TAGUIG CITY UNIVERSITY

FACULTY ATTENDANCE AND LOG MONITORING SYSTEM USING QUICK RESPONSE CODE THROUGH KIOSK WITH INFORMATION SYSTEM

A Thesis

Presented to the Faculty of Computer Science

Taguig City University, General Santos Avenue Central Bicutan,

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In Partial Fulfillment of the Requirements for the Degree of

Bachelor of Science in Computer Science

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TAGUIG CITY UNIVERSITY

APPROVAL SHEET

This thesis entitled **"FACULTY ATTENDANCE AND LOG MONITORING USING QUICK RESPONSE CODE THROUGH KIOSK WITH INFORMATION SYSTEM".** Prepared and submitted by **Kenard R. Velasquez, Rommel B. Patricio, Charizze B. Mendoza and Cedrick B. Bercasio** in partial fulfillment of the requirements for the degree of **BACHELOR OF SCIENCE IN COMPUTER SCIENCE**, examined and recommended for oral examination.

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CERTIFICATION OF ORIGINALITY

This is certify that the research work presented in this thesis entitled "**FACULTY ATTENDANCE AND LOG MONITORING USING QUICK RESPONSE CODE THROUGH KIOSK WITH INFORMATION SYSTEM**" for the degree Bachelor of Science in Computer Science at the Taguig City University embodies the result of original and scholarly work carried out by the undersigned. This thesis does not contain words or ideas taken from published sources or written works that have been accepted as basis for the award of a degree from any higher education institution, except where proper referencing and acknowledgement were made.

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The study has indeed helped us to explore more knowledgeable avenues related to our topic and we are sure it will help us in our future.

ABSTRACT

Title: FACULTY ATTENDANCE ANG LOG MONITORING USING QUICK RESPONSE CODE THROUGH KIOSK WITH INFORMATION SYSTEM

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E-Logging System is a simple windows based attendance system that was specifically developed for university or campuses. This software helps to manage the workforce and track employee time and attendance in an easier way. This software application can manage the recordings, control and monitoring of faculty member absence and lateness. The significance of this software is to make sure that the faculty member are punctual and do their jobs on time. Some universities still use the paper- based system to store the records of the faculty members. With the implementation of this system, paper based system will be eliminated. This research will help the monitoring staff to manage recordings and monitoring the attendance of the faculty members. It provides an accurate time management for the faculty members. In this study, the QR Code based E-Logging System was developed using Visual Basic Programming Language as front end while Microsoft SQL Server 2014 was used as the Database to the backend users.

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CHAPTER 1

INTRODUCTION

Taguig City University (TCU) was established on 2006, since then the university uses the traditional method recording of attendance which is with the use of a logbook making it highly paper based. Today due to modern and rapid technological advancements: traditional checking, recording and computation of data become obsolete. At the moment, manual operations are gradually replaced by systematic procedures that improve one's productivity and efficiency.

Maintaining the Record of Attendance is an important factor in every industry and academic institution's people management system. In the academe, monitoring of attendance of the faculty members is important because it is needed as basis for the professor's salary; and the attendance of professors ensures compliance to the course learning module/lessons thus increasing capability of the students.

Traditional attendance recording takes time and can produce a lot of mistakes or biases. This method cannot really monitor faculty members who are frequently absent or late. The researchers opt to bridge this gap by automating attendance tracking and recording through the use of an Information system that generates and reads Quick Response (QR) Code as an ID for the users. The system developed was embedded in an interactive kiosk. The System also acts as database for the professor's personal

information, teaching load and daily attendance record. It may also serve as a record of student's information and their item and log record.

PROJECT CONTEXT

Taguig City University uses the traditional method of checking and recording the attendance of every professor. This process made the checking inefficient and time consuming. In the current system, the admin cannot really monitor faculty members who are frequently late since entry in the logbook can be changed based on the biases of time. Also, record keeping and tracking was an issue because it was paper-based. Loss of record was inevitable because it is written in paper. If the record was lost, tracking of data might be impossible it can only be solved if the admin has a backup of the records to be tracked.

The researchers developed a system that provides solution to the problems written above. First, the system records real time attendance. As the system read the QR code time log in is automatically registered and is unchangeable thus showing the list of the staff who are late. Second for loss of record; the system provides a Local Area Network Database where records of professors' attendance were found in a daily basis. Third, the record is saved as a Portable Document Format (.pdf) file that can be printed by the admin or forwarded by the admin to the users thru email. Lastly, Users can easily track their attendance record thru their personal email as forwarded by the admin or see their daily log thru the user interface of the system.

PURPOSE AND DESCRIPTION

The purpose of this project was to transform the old and manual process of checking the attendance of TCU faculty members into an automated attendance system using QR Code. Each faculty members will be able to track their attendance log using their QR Code. Using Quick Response Code and Interactive Kiosk, there is no need to use a piece of paper or logbook to fill up the attendance record sheet.

The Information System is composed of two interfaces, the User Interface and the Administrator (Admin) Interface.

The system provides user-friendly and effective way of attendance checking. In the User Interface, the user will be able to log-in or out by scanning the QR Code on the kiosk, this will act as a record of their attendance during their class time. User can view their personal information at a fast speed and update their attendance record.

The system also has an Admin Interface. The Interface was made so the admin can add information needed to complete the User Interface like the information of professors and students. Admin can log in to view and edit the following: first, Personal information of the professor and student which is shown at the User Interface. Second, update professor's load and schedule that the student and attendance monitor can view.

OBJECTIVES

- To develop an Information system that have the following capability:
    - Store faculty information, subject load and student information in a specific database generated by the system.
    - To develop a log of daily time record to check compliance of faculty to required attendance in relation to their assigned subject load.
    - To generate a specific and unique QR Code for each faculty members.
- To develop a monitoring of attendance that eliminates the usage of logbook.To develop a centralized monitoring system in the attendance record of TCU faculty.

SCOPE

The following serves as the scope of the research activity:

- Develop a System for the use of TCU faculty.
- The admin can view the list of the fulltime and part time faculty members and student's log information.
- Faculty members and students can login through kiosk machine.

LIMITATIONS

- The System was made for the use of Taguig City University faculty and staff.
- Faculty members and students cannot login without their QR Code.
- The study is limited to the development of the system only. Testing of the system and survey of efficiency will be suggested for further studies

CHAPTER 2

LOCAL STUDY

According to Aquilan (2004), in his thesis where he made a comparison in the effectiveness of the automated and the tradition method of time in and time out the use of Key card system tends to eliminate the manual recording system of time and ease salary computation of each employee based on the time and attendance reports.

Ramon Faloran (2005) wrote in the article of Philippine Daily Inquirer entitled "The Computer Edge of the New Employment and Opportunities," He stated that computer gives you a different feeling about what is happening in the company. Business will be highly competitive and innovative because the computer provides instant information. Study by Cantoma (2004) in her thesis entitled "Computer Library System for St. James Academy" stated that, in manual method of retrieving, maintaining, securing and piling of records takes longer process because of the years gone by. Furthermore, these files were only kept in envelopes and folders in wooden rocks. There are also instances when the right information is given to a wrong person, which affect quality of service. According to *vantagepointsoftware.com* the Attendance Management becomes possible with Time and attendance Monitoring System because they allow the managers to be able to track employee time in an efficient manner. In addition, managers are also able to see records in the form of employee profiles and

they can easily manage their time and attendance data. Buddy punching; which is a common practice in many organizations is also eliminated through time and attendance software. Through attendance Monitoring System, Company are able to perform scheduling easily, hence going way ahead of just tracking attendance but also managing and planning the employee's time in the organization.

It is through time and attendance software that employees can apply for leave in a timely manner. Each employee has his or her own profile on the system in which an account of the leaves taken and the balance of leaves are given. This enables employees to take timely leaves. When this happens, Using attendance Monitoring System the management will know in advance who will not be coming in a certain period of time. This makes workforce planning and task planning easier for Company as they assign tasks to people and notify employees when a position needs to be temporarily filled in for. Through all the features of the attendance Monitoring System, valuable resources of the organization can be managed efficiently. This is done when the present workforce is used to the optimum level and time is managed effectively for performing a job. In this manner, attendance Monitoring System contributes significantly towards the effective use of time as well as human resource, both of which are valuable and scarce for organization.

According to Data Center College of the Philippines, Laog City (2012), Identification, Verification and Entry Control Systems with a computer-based system

counter with the help of digital and logical circuit concepts enabled the company to have interconnections to other subsystems. A software application that serves as the mean of communication of the system to the user and with other system or devices connected to the main system was installed on the computer. This enables the user to manage records in the database, generate barcode and generate a summary of individual that are in the school premises.

Also with these applications, using the computer's architecture, it enables the system to communicate to other devices in getting input data and acquiring signal outputs. Each student and employee of the school will be issued an identification card with barcode that will be swiped and read by a barcode scanner and a PIN code that will deeply identify their authenticity in order for them to pass through the turnstile. Upon entering and leaving the school premises the counters will increment. The device was composed of two counters namely, entry counters and exits counter, this counter will increment manage records in the database, generate barcode and generate a summary of individuals that are in the school premises.

LOCAL STUDY

According to Ateneo De Manila University (2004), Fingerprint-Based Attendance Management System. In recent time, there has been high level of impersonation experienced on a daily basis in both private and public sectors, the ghost worker

syndrome, which has become a menace across all tiers of government, employers concerns over the levels of employee absence in their workforce and the difficulty in managing student attendance during lecture periods, Fingerprint is a form of biometric identification which is unique and does not change in one's entire lifetime. This paper presents the attendance management system using fingerprint technology in a university environment. It consists of two process namely; enrollment and authentication

During enrollment, the fingerprint of the user is captured and its unique features extracted and stored in a database along with the users identify as a template for the subject. The unique features called minutiae points were extracted using the Crossing Number (CN) method which extracts the ridge endings and bifurcations from the skeleton image by examining the local neighborhoods of each ridge pixel using a 3 x 3 window. During authentication, the fingerprint of the user is captured again and the extracted features compared with template in the database to determine a match before attendance is made. The fingerprint based attendance management system was implemented with Microsoft' C# on the .NET framework and Microsoft Structured Query Language (SQL) Server 2005 as the backend. The experimental result shows that the developed system is highly efficient in the verification of users fingerprint with an accuracy level of 97.4%. The average execution time for the developed system was 4.29 seconds as against 18.48 seconds for the existing system. Moreover, the result shows a well secured and reliable system capable of preventing implementation.

LOCAL STUDY

Marrero (2009) in his study entitled “Student Information System for the University of the Cordilleras” stressed that the concept of Information Systems (IS) emerged in the early 1960s. More often, when information system is defined, the field Information Science is always associated, IS is an academic field that deals with the generation, collection, organization, storage, retrieval, and dissemination of recorded knowledge. Furthermore, it is a collection of related components designed to support operations, management, and decision making in an organization. Generally, IS is supposed to inform people. Information System supports people or users in making intelligent decisions based upon the information derived from reliable data.

According to Evangelista (2008) the university’s Student Information System (SIS) of Nueva Vizcaya State University is a secure, web accessible interactive computer system that allows user access to grade reports, transcripts, schedule of classes, and remaining balance for the semester and register for classes online. Through the system, students would be assigned a unique identification number. All data to and from the university would use that unique identifier. The use of individual student records would: 1) Increase the admissions capacity to follow a student’s progress over time; 2) provide better quality data to drive more enlightened policy decisions resulting in enhanced educational opportunities for all students; 3) reduce

data collection burden through a web enabled SIS; and 4) as a tool of parents in monitoring the academic performance of their children.

LOCAL LITERATURE

The study aimed to develop a fully customized Student Information and Accounting System (SIAS) of Cagayan State University – Lasam Campus (2013) to facilitate the enrollment and accounting process and to cater the needs of all the clients and the staff in the delivery of frontline services. It is also compliance to the mandate of the CSC in Section 5 of RA 9485 (Anti-Red Tape Act of 2007). This study followed the framework of Design Science Research for Information Systems, thus, the researcher identified the problems encountered in the enrollment and accounting process, defined the objective of the study, designed and developed the system, deployed and evaluated, and presented the result of the study. The SIAS operates in multiple computer units over the network having a centralized database for data storage and retrieval. It has different integrated features that support the needs of the frontline service providers and the clients. The overall functionality of the SIAS increased the efficiency of the frontline service providers since most of the processes are computerized and automated. The result of the survey along with quality of services, accuracy of records and reports, and timeliness reveals that SIAS is significant and effective instrument in the delivery of frontline services.

Information Systems (IS) are consisting of data, hardware, software, people, and procedures, all with strengths and weaknesses. In a computer-based IS, computers collect, store, and process data into information, according to instructions people provide via computer programs. Moreover, all IS operate in the same basic fashion whether they include a computer or not. However, the computer provides a convenient means to execute the four main operations of an IS such as entering data into the IS (input), changing and manipulating the data in the IS (data processing), getting information out of the IS (output), and storing data and information (storage) (Oz, 2000).

The Civil Service Commission (CSC) mandated all government agencies including State Universities and Colleges (SUC's) that provide frontline services to improve its delivery of services to its clients. Furthermore, Reengineering of Systems and Procedures as specified in Section 5 of RA 9485 also known as the "Anti-Red Tape Act of 2007" states that all offices and agencies which provide frontline services are hereby mandated to regularly undertake time and motion studies, undergo evaluation and improvement of their transaction systems and procedures and re-engineer the same if deemed necessary to reduce bureaucratic red tape and processing time. In compliance to the mandate of the CSC, the researcher initiated to develop a fully customized SIAS to improve and accelerate the delivery of frontline services of Cagayan State University – Lasam Campus (CSU-Lasam). The system is intended to facilitate the enrollment and accounting process and to cater the needs of all the clients and the staff in the delivery of frontline services. Student Information and Accounting

System (SIAS) is a full-featured, complete and integrated system for government and private schools, colleges and universities in any size which integrates registrar, cashiering and accounting processes. Registrar's transactions include student registration, grades entry, certification of grades and enrollment, evaluation of grades and issuance of official transcript of records. Cashiering and accounting transactions include collection of payment and issuance of receipt, assessment and updating of student ledger (Espiritu, 2013).

