = WeightedMean " fx = sum of the product of Frâˆ' fx = sum of the product of Frequency (f) And Weight (x) n = Number of respondents Project Identification And Selection Project Initiation and Planning Analysis Logical Design Physical Design Implementation Maintenance System Analyst Leader Programmer Researcher Encoder Legend: Critical (Non-Critical x TL = 0. 6 TE = 0. 6 ET = 0. 2 B1 A2 A1 S TL = 0. 4 TE = 0. 4 ET = 0. 3 TL = 0. 1 TE = 0. 1 ET = 0. 1 TL = 0 TE = 0 ET = 0 TL = 2. 1 TE = 2. 1 ET = 1. 5 B2 TL = 3. 8 TE = 2. 6 ET = 2 C1 TL = 5. 1 TE = 5. 1 ET = 3 C2 D1 TL = 5. 1 TE = 3. 9 ET = 1. 3 TL = 5. 4 TE = 5. 4 ET = 0. 3 D2 TL = 7. 6 TE = 7. 6 ET = 2. 2 TL = 7. 6 TE = 7. 6 ET = 0 F D3 Legend Critical Path Non Critical Path Legend: Critical path Non Critical path System Planning A 0. 4 06/19/12 06/20/12 Library Research A2 0. 3 06/20/12 06/23/12 Interview B1 0. 2 06/25/12 06/27/12 Documentation B2 1. 5 06/28/12 07/10/12 Selection of Research Topic A1 0. 1 06/19/12 06/20/12 System Analysis B 2. 1 06/25/12 07/10/12 System Design C 3. 4 07/12/12 08/06/12 Interface Design C1 2 07/12/12 07/26/12 Database Design C2 1. 3 07/27/12 08/06/12 System Implementation D 4. 3 08/07/12 09/17/12 Program Coding D1 3 08/07/12 08/28/12 System Testing D2 0. 3 08/29/12 09/01/12 Activity Name Activity ID Start Finished Duration System

Debugging D3 2. 2 09/02/12 09/18/12 LEGEND Non Critical Path Critical Path 1. 1 Verify Username & Password Level 1 Log-in Admin 1. 3 Open System Admin 1. 2 Security Database Level 2 2. 2 Select Book 2. 4 Database 2. 3 Check Book 2. 1 Search Admin Level 3 OK 3. 3 Validate 3. 2 Save? 3. 1 Add Book Admin Admin 3. 4 Save 3. 5 Database Level 4 4. 4 Edit? 4. 2 Validate 4. 5 Update Admin 4. 1 Select 4. 6 Database 4. 3 Database Admin Admin Level 5 5. 4 Delete? 5. 2 Validate 5. 1 Select 5. 5 Delete 5. 6 Database 5. 3 Database Admin 1. 2 Database Level 1 Log-in 1. 1 Verify Username & Password User User 1. 3 Open System 2. 2 Select Book 2. 1 Search 2. 4 Database 2. 3 Open Book Level 2 User Logo Online Library Management System of ADFC eBook Management Library Management List of books Filter Logout 2 1 3 8 7 6 5 4 3 2 1 3 2 1 4 1 2 3 6 8 5 7