LOCAL LITERATURE

This paper describes a conducive and structured information exchange environment for the students of the College of Computer Studies in Manuel S. Enverga University Foundation in Lucena City, Philippines. The system was developed to help the students check their academic result every end of the semester, make self-enlistment that would assist the students to manage their academic status that can be viewed in their mobile phones. This system would also help the dean to predict how many number of sections to be created for the next semester. The researchers applied Hill Climbing Algorithm search technique for the system particularly in creating self-enlistment and finding the best set of courses to the class schedule, and in projection of number of sections to be created for the next semester. Rapid Application Development (RAD) was utilized for the system development; PHP as the programming language, and MySQL as the database. The testing process of the system was done before

deploying it to the internet. The process was done in different processors, operating systems and different mobile device platforms. The system's evaluation involved 67 respondents from the College of Computer Studies in Manuel S.Enverga University Foundation in Lucena City, Philippines. The researchers made use of ISO 9126 based Likert modified scale type of questionnaire that assess the system's acceptability in terms of functionality, reliability, usability, efficiency, maintainability and portability. Non-probability sampling method was used in selecting respondents under a purposive-sampling scheme. The results of the evaluation for the prototype yielded a general weighted mean of 4.44 that describes the respondents strongly agree that the developed system was acceptable Index Terms—Hill climbing algorithm, integrated system, mobile web-based, student information system.

Student Integrated Information System is now a facility which universities and colleges use to manage the records of their students. The convenience of accessing the educational resources online makes the programs ideal for working professionals and students alike. With the widespread employment of distance learning education program, even most conventional colleges and universities are now offering online education. Along with this program, certificate, associates and bachelor's degree, master's degree, and doctoral degree can be acquired through distance learning education. Thus, the main advantage is to be able to have a place for the students in the appropriate instructional environment, which is in an online application. Student advising is an essential component of a successful academic experience. Academic

advisors are exposed to a variety of opportunities, enhancements, problems, and choices as technology becomes more prevalent in university campuses. Various universities and institutions around the world use automated advising systems. They are helpful and beneficial for both advisors and advisees in that they contribute to assisting in making better-informed decisions and improved services. Mobile computing is a versatile and potentially strategic technology that improves information quality and accessibility, increases operational efficiency, and enhances management effectiveness .This is because of its capability to enable users to remain connected while on the move. High end-users can opt for satellite-based networking which provides wireless connectivity anywhere in the world.In today's fast-paced and technology-driven community, quality education with essential systems being used is a necessity. Hence, Manuel S. Enverga University Foundation, Lucena City, Philippines has already an existing online student information portal in which students can only view their grades that can be accessed only through intranet.

With this, the researchers looked into the workability of developing a mobile web-based student integrated information system that would give students an easy and speedy access through internet technology and use of mobile phones to a range of handy and important information about their school activities, program curriculum, enlistment and grades15

The study developed a web-based faculty information system which is capable of managing faculty, school, and user data, handle queries and requests for user

registration and generates important reports suited to the needs of the CHEDCO and CHEDRO personnel. This system, therefore, could benefit CHED Central Office, CHED Regional Office, CHED Regional Quality Assessment Team, Higher Education Institutions, faculty members' and future researchers. The system can handle queries concerning faculty records such the active and inactive faculty and faculty with multiple employers. In addition, school records are also provided, in terms of school information by region and delinquent schools. These valuable features are beneficial to CHEDCO in monitoring faculty member's qualification and their respective HEIs. CHEDRO personnel such as RQAT, Technical Panel Group, Technical Committees and National Assessor are responsible for the review of required documents of HEIs in applying a new program offering to CHED. These documents are their basis of reports and recommendations for final approval. The faculty information system stores the faculty member information such as current employment status, school affiliation, work experiences and educational background among others. Likewise, it validates faculty records accordingly.

Thus CHEDRO personnel can easily determine whether a faculty member is holding position in numerous institutions and whether qualified as faculty or as an administrative officer in the applied program.

Indeed, this could help them to efficiently come up with precise findings and fair recommendations for the approval of the program.The system is also beneficial to the HEIs because they would be made aware of the CHED processes and evade from any

disreputable act like submitting unreliable information of a faculty member. Similarly, to faculty members, as a caution for them in accepting multiple positions or teaching loads, from numerous institutions without considering the CHED standard policies and procedures. The system is likewise valuable to future researchers because the outcome of this study could serve as related study in the field of information technology.

LOCAL LITERATURE

The PUPWebSite (1998) continues to evolve dramatically as it gives its visitors information and online services that is relevant and useful to them. In addition, PUPWebSite has matured into one of the University's most important promotion medium. New Internet and Web technologies allow the delivery of personalized and relevant information to our clienteles, who respond by telling us about themselves. That customer information helps us focus our content and provide services that assist visitors in quickly finding the information they need.

PUPWebSite is replacing more expensive, traditional methods of doing things with a more streamlined and efficient online solution. Through this means, we are able to reduce paper, printing, and postal costs by distributing information online instead of on paper. And we are reducing media production and distribution costs by distributing relevant files online.

They are reducing errors in customer data by allowing customers to submit and update their information online, instead of filling out registration cards that are

transcribed by data entry personnel. These are just a few of the ways that an academic Web site can impact the bottom line of the University. AISIS Online (2006) posted a precise definition of Ateneo Integrated Student Information System (AISIS) serves as the portal for Ateneo students, faculty and staff.

Through the AISIS Online officially enrolled Ateneo students may view pertinent school information including their Individual Program of Study (IPS), grades, class schedules and the like. Students may also eventually enlist using AISIS Online. Ateneo faculty and staff with access to AISIS, on the other hand, may submit grades and access their class schedules from outside the campus.

Villafania (2007) reported that in the Philippines, the Commission on Higher Education (CHED) has initiated programs to secure academic records. CHED and the National Printing Office (NPO) have signed a memorandum of agreement (MOA) on the Securitization of Academic Records for college and university graduates beginning school year 2007. The move is part of CHED's drive to stop the use of fake diplomas and school records. CHED former chairman Carlito Puno said the MOA aims to secure authenticity of academic records such as diplomas, transcript of records and special orders from all colleges and universities in the Philippines. Thus, protect the image and integrity of Filipino College students to potential employers both locally and internationally. Puno emphasized further that the MOA would boost the competitive edge of the graduates in the labor market for it will ensure the integrity of credentials of the graduates while protecting the reputation of higher institutions of learning.

According to the Republic Act No. 10175 known as the Cybercrime Law (2012); The State recognizes the importance of providing an environment conducive to the development, acceleration, and rational application and exploitation of information and communications technology (ICT) to attain free, easy, and intelligible access to exchange and/or delivery of information; and the need to protect and safeguard the integrity of computer, computer and communications systems, networks, and databases, and the confidentiality, integrity, and

availability of information and data stored therein, from all forms of misuse, abuse, and illegal access by making punishable under the law such conduct or conducts.

In relation to this, the input, alteration, or deletion of any computer data without right resulting in inauthentic data with the intent that it be considered or acted upon for legal purposes as if it were authentic, regardless whether or not the data is directly readable and intelligible.

FOREIGN LITERATURE

According to Department of Computer Engineering, K. j, Somaiya College of Engineering, Mumbai, India (2014). The attendance monitoring system will provide the needed solution. The system consists of two apk files, one for the teacher and one for the student respectively, which are installed on their android devices. The AMS will be used to mark the attendance of the students and will also be used to generate reports of

all the students and thus will enable the faculty members to keep track of student's record.

Rather than signing on the attendance sheets, the student will mark the attendance by just a single click on his device. Also, the teacher has the facility to generate reports on a single click. There is a facility to generate report of one or more than one student.

The paper discusses related works in the problem domain; highlights the general overview of the proposed system; details design considerations of the system, both the hardware and software level; discusses the operation and how the system was tested in conformity to system design and functional objectives; concludes the observation made.

FOREIGN LITERATURE

According to Sinclair Community College (SCC) is at the most advanced stage of the continuum. SCC's initial goal for its campus-wide information system was to augment the college's ability to advise its diverse and growing body of 20,000 students. Its student-to-counselor ratio of 1000 to 1 motivated one counselor to investigate other options. His investigations resulted in a project referred to as CWEST (Counseling with Expert System Technology) that eventually became integrated within TRG's In touch.

During the first few years of the CWEST project, a group of volunteers led by artificial intelligence specialist, Dr. Kathryn Neff, and counselor, Mr. Gordon Robinson,

developed a prototype of the system. Taking the information that counselors consider when advising students and how counselors weigh the different factors during the session the team progressed, they recognized that other modules could enhance the services offered by the advising modules. Since SCC's policy is to not write its own software, the team decided to find an external partner that marketed a system that would complement their counseling modules. In December, 1992, SCC formed a partnership with TRG, Inc. TRG's team worked with SCC to integrate the functionality of Intouch. SCC launched the new system during the late Summer of 1993. An imperative of SCC's executive staff was to have a sufficient number of kiosks so that students would be able to find them anywhere on campus. SCC initially acquired six IBM kiosks and now has 13 kiosks located throughout the campus. In summarizing the project,

SCC notes that it was driven by users, not information systems staff, to ensure that 'need,' not technology, was the focus. Quantitative data show that SCC averages over 1,500 users per month per kiosk. According to the observations of SCC staff, it appears that most people will select two or three main menu items in one session. SCC's utilization statistics and transactions counts measured from April 1994 through October 1994 are featured in the Appendix. (Appendix not available in the ASCII Text Version) SCC conducted a demographic analysis of SCC's kiosk users during the Spring 1994 term. The study concluded that Intouch kiosk system is reaching a broad spectrum of students: men and women of all ages, ethnic backgrounds, majors, and academic disciplines. The report titled, 'Who's Using the Kiosks?' notes that 6,480

different students, representing 35 percent of the institution's total spring enrollment, accessed their personal records (from SCC's student information system) at least once during the term. The utilization statistics revealed that the kiosk users were slightly younger (age 28.4 compared to 32.8 for all SCC) and more likely to be male than the average student, although the system has been accessed by students ranging from age 13 to 83 with 36 percent of the kiosk users over age 30. The report demonstrated that all ethnic groups are well represented and, in particular, SCC's African-American population. Additionally, the statistics showed that kiosks seem to attract students who are somewhat more dedicated and academically successful than the overall student population, as indicated by kiosk users having slightly higher grade point averages and higher credit hours loads than the general student population. An actual kiosk user distribution breakdown by major closely parallels that of SCC's overall breakdown by major. To provide a basis for judging the cost effectiveness of Intouch, SCC has attempted to compare kiosk costs with human academic advisors and with printed items such as catalogs and brochures. SCC determined that a kiosk costs approximately $600 per month: about one third the cost for people to do the same tasks. Also, each kiosk is available for use about 390 hours per month (15 hours per day, 26 days per month).The annual cost of the kiosk system can be broken down to $2.16 per student or just $.30 per interactive session. Compared with the costs of delivering information and advisement through more traditional channels, for example, catalogs ($1.58 each);

brochures ($1.00 each) or 30 minute sessions with an academic counselor ($11.75 each), kiosks are proving to be very cost effective.

During the nearly one and a half years that the kiosks have been used on campus, student usage has increased dramatically More than 6,400 students requested information via In touch in the spring quarter, 1994. SCC is observing other positive results that that are not directly cost-related. These include the convenience for students since no appointment is needed to use the kiosks and they are available at all hours and at multiple locations. SCC also had found that there is a consistency in the information provided that is more up to date than printed materials. Also, the information is provided in a manner that is unbiased with respect to race and gender. Additionally, SCC officials believe that the frustration students can feel when they are caught in administrative red tape is reduced when they get assistance immediately from a kiosk. By SCC's being more responsive to student needs, the College feels that it has made the campus a better learning environment.

FOREIGN LITERATURE

Brevard Community College (1994), serves more than 14,000 students at four campuses located in Cocoa, Melbourne, Titusville, and Palm Bay, Florida. The driving imperative to acquire a campus-wide information system (CWIS) was to support the recruiting process. To do so, BCC will make the software available at numerous convenient locations, including employer sites, shopping malls, and surrounding high

school guidance counselor offices. By providing comprehensive information about BCC in an appealing and convenient manner, BCC anticipates that they will be able to attract many additional students.

II. Implementation

BCC used a prototype model for initial test implementation. Using TRG's Intouch software as a base, a talented programmer developed a prototype customized to BCC. Various college departments reviewed the prototype. BCC incorporated the suggestions from the college, as well as new ideas gleaned from other external sources into the software. BCC completed the initial phase of the project and installed the prototype kiosk at the Student Center of the Cocoa Campus in the Spring of 1994.

III. Results

Once the prototype was in place, BCC asked kiosk users for input and reviewed screen utilization statistics. BCC's executive staff found the feedback to be very valuable because it provided specific suggestions for enhancing the way students and other users accessed information from the kiosk.

For example, the college learned that a bigger touch screen was needed, that the processor needed to be faster, and that the kiosk itself needed to be more attractive.

Subsequently, the college upgraded to more powerful PCs with a larger touchscreen and purchased attractive kiosk cabinets. Shortly after the start of the Fall

1994 semester, the college installed the enhanced personal computers in the new kiosk cabinets at the Student Center of all four college campuses.

FOREIGN STUDY

According to National Institute of Technology Rourkela (2009). Our Project aims at designing an student attendance system which could effectively manage attendance of students at Institute like NIT Rourkela. Attendance is marked after student identification. For student identification, a fingerprint recognition based identification system is used. Fingerprints are considered to be the best and fastest method for biometric identification. They are secure to use, unique for every person and do not change in one's lifetime. Fingerprint recognition is a mature field to-day, but still identifying individual from a set of enrolled fingerprints is a time taking process. It was our responsibility to improve the fingerprint identification system for implementation on large databases e.g. of an institute or a country etc. In this project, many new algorithms have been used e.g. gender estimation, key based one too many matching removing boundary minutiae.

Using these new algorithms, we have developed an identification system which is faster in implementation than any other available today in the market. Although we are using the fingerprint identification system for student identification purpose in our project, the matching results are so good that it could perform very well on large databases like that of a country like India (MNIC Project).

FOREIGN STUDY

Richard (2004) emphasized that information about students is vital, but time-consuming to manage and it is essential that the most effective tools be used to aid both staff and students go about their work and studies. The Cambridge Student Information System (CAMSIS) replaced various student records system used by the colleges, departments and universities. CAMSIS provides comprehensive and accurate information about student body and also improves data quality, reduce the administrative burden dramatically and provides better services to both academic staff and students.

According to Desousa (2008), Web based application have four core benefits. These are the following: 1) Compatibility. Web based applications are far more compatible across platforms than traditional installed software like web browsers. 2) Efficiency. Everyone hates to deal with piles of paper unless they do not have any other alternatives. The benefit of web based solution makes services and information available from any web-facilitated Personal Computer (PC). 3) Security of live data. Normally in more complex systems data is moved about separate systems and data sources. In web-based systems, these systems and processes can often be merged by reducing the need to move the data around. Web-based applications also provide an additional security by removing the need for the user to have access to the data and back end servers. 4) Cost Effective. Web-based applications can considerably lower the

costs because of reduced support and maintenance, lower requirements on the end user system and simplifyed plans.

FOREIGN STUDY

There exist various modes of attendance system applications being used in various situations such as in schools and higher institutions of learning. The most notable changes in most educational landscape today are the capitalization of technology in managing the attendance of students (Gomis- Porqueras et al., 2011).

A Learning Management Systems (LMS) proposed the use of real time face detection algorithms which automatically detects and registers student attending the class (Shehu and Dika, 2010). A system which uses fingerprint verification technique was proposed by applying a technique known as extraction of minutiae which automates the process of attendance taking (Saraswat and Kumar, 2010). A prototype system which uses facial recognition and detection technology combining with a neural network algorithm was developed to perform face detection and an eigenface method to perform facial recognition was implemented (Xiao and Yang, 2009).

Another study which confirmed the presence of a student attending a class was developed using a mobile phone via a Bluetooth connection. It will further query the existence of the student through the transfer of student's Media Access Control (MAC) address to the instructor's mobile phone (Jamil, 2011). A few studies were conducted

on the use of QR code for attendance systems (Deugo, 2015; Baban, 2014; Masalha and Hirzallah, 2014; Singh and Munukoti, 2013).

CHAPTER 3

TECHNICAL BACKGROUND

The researchers developed automated Faculty Attendance and Log Monitoring System for Taguig City University. The system developed will be able to eliminate the usage of logbooks needed for recording faculty member attendance and for item of student upon adoption of the system in the processes of the University. The system includes the computerized processing of recording of attendance needed for the University. The system enables the faculty and student to log easily using their own QR Code and facilitates record keeping and information of faculty members and student in a specific database.

- **Hardware**

KIOSK – As shown in Figure 1, a small, freestanding physical structure that displays information or provides a service. Kiosk can be manned or unmanned, and unmanned kiosks can be digital or non-digital. An interactive kiosk is a computer terminal featuring specialized hardware and software that provides access to information and applications for education and information keeping.

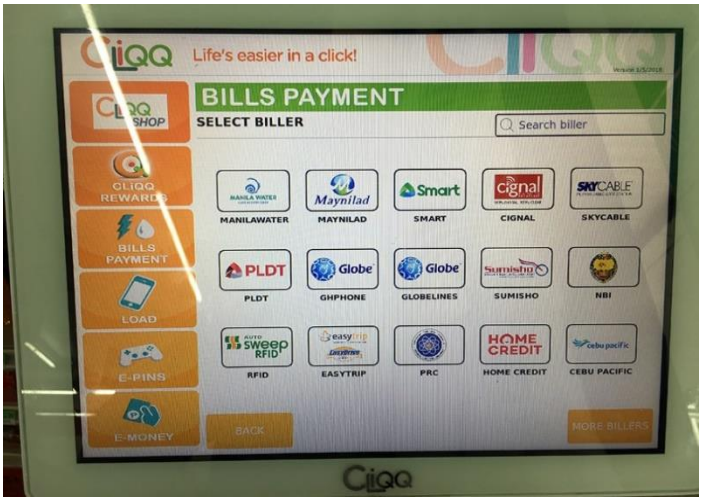


Figure 1. Kiosk

Barcode/ QR Code Scanner - As shown below, Figure 2, an electronic device that decodes and physically captures information contained in barcodes. Automates the data collection process so organizations can reduce human error and expedite tasks such as tracking inventory, managing assets, and monitoring point-of-sale transactions.

Figure 2. Barcode Scanner

- **Software**

Microsoft Visual Studio – An integrated development environment (IDE) from Microsoft. It is used to develop computer programs, as well as websites, web apps, web services and mobile apps.

Microsoft SQL Server – A relational database management system, or RDBMS, that supports a wide variety of transaction processing, business intelligence and analytics applications in corporate IT environments. It is one of the three market-leading database technologies, along with Oracle Database and IBM's DB2.

CHAPTER 4

4.0 Design and Methodology

4.1 Method and Research

Developmental Research

Developmental research has been defined as the systematic study of designing, developing and evaluating instructional programs, processes, and products that must meet the criteria of internal consistency and effectiveness. A situation in which someone is performing instructional design, development, or evaluation activities and studying the process at the same time. It is a broad concept or relevant, development-oriented, aimed at providing answers to development problems. Research project may include several distinct stages, each of which involves reporting and analyzing a data set. One must also include the analysis and reporting stage to warrant being classified as developmental research.

The proponents use developmental research because the proponents studied how the system must be designed, followed the systematic study of how the system is being develop, what will be the process of the system, analyzing and evaluating the process of developing the system.

Developed Prototype

Dashboard (Figure 1.) will be the first module that will appear in the system. The manual at the end portion of the thesis shows specific functions of each item found in the dashboard.

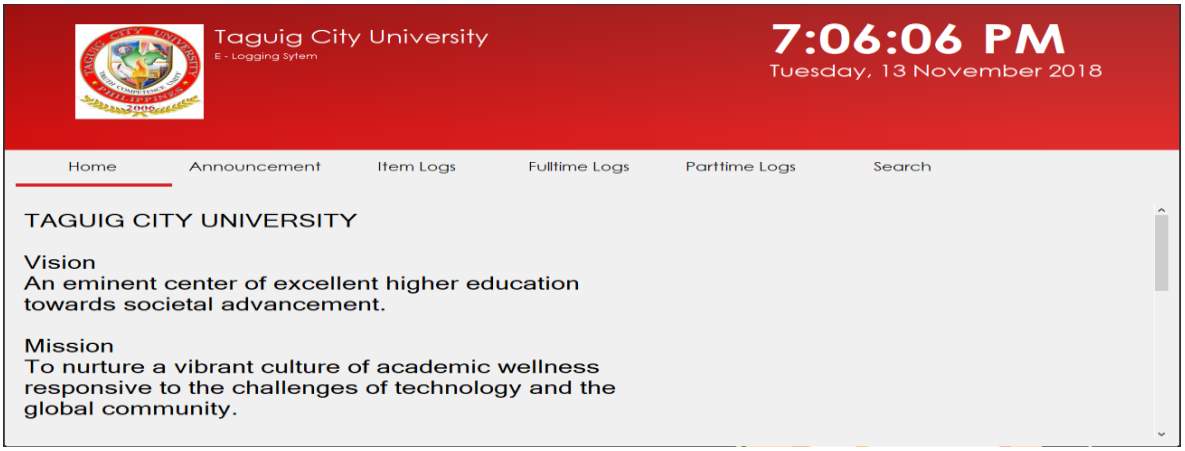


Figure 1. Dashboard

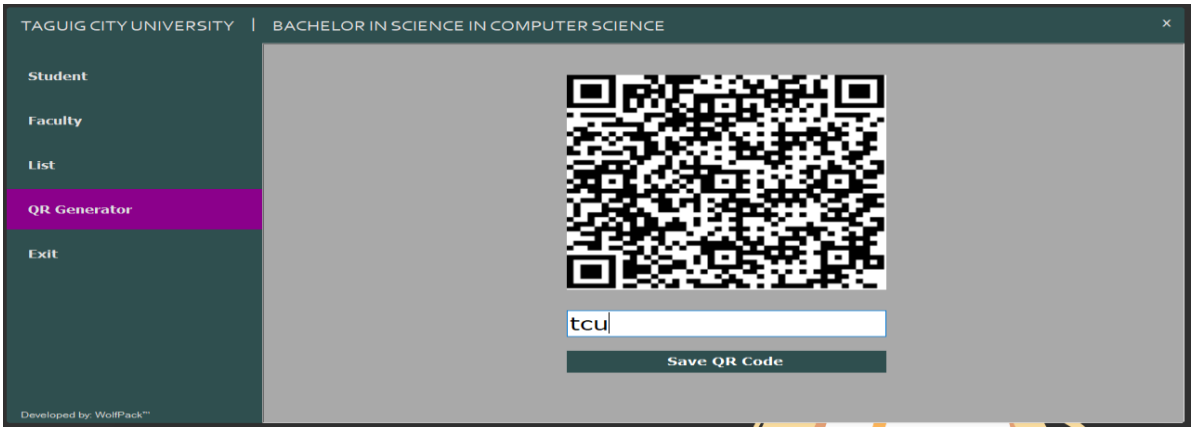


Figure 2. Admin (QR Generator)

In Figure 2. Admin will be the one to generate a QR Code for the users.

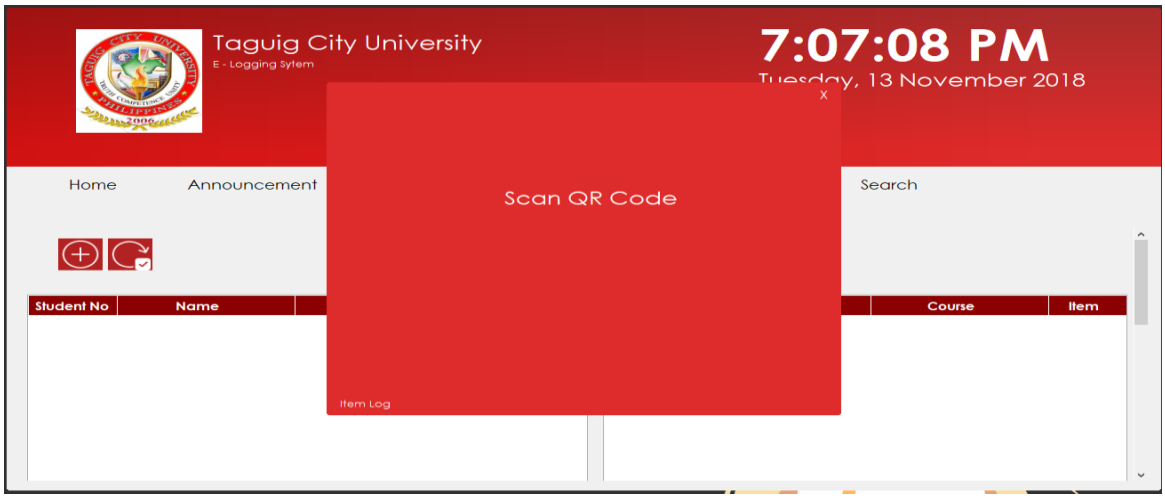


Figure 3. Item Log

As shown in Figure 3. (Item Log) student must scan the QR Code to log their item or laptop.

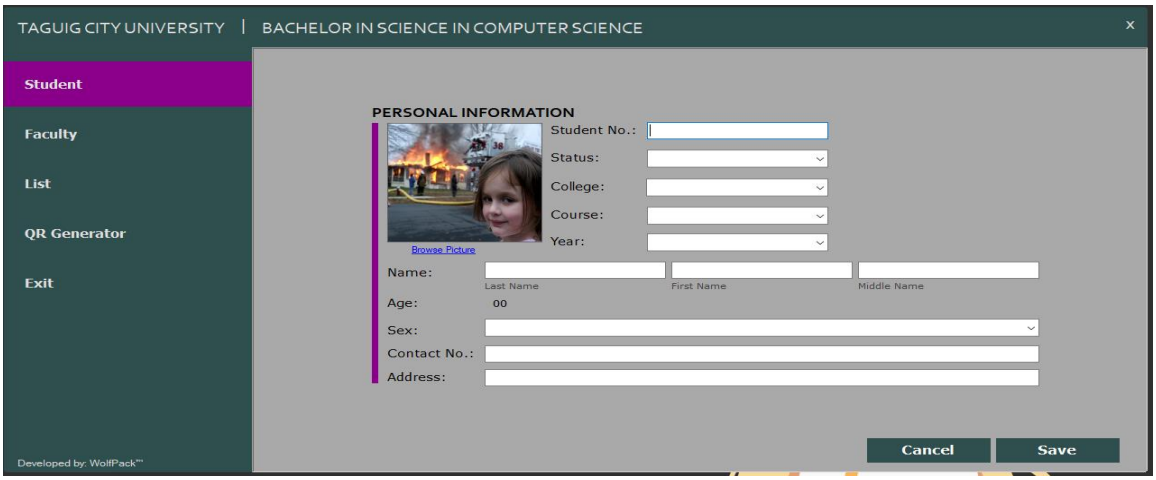


Figure 4. Admin (Add Student)

Admin (Figure 4. Admin (Add Student) will be the one to add faculty member and student info and generate QR Code for the user.

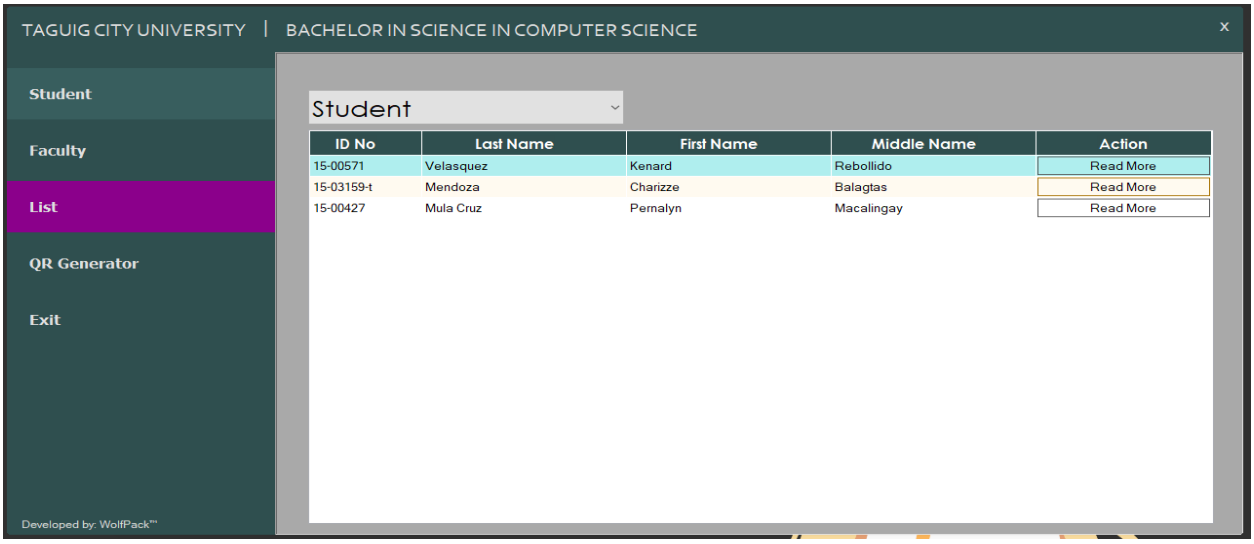


Figure 5. Admin (Faculty and Student Item List Log)

In this module (Figure 5. Admin (Student Item List Log) Admin can also view the list of the students and faculty members who log in to the system.

4.2 Population, Sample size –use Slovin's Formula, Sampling Technique

- **CS Faculty Member and Students of CS –** The proponents gathered system evaluation to every professor in CS Faculty and students of computer science that answered the survey according to their opinion or perception about having an e-logging system.

- **IT Professional –** The proponents conducted a survey to IT Professional or any IT related graduate who has knowledge about the system and already working in a computer company or institution.

Description of Respondents –Users, IT Prof

- **Users –** CS Faculty Members and Students from Taguig City University who are going to use the system.
- **IT Professional –** the researchers conducted a survey to IT Professional or any IT related graduate who has knowledge about system and already working in a computer company or institution.

Sample Size

The respondents selected 254 students of computer science from Taguig City University, 7 IT Professionals, 1 Admin a total of 695 people were given evaluation questionnaire. The proponents are going use Descriptive Research Method, a technique that uses a face to face interview and survey method. The face to face interview is the most widely used in the research of any topic and based on a direct meeting between interviewer and interviewee while the survey is collecting measurable information to find the condition of the respondent with an accurate interpretation. The researchers used the two methods because those methods can easily display their point of view. These included the primary and secondary data types. The primary data

were derived from the answers of interviewee gave during the interview process. The secondary were obtained from published documents and studies.

The proponents are using Slovins Formula

Slovins Formula

$$n = \frac{N}{(1 + Ne^{2)}}$$

The N stands for the whole population of Computer Science student from Taguig City University, while e stands for the margin error, the researchers use 0.05 as the margin of error. The data collected are analyze and tabulated. Analyzes of data were guided by mean and percentage.

Where:

N= total population

E= margin of error

n= sample size

Solution:

N= 695 Students, 7 IT Professionals, 1 Admin

E= 0.05

n=?

$$n = \frac{695}{1+695(0.0025)} \qquad n = \frac{695}{1+695(0.05)^2} \qquad n = \frac{695}{(2.7375)} \qquad n = \frac{695}{1+1.7375}$$

n =253.88 or 254 Sample Size

Sampling Technique

The proponents used the Non Probability Sampling Technique, where the respondents selected the sample population in random basis which was composed of computer science student in Taguig City University. It was challenging to get the total population of the students in Taguig City University because of the varied number of students enrolled every year so the proponents chose Computer Science students as sample. The selected respondents has a total sample size of 254. The respondents are Students, IT Professionals and Admin from Taguig City University combined with the total of 254 based on the Slovin's Formula.

4.3 Data Gathering Research

Internet Research

The proponents used the internet to gather information about the system that was developed for the **Faculty Attendance and Log Monitoring System**. This were the information that the proponents have researched through the internet.

- Codes for the system

The proponents searched a video tutorial at www.youtube.com for reference and to look for a similar function in the system at https://stackoverflow.com.

- Design for the system

  The proponents used the colors that symbolize the Taguig City University, which is white and red for the GUI of the system.

- Information for the documentation

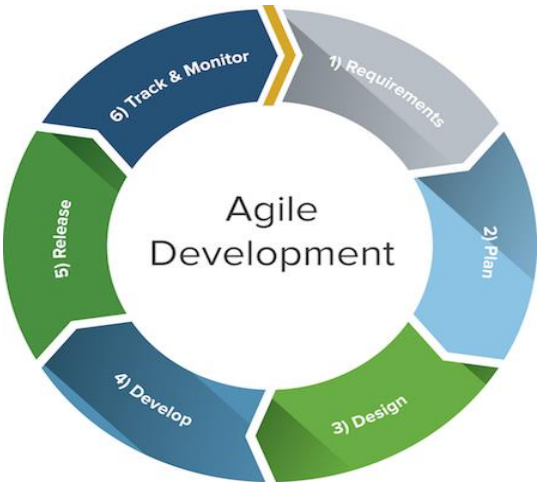
  The proponents conducted a research about the information of past or old data about the system that used quick response code and agile model picture and description to represent the process of our system at http://www.studymode.com.

Research Methodology

Research methodology refers to the development of a system or method for a unique situation. Today, the term is most often applied to technological fields in reference to web design, software or information systems design.

4.4 Conceptual Design/ System Architecture

Agile Model



Agile SDLC Model is the model that the proponents used to show the combination of iterative and incremental process model that focuses on process adaptability and customer satisfaction by rapid delivery of working software product. These builds are provided in iterations. Each iteration's typically lasts from about one to three weeks. Agile gives freedom when recent changes need to be implemented. Adaptation to the client's needs and preferences through the development process.

The proponents purpose of using agile model is to break down each process involves in project into prioritized requirements within an iterative cycle. This model helps in understanding the key aspects, including the requirements in the proposed system, which is **Faculty Attendance and Log Monitoring System using Quick Response Code through Kiosk with Information System.**

- **Requirements.** The proponents identified the scope of the project, the functions, and the data needed and knowing the technology platform requirements for the development of the system.

- **Plan/Planning.** Turning the user's experience in manual process of logging system into an automated system. Proponents listed all the features that are needed to see in the system.

- **Design.** Dashboard was the first module that appeared on screen when running the system. Another module will flash on screen for users to scan their QR Code.

- **Develop** The proponents developed a system for the execution of manual test scenarios and conversion of manual to automated process. Where the admin can view the attendance record and add student list and faculty members with their information.

- **Release.** The proponents show cased the functions and capabilities of the system to prospect users of TCU.

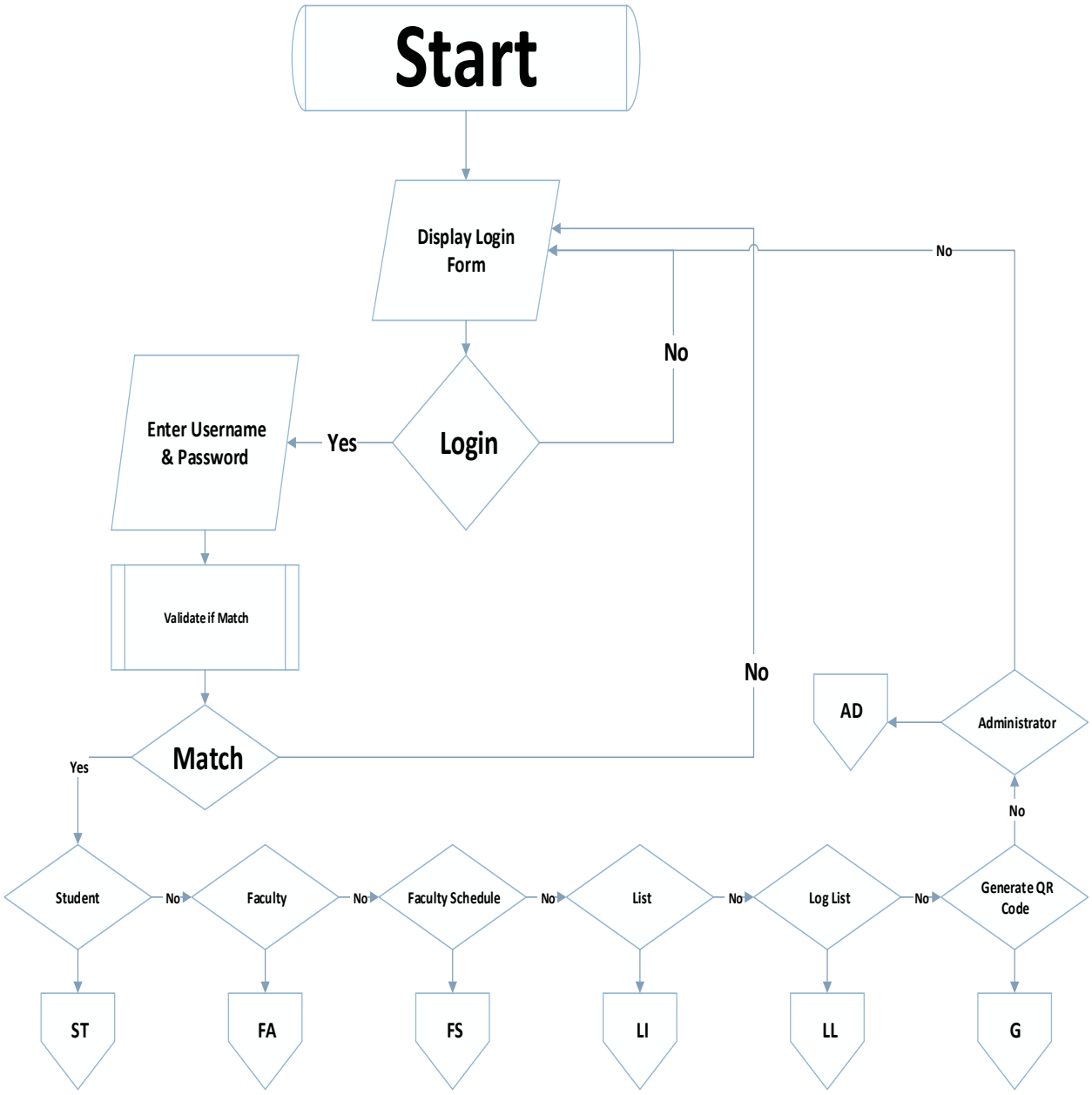
- **Track & Monitor**. The proponents identified the issues and opportunities for improvement of the system to avoid the bugs in the system, the system performance and the system health in terms of bugs and errors.

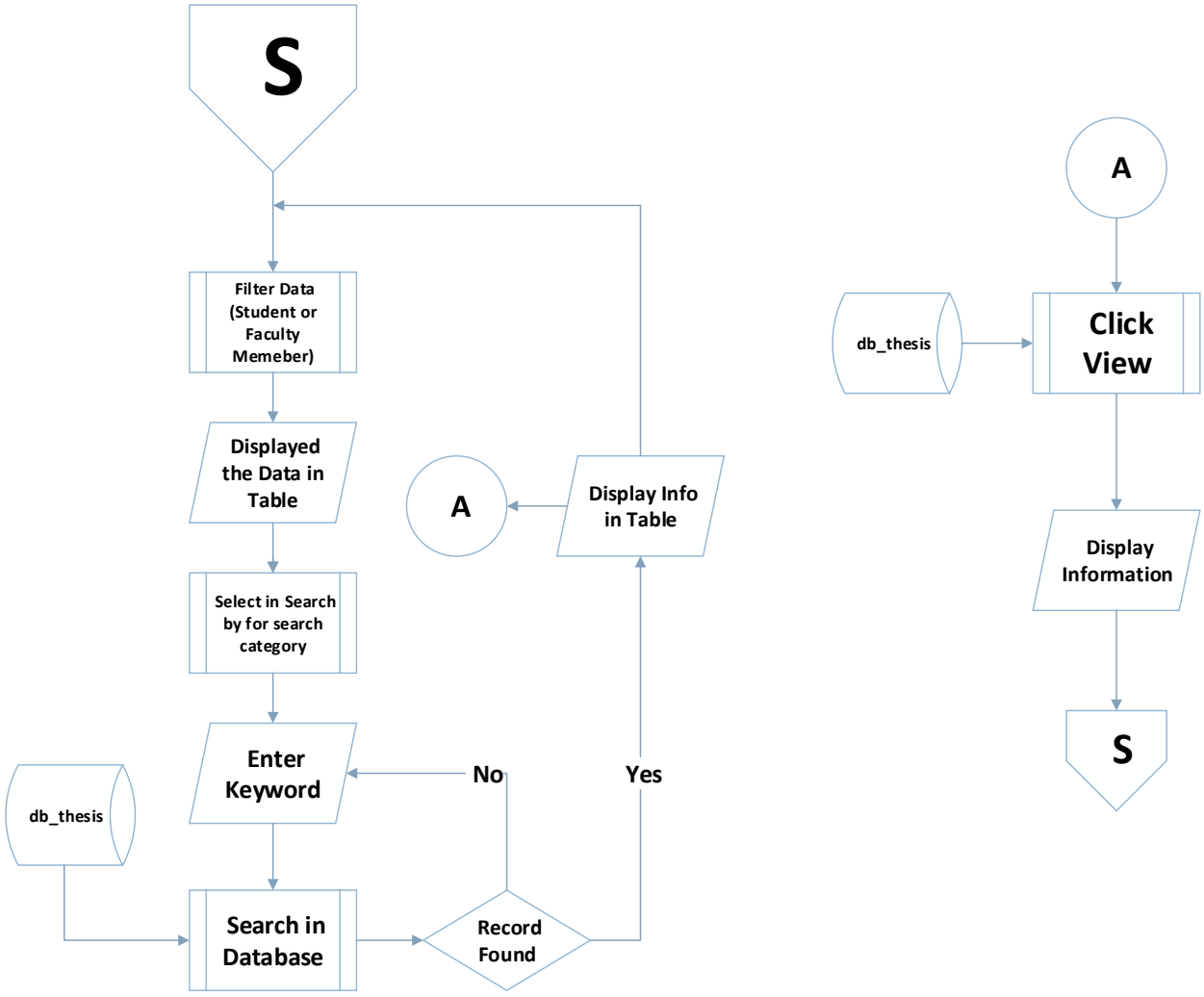
Algorithm

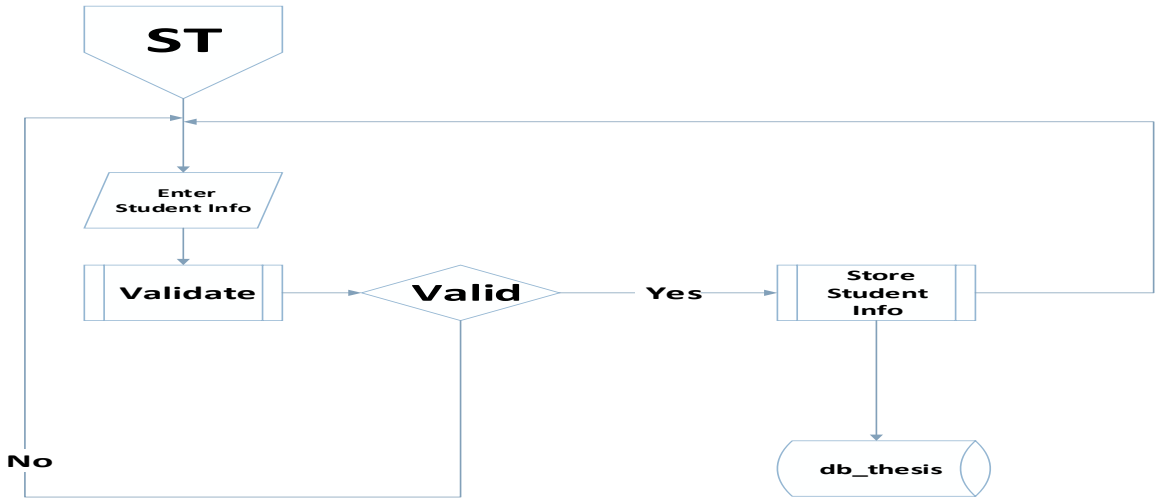
This **Algorithm** is showing the **Faculty Attendance and Log Monitoring System Process**

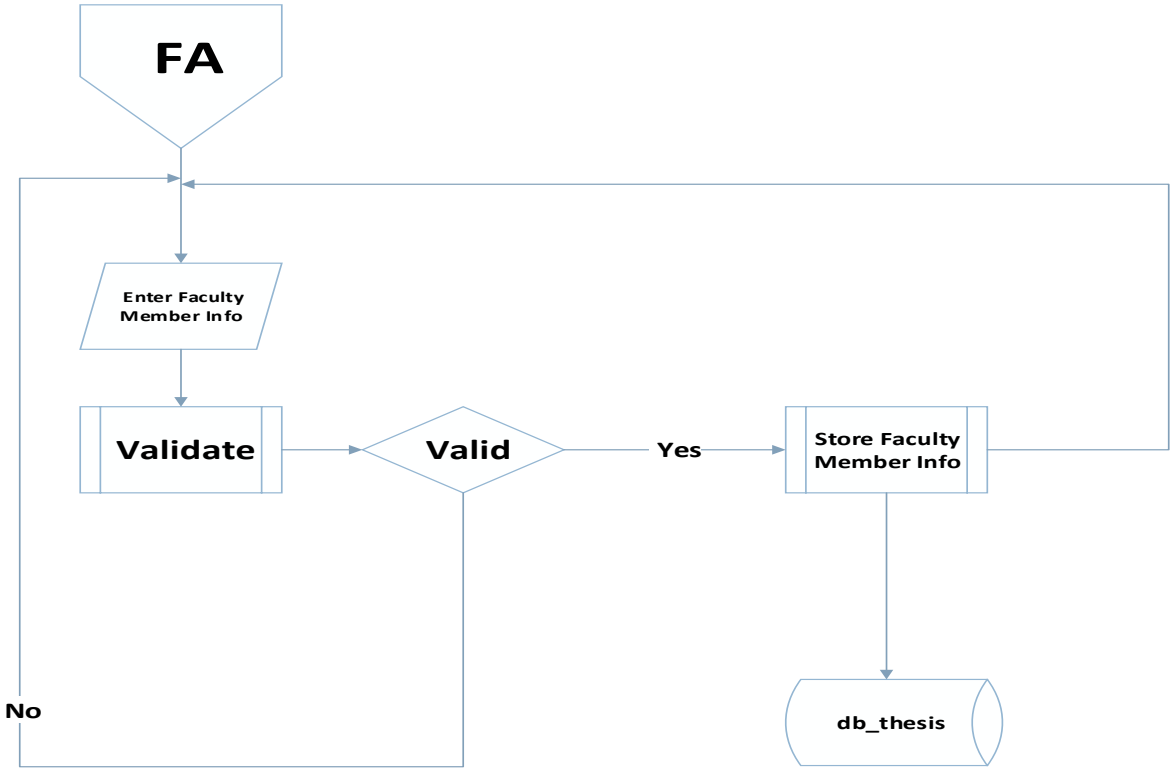
- Admin are going to login into the system
- Admin will input the information of the Faculty members and student to generate of their own QR Code.
- Faculty members will tap their QR Code in barcode scanner for their log in and log out.
- The student will choose what item they log and what using their own QR Code

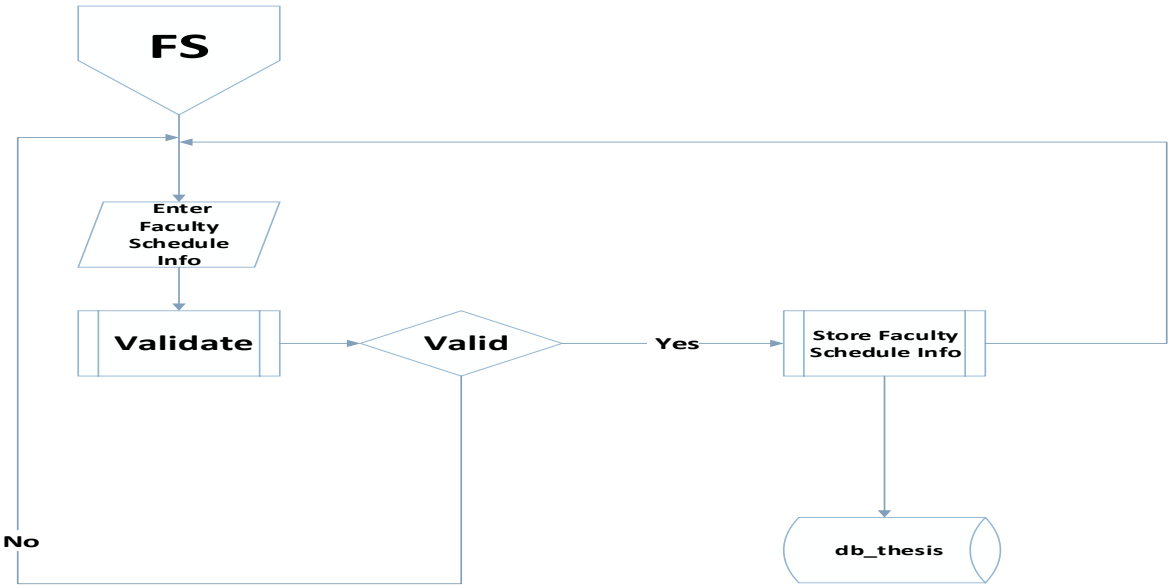
4.5 (Flowchart)

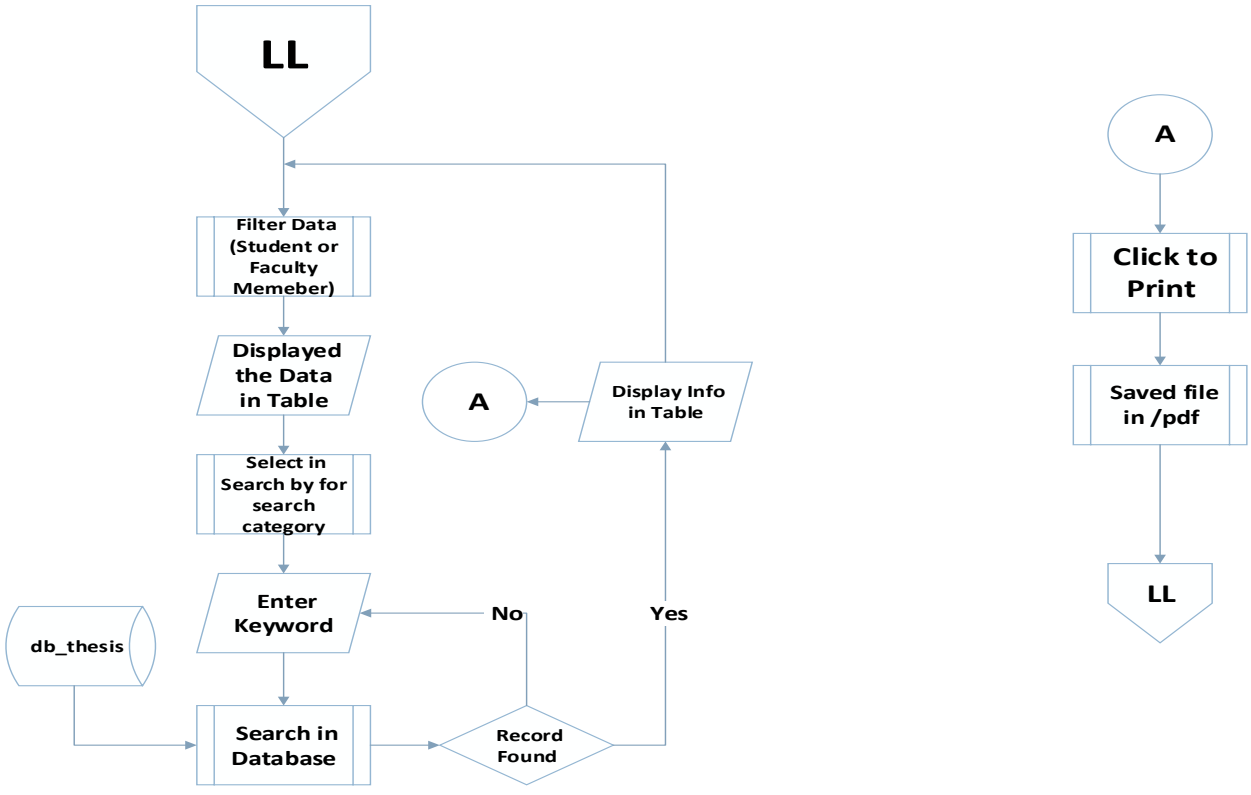


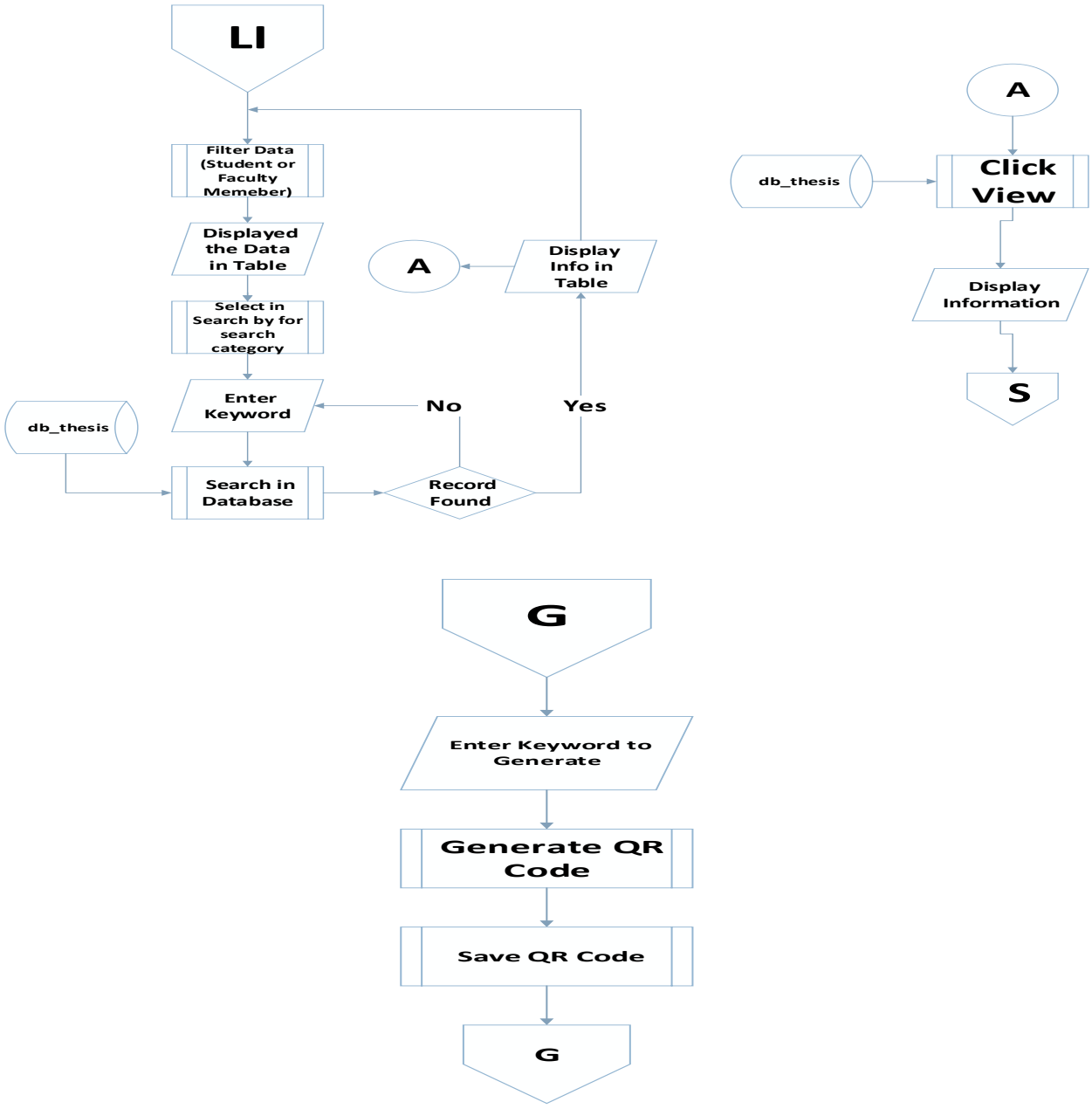

S
Filter Data (Student or Faculty Memeber)
Displayed the Data in Table
Select in Search by for search category
Enter Keyword
db_thesis
Search in Database
Record Found
No
Yes
A
Display Info in Table
A
db_thesis
Click View
Display Information
S


ST
Enter Student Info
Validate
Valid
Yes
Store Student Info
db_thesis
No


FA
Enter Faculty Member Info
Validate
Valid
Yes
Store Faculty Member Info
db_thesis
No


FS
Enter Faculty Schedule Info
Validate
Valid
Yes
Store Faculty Schedule Info
db_thesis
No


LL
Filter Data (Student or Faculty Memeber)
Displayed the Data in Table
Select in Search by for search category
Enter Keyword
db_thesis
Search in Database
Record Found
No
Yes
A
Display Info in Table
A
Click to Print
Saved file in /pdf
LL


LI
Filter Data (Student or Faculty Memeber)
Displayed the Data in Table
Select in Search by for search category
Enter Keyword
db_thesis
Search in Database
Record Found
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Display Info in Table
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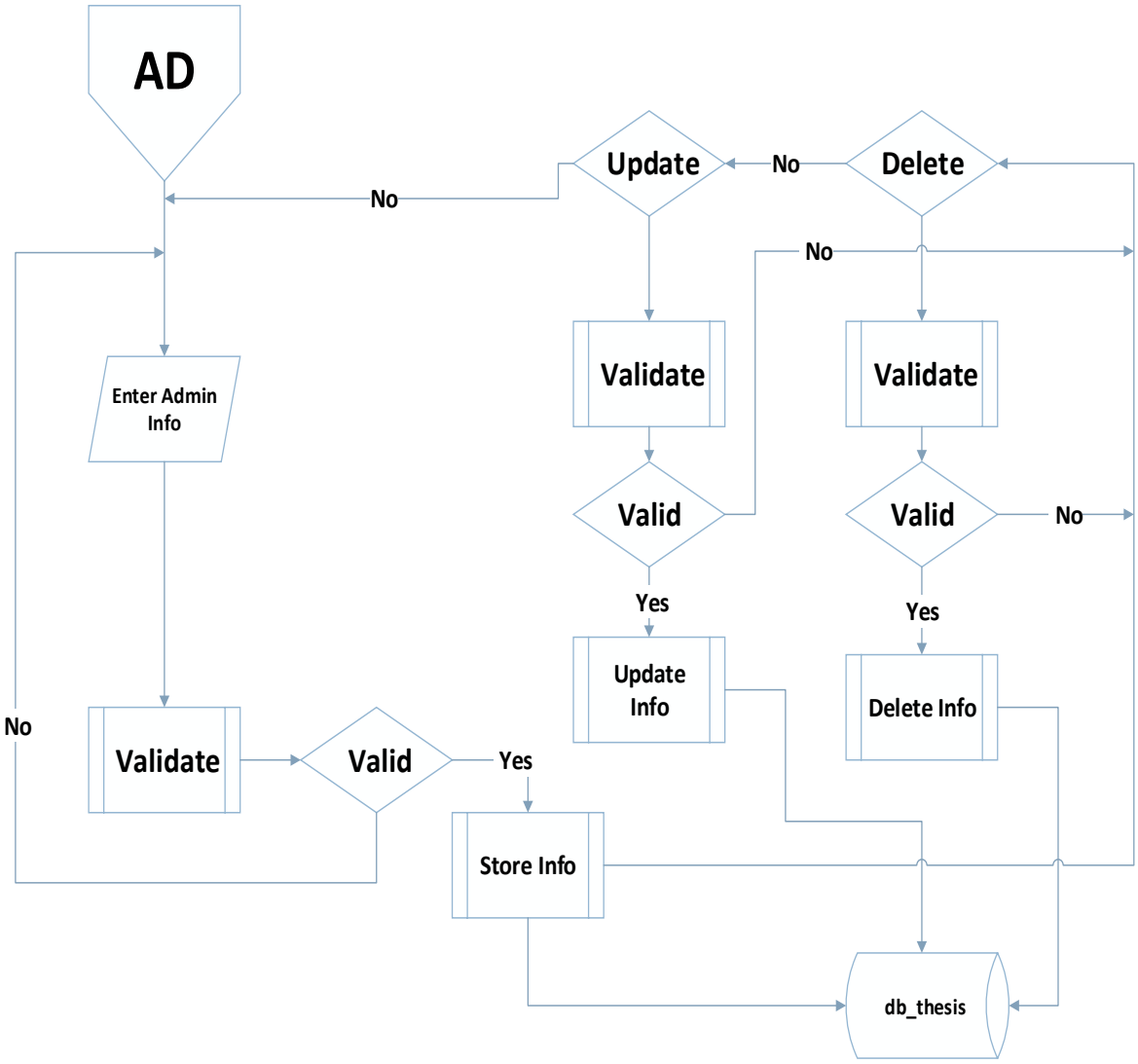
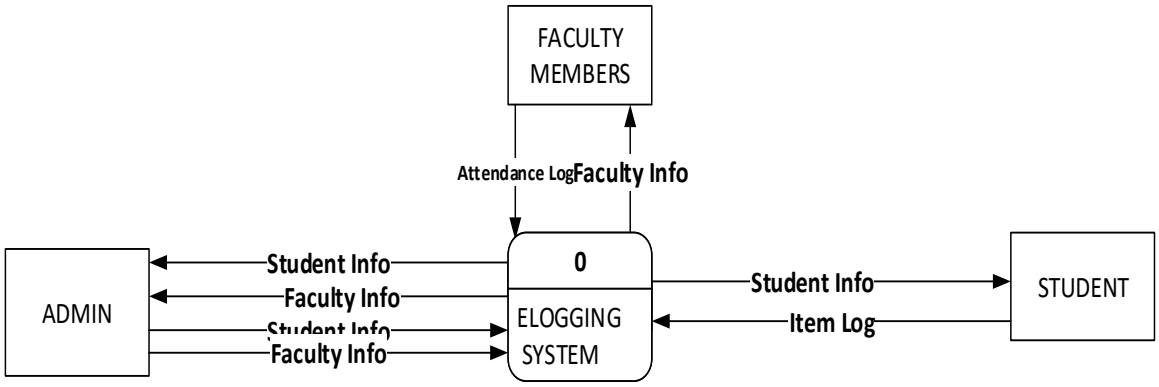
db_thesis
Click View
Display Information
S
G
Enter Keyword to Generate
Generate QR Code
Save QR Code
G


AD
Update
No
Delete
No
No
Validate
Validate
Enter Admin Info
Valid
Valid
No
Yes
Yes
Update Info
Delete Info
No
Validate
Valid
Yes
Store Info
db_thesis

(Data Flow Diagram Level 0)

The **DFD Level 0** is the basic process of Faculty Attendance and Log Monitoring System



- **Admin** – Admin is the main user and the person who will provide the QR Code of the faculty member and student and input data to the system.
- **Faculty Attendance And Log Monitoring System –** The system will be the source of faculty member and student information.
- **Student –** Student will have his/her own QR Code for their items log.
- **Faculty Member –** Faculty member will have their own QR Code for their daily attendance.

(Data Flow Diagram Level 1)

The DFD level 1 is what will be the process of Faculty Attendance and Log Monitoring System.

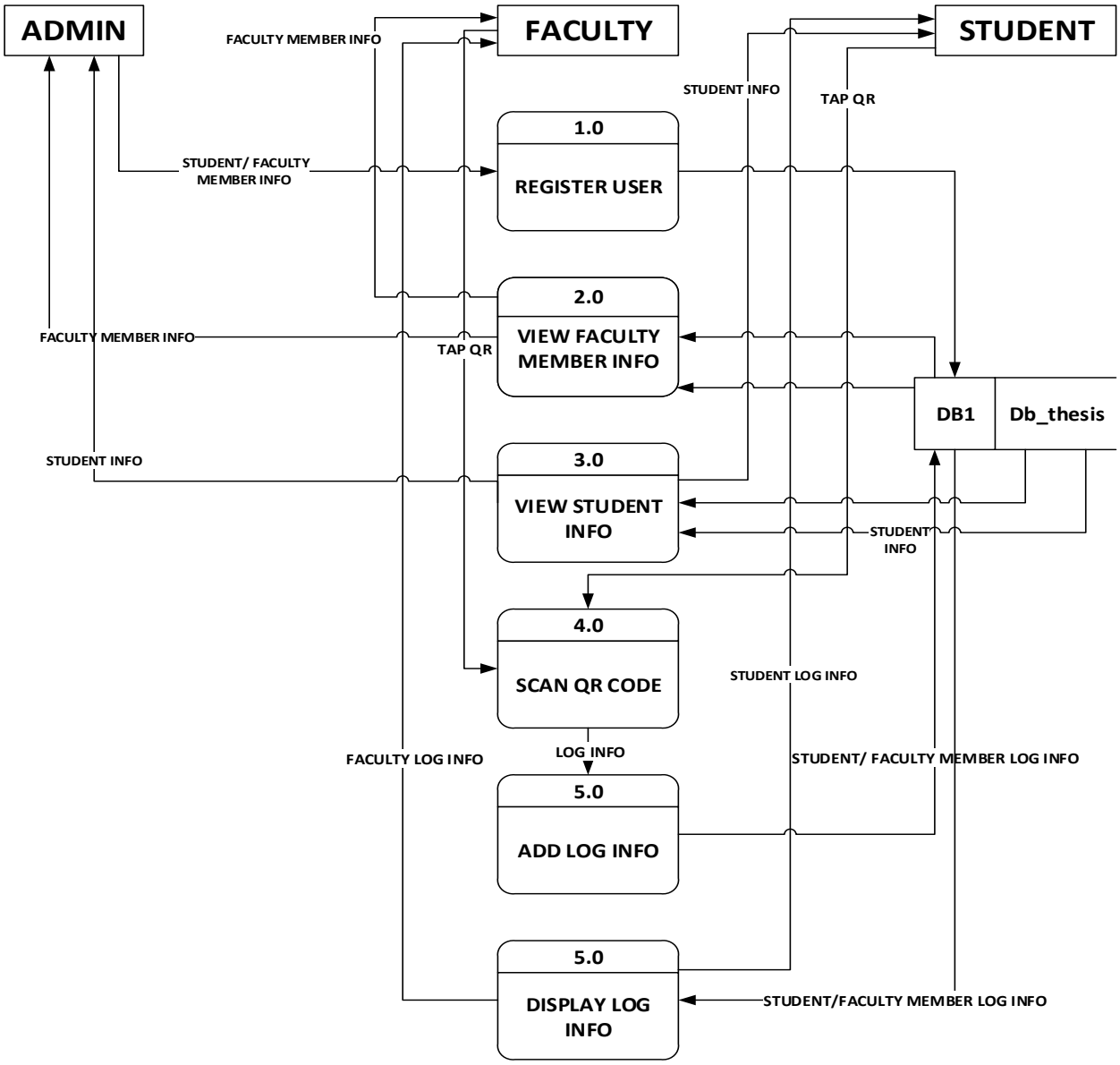


Figure 1. Data Flow Diagram Level 1

Faculty member and student info will be added by the admin and will be store directly in database. The stored data will be retrieve when admin wants to view the information of the faculty member and student and also, if the faculty member and student wants to view their information, their info will be retrieve from database by scanning their QR Code. In this process, Display Log Info, once the student or faculty member tap their QR Code, their log info will be retrieve in the database that will display in table.

(Data Flow Diagram Level 2)

The DFD level 2 is what will be the process of Faculty Attendance and Log Monitoring System.

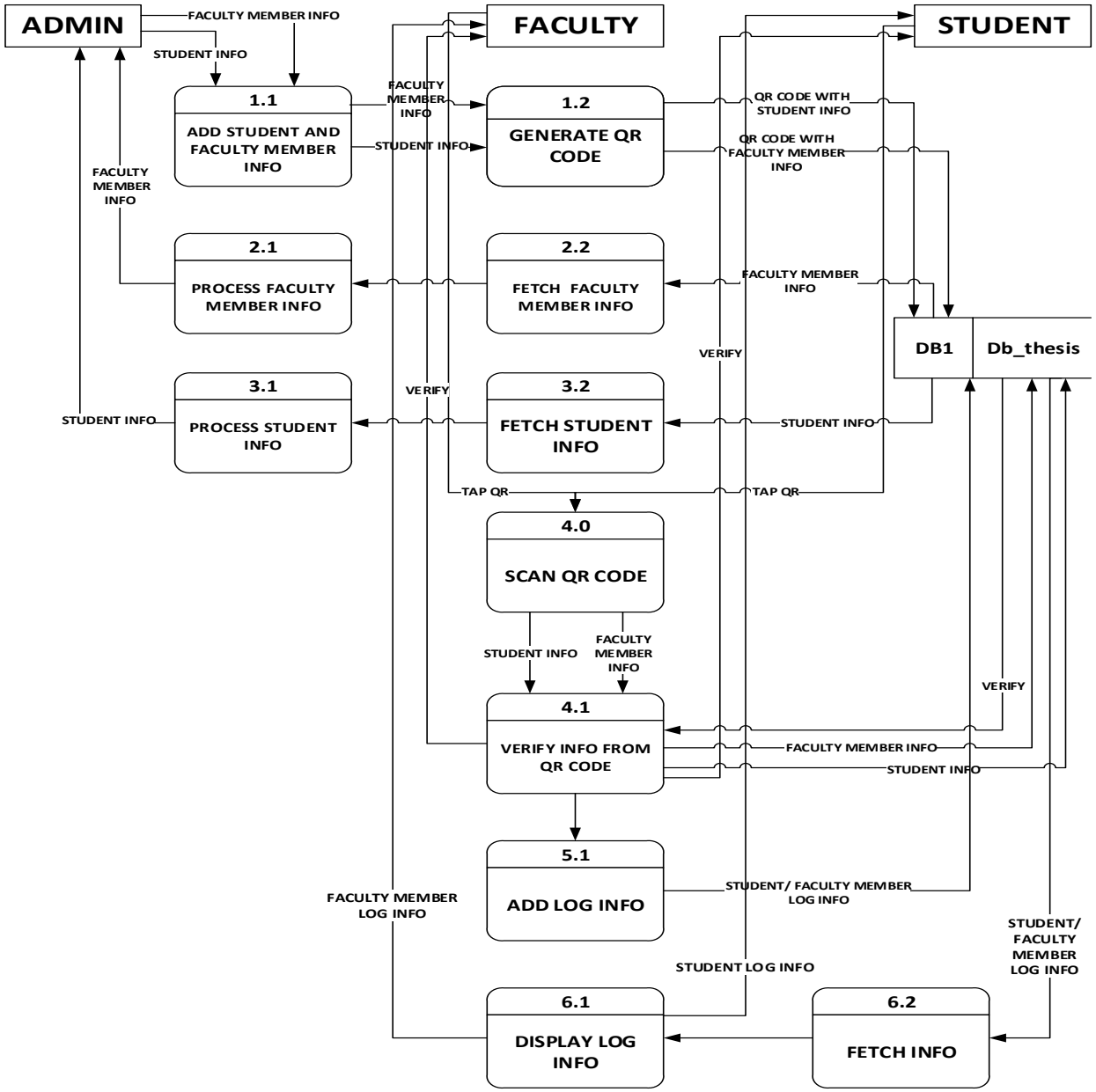


Figure 2. Data Flow Diagram Level 2

- **Admin –** The admin is the one who are going to add faculty member and student information to use it for generating their own QR Code.
- **Scan QR –** Process the scanning of QR Code to perform the systems transaction.
- **Faculty Attendance And Log Monitoring System –** The system have the information of faculty member and student.
- **Student –** is the one who are going to have QR Code for their item log.
- **Faculty Member –** is the one who are going to have their attendance in the system using also their own QR Code.

In the system's data flow diagram level 2, admin will be the one to add faculty member info and student info in order to generate for their QR Code. Stored data will be fetched from the database if the admin want to view the user's information. In Scan QR Code process, once the QR Code of the faculty members tap their QR Code, the system will verify the info from the database and their log info will be saved also in a specific database. Display Log Info process, it is where the info of the user's will be fetched from database to display in the table.

4.6 Test Parameters

Evaluation (Hardware and Software)

Name (Optional):_____Course:_____

Educational Attainment (High School, Technical/Vocational, Bachelor's Degree)

Master's Degree w/ Units: _____

Master's Degree Graduate: _____

Doctorate Degree w/ Units: _____

Doctorate Degree Graduate: _____

Gender: ☐ Male ☐ Female

Age: ☐ 25 years and below ☐ 26-35 years old ☐ 36-40 years old ☐ above 40

Educational Attainment: _____

This questionnaire survey is for the Faculty Attendance and Log Monitoring System which is called "E-Logging System". This survey can help us know if the E-Logging System really works. The proponents will allow the computer science faculty members and students of Taguig City University can answer this questionnaire survey. Please check (√) only one from the selection.

Strongly Acceptable (4)	Moderately Acceptable (3)	Acceptable (2)	Not Acceptable (1)

Evaluation	4	3	2	1
Functionality				
1. Elogging System can easily store all the faculty member and student information?				
2. Elogging System can give the right information of the user?				
3. Elogging System can perform speed scanning of QR Code for the attendance?				
4. Elogging System is capable to generate QR Codes?				
Efficiency				
1. System can reduce the usage of logbook in attendance process?				
2. Using Quick Response Code will be a great help for logging student's item?				
3. Is Elogging System can scan multiple of QR Codes of faculty member and student?				
4. Is Elogging System can help the monitoring staff in managing the faculty member attendance?				
Usability				
1. The System can really help the faculty member and student to improve the process of attendance and logbook?				
2. E-Logging System is user-friendly?				
3. E-Logging System can be useful to the students and faculty members?				
4. The System can perform zero tolerance of error?				
Effectiveness				

1. System can be really trust for getting the user information?				
2. E-Logging System can really help the faculty members to view their information easily?				
3. The System can help the faculty member and student to reduce time of logging in to logbook?				
4. E-Logging System can improve the process of attendance and logbook?				
Accuracy				
1. The System can generate the report of attendance log by date in the system?				
2. The System recorded the user info correctly?				
3. The System will validate the user info accurately?				
4. Attendance record of faculty member and student log info can easily manage by the admin?				

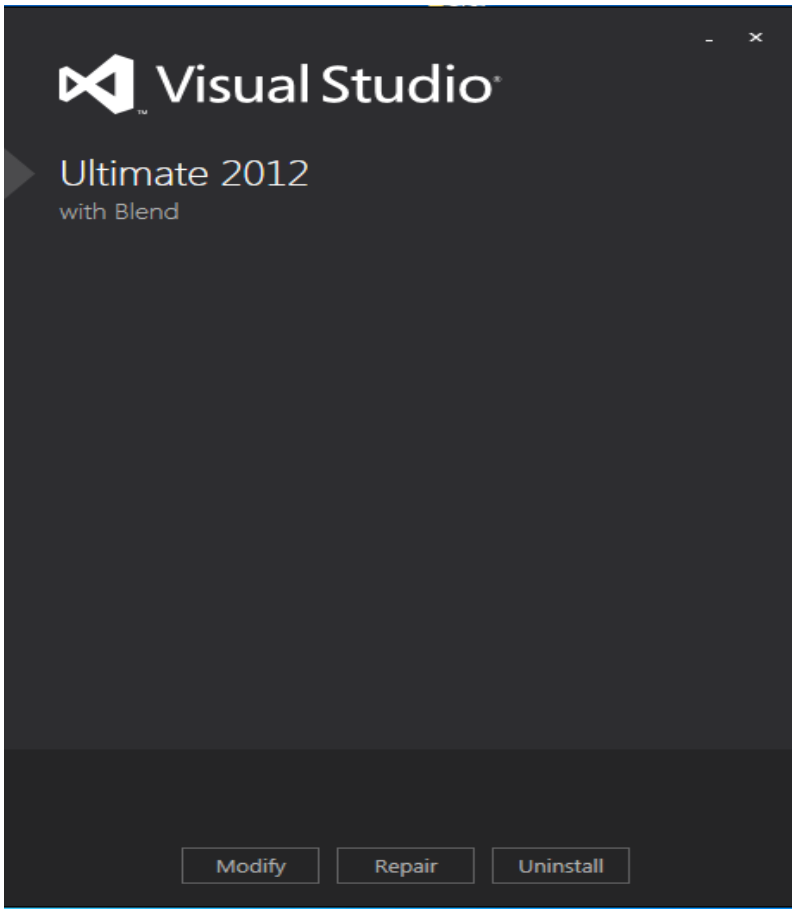
Comments:

_____

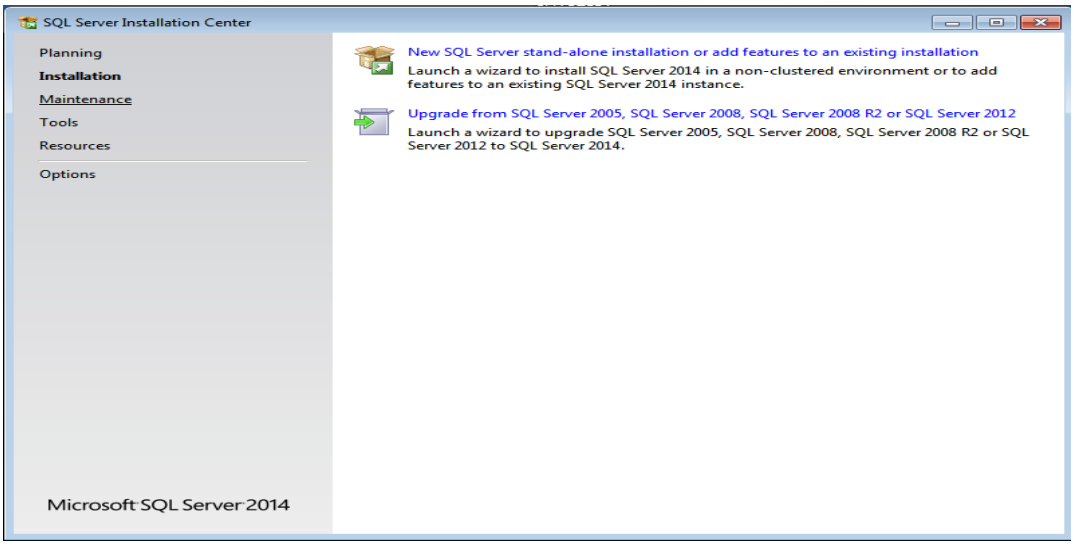
_____

4.7 System Deployment

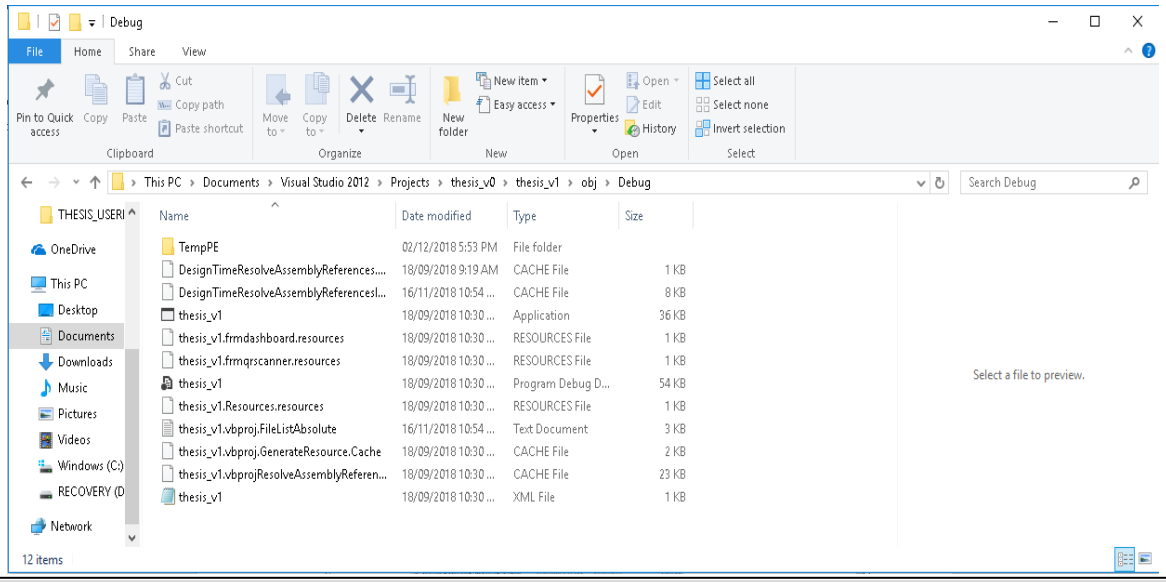
1. Microsoft Visual Studio 2012 or 2015 would fit in the installation because the system only depends on the .net framework. It is downloadable and searchable in the internet.



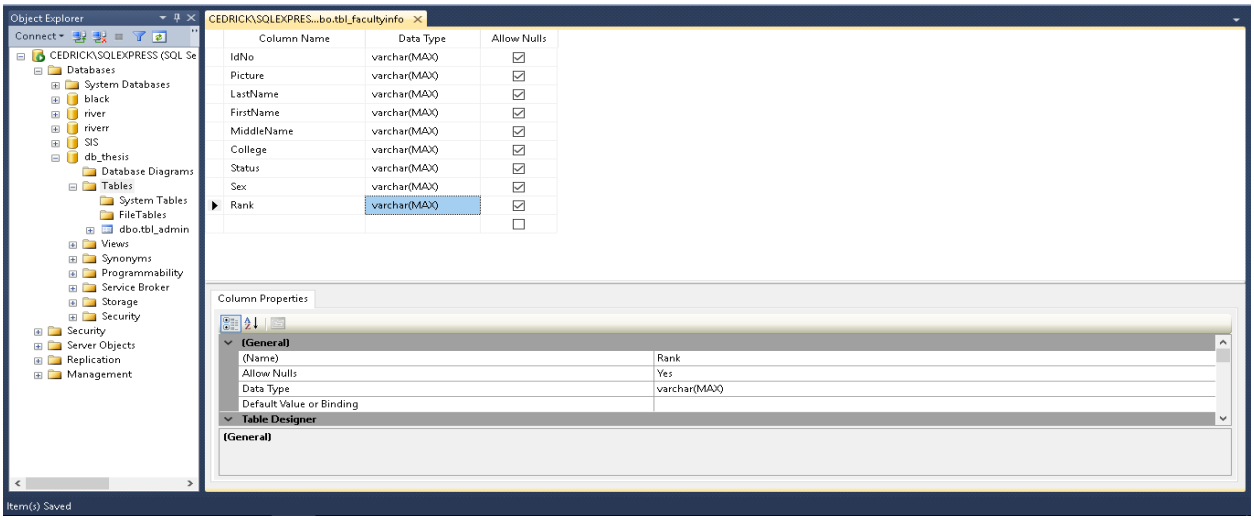
2. **Microsoft SQL SERVER 2014 –** there are two folder when you download SQL server SQLEXPR_x64_ENU and the SQLManagementStudio_x64_ENU. Both are just the same. It is downloadable in the internet.



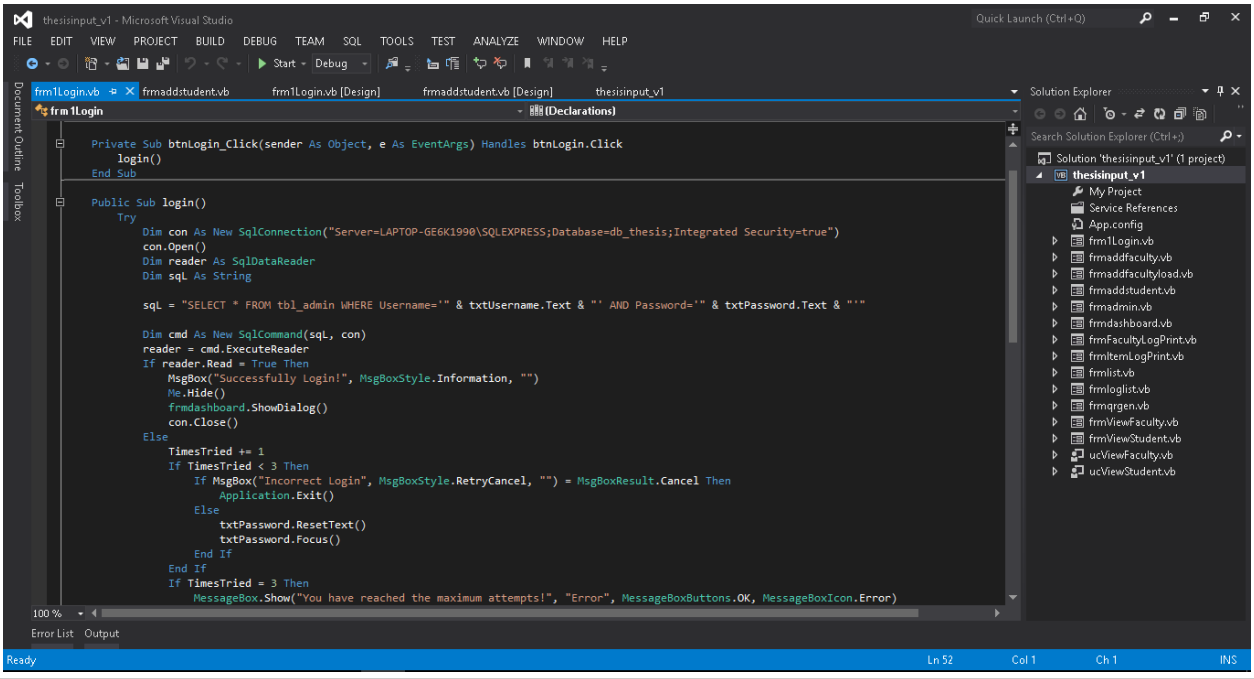
3. Copy the application file and run the executable (.exe) file of the system to run it to the computer.



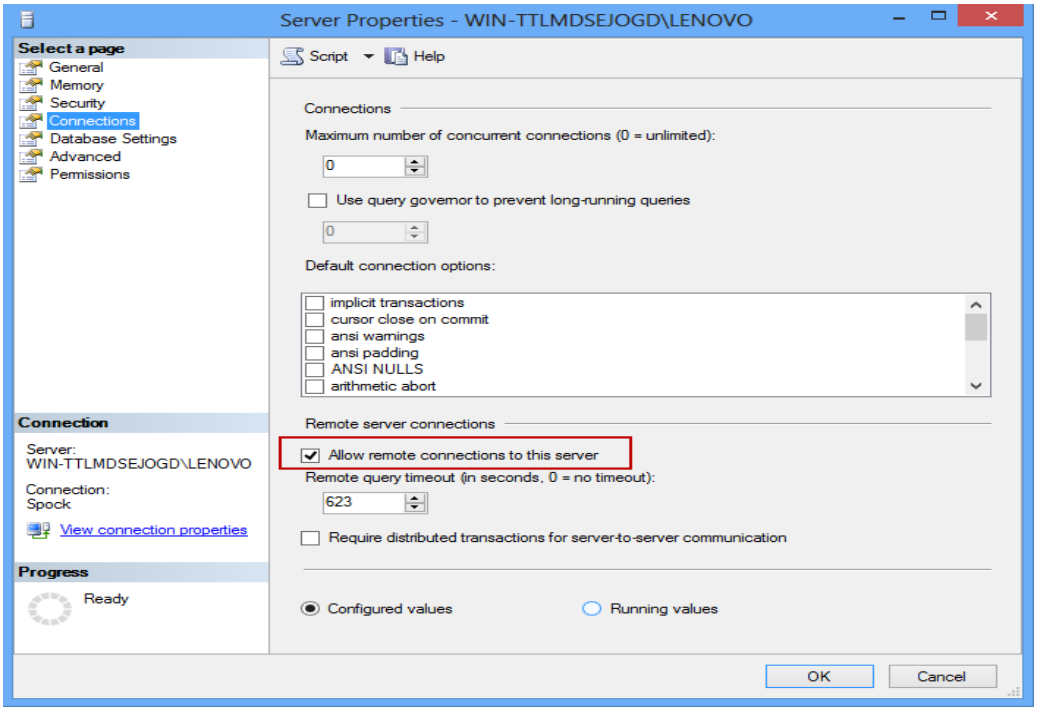
4. You need to create the database for the new computer for the system/application.

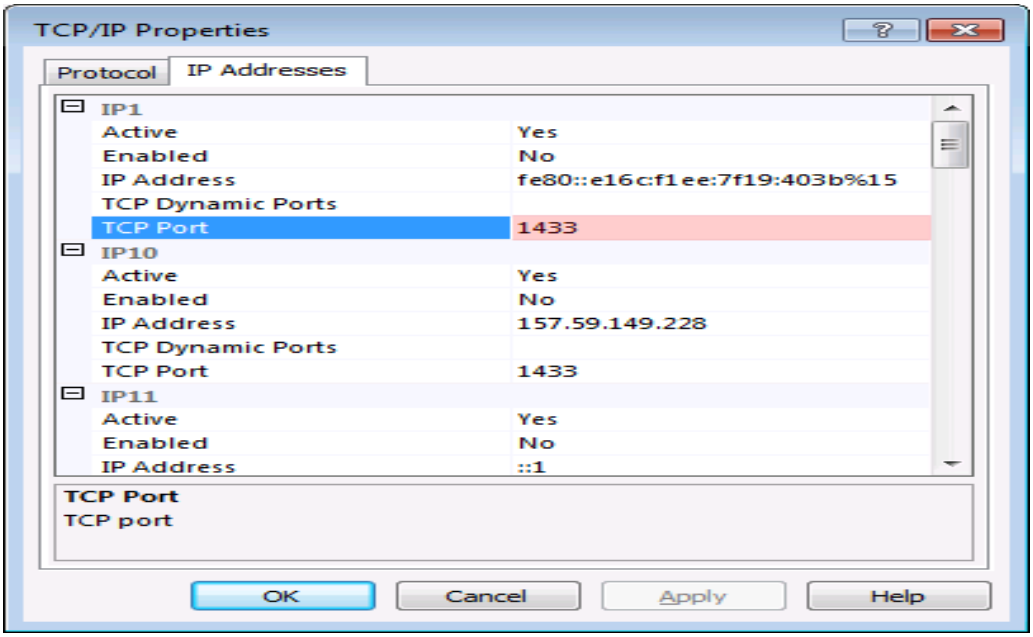


5. Database connection should be changed after running the system in executable(.exe) file, make sure that every connection on forms will be changed.



6. Enable remote connections in SQL Server 2014.





CHAPTER 5

SUMMARY

This chapter presents the summary of findings in relation to the Faculty Attendance and Log Monitoring using Quick Response Code through Kiosk with Information System, the method performed by the researchers and the result related to the study. The study aimed to determine the conditions of and problems in the existing system of by providing an effective computer-based attendance system which will lead to the appreciation of computer-aided techniques and strategies that involves easy way of attendance, geared toward E-Logging System. In order to obtain the objective of the study, the researcher used the descriptive method that includes the use of evaluation questionnaire as a tool in gathering information. The study was conducted in Taguig City University (TCU). The respondents of the study were the students and IT professionals based on the computed sample size using slovin's formula and data was analyzed by computing their weighted mean average. Results is presented by tables to facilitate the analysis.

FINDINGS

Respondent's Overall Assessment of the developed Faculty Attendance and Log Monitoring System Using Quick Response Code through Kiosk with Information System

FUNCTIONALITY	Weighted Mean	Verbal Interpretation
1. Elogging System can easily store all the faculty member and student information?	**3.18**	**Moderately Acceptable**
2. Elogging System can give the right information of the user?	**3.21**	**Moderately Acceptable**
3. Elogging System can perform speed scanning of QR Code for the attendance?	**3.08**	**Moderately Acceptable**
4. Elogging System is capable to generate QR Codes?	**3.49**	**Moderately Acceptable**
TOTAL	**3.24**	**Moderately Acceptable**

Table: #1 Functionality

Table 1. Shows the overall assessment of the developed Faculty Attendance and Log Monitoring System Using Quick Response Code through Kiosk with Information System with regards to its functionality. The last category "E-Logging System is capable to generate QR Codes?" has the highest average weighted mean of 3.49**,** while the lowest is the third category "E-Logging System can perform speed scanning of QR

Code for the attendance?" with 3.08. From the same table an overall average mean of 3.24 is interpreted to mean that the respondents as a whole considered "Moderately Acceptable" the developed system in terms of functionality.

Respondent's Overall Assessment of the developed Faculty Attendance and Log Monitoring System Using Quick Response Code through Kiosk with Information System

EFFICIENCY	Weighted Mean	Verbal Interpretation
1. System can reduce the usage of logbook in attendance process?	**3.44**	**Moderately Acceptable**
2. Using Quick Response Code will be a great help for logging student's item?	**3.40**	**Moderately Acceptable**
3. Is E-Logging System can scan multiple of QR Codes of faculty member and student?	**2.57**	**Moderately Acceptable**
4. Is E-Logging System can help the monitoring staff in managing the faculty member attendance?	**2.52**	**Moderately Acceptable**
TOTAL	**2.98**	**Moderately Acceptable**

Table: #2 Efficiency

Table 2. Shows the overall assessment of the developed Faculty Attendance and Log Monitoring System Using Quick Response Code through Kiosk with Information System with regards to its efficiency. The first category "System can reduce the usage

of logbook in attendance process?" has the highest average weighted mean of 3.44**,** while the lowest is the last category "Is E-Logging System can help the monitoring staff in managing the faculty member attendance?" with 2.52. From the same table an overall average mean of 2.98 is interpreted to mean that the respondents as a whole considered "Moderately Acceptable" the developed system in terms of efficiency.

Respondent's Overall Assessment of the developed Faculty Attendance and Log Monitoring System Using Quick Response Code through Kiosk with Information System

USABILITY	Weighted Mean	Verbal Interpretation
1. The System can really help the faculty member and student to improve the process of attendance and logbook?	**3.44**	**Moderately Acceptable**
2. E-Logging System is user-friendly?	**3.16**	**Moderately Acceptable**
3. E-Logging System can be useful to the students and faculty members?	**3.49**	**Moderately Acceptable**
4. Is E-Logging System can perform zero tolerance of error?	**3.22**	**Moderately Acceptable**
TOTAL	**3.32**	**Moderately Acceptable**

Table: #3 Usability

Table 3. Shows the overall assessment of the developed Faculty Attendance and Log Monitoring System Using Quick Response Code through Kiosk with Information System with regards to its usability. The third category “E-Logging System can be useful to the students and faculty members?” has the highest average weighted mean of 3.49**,** while the lowest is the second category “E-Logging System is user-friendly?” with 3.16. From the same table an overall average mean of 3.32 is interpreted to mean that the respondents as a whole considered “Moderately Acceptable” the developed system in terms of usability.

Respondent’s Overall Assessment of the developed Faculty Attendance and Log Monitoring System Using Quick Response Code through Kiosk with Information System

EFFECTIVENESS	Weighted Mean	Verbal Interpretation
1. Is Elogging System can be really trust for getting the user information?	**3.51**	**Strongly Acceptable**
2. E-Logging System can really help the faculty members to view their information easily?	**3.42**	**Moderately Acceptable**
3. The System can help the faculty member and student to reduce time of logging in to logbook?	**3.57**	**Strongly Acceptable**
4. E-Logging System can improve the process of attendance and logbook?	**3.48**	**Moderately Acceptable**

TOTAL	**3.49**	**Moderately Acceptable**

Table: #4 Effectiveness

Table 3. Shows the overall assessment of the developed Faculty Attendance and Log Monitoring System Using Quick Response Code through Kiosk with Information System with regards to its effectiveness. The third category “The System can help the faculty member and student to reduce time of logging in to logbook?” has the highest average weighted mean of 3.57**,** while the second is the second category “E-Logging System can really help the faculty members to view their information easily?” with 3.42. From the same table an overall average mean of 3.49 is interpreted to mean that the respondents as a whole considered “Moderately Acceptable” the developed system in terms of effectiveness.

Respondent’s Overall Assessment of the developed Faculty Attendance and Log Monitoring System Using Quick Response Code through Kiosk with Information System

ACCURACY	Weighted Mean	Verbal Interpretation
1. The System can generate the report of attendance log by date in the system?	**3.55**	**Strongly Acceptable**
2. The System recorded the user info correctly?	**3.59**	**Strongly Acceptable**

3. The System will validate the user info accurately?	**3.65**	**Strongly Acceptable**
4. Attendance record of faculty member and student log info can easily manage by the admin?	**3.54**	**Strongly Acceptable**
TOTAL	**3.58**	**Strongly Acceptable**

Table: #5 Accuracy

Table 5. Shows the overall assessment of the developed Faculty Attendance and Log Monitoring System Using Quick Response Code through Kiosk with Information System with regards to its accuracy. The third category "The System will validate the user info accurately?" has the highest average weighted mean of 3.65**,** while the second is the second category "Attendance record of faculty member and student log info can easily manage by the admin?" with 3.54. From the same table an overall average mean of 3.58 is interpreted to mean that the respondents as a whole considered "Strongly Acceptable" the developed system in terms of accuracy.

CONCLUSION

After conducting researches and surveys the proponents observed that, the E-Logging System using quick response technology will be a big development in monitoring and managing of faculty member's attendance at Taguig City University. Through the method that the proponents used to extracts the fact, the proponents reached on the following conclusion based on the problem that the school has and identified with the study. The proponents conclude that the functionality total was

moderately acceptable with regards of QR Code that can perform speed scanning and can easily store all the faculty member and student information in a specific database. The efficiency of E-Logging system was moderately acceptable because of reducing the usage of logbook in attendance process and its ability to manage the faculty member attendance. The E-Logging system was moderately acceptable about its usability in terms of improving the process of attendance and logbook. The effectiveness of E-Logging system was moderately acceptable in terms of helping the faculty member and student to reduce time of logging in to logbook. Lastly, the proponents conclude that E-Logging systems accuracy was strongly acceptable with regards of accurate validating of user when the QR Code is being tap on scanner.

RECOMMENDATION

Based on the findings of the study, proponents would like to recommend that the proposed system should have the mobile application for transferring the generated QR Code of faculty members and for monitoring staff, a mobile application that is connected to the system that will automatically update the professor's log record if he/she already arrive in the assigned room, class or section that will help the monitoring staff to easily updated the professor's log record.

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APPENDICES

Appendix A

Questionnaire

Name (Optional):_____**Course:**_____

Educational Attainment (High School, Technical/Vocational, Bachelor's Degree)

Master's Degree w/ Units: _____

Master's Degree Graduate: _____

Doctorate Degree w/ Units: _____

Doctorate Degree Graduate: _____

Gender: ☐ **Male** ☐ **Female**

Age: ☐ **25 years and below** ☐ **26-35 years old** ☐ **36-40 years old** ☐ **above 40**

Educational Attainment: _____

This questionnaire survey is for the Faculty Attendance and Log Monitoring System which is called "E-Logging System". This survey can help us know if the E-Logging System really works. The proponents will allow the computer science faculty members and students of Taguig City University can answer this questionnaire survey. Please check (√) only one from the selection.

Strongly Acceptable (4)	Moderately Acceptable (3)	Acceptable (2)	Not Acceptable (1)

Evaluation	4	3	2	1
Functionality				
1. Elogging System can easily store all the faculty member and student information?				
2. Elogging System can give the right information of the user?				
3. Elogging System can perform speed scanning of QR Code for the attendance?				
4. Elogging System is capable to generate QR Codes?				
Efficiency				
1. System can reduce the usage of logbook in attendance process?				
2. Using Quick Response Code will be a great help for logging student's item?				
3. Is Elogging System can scan multiple of QR Codes of faculty member and student?				
4. Is Elogging System can help the monitoring staff in managing the faculty member attendance?				
Usability				
1. The System can really help the faculty member and student to improve the process of attendance and logbook?				
2. E-Logging System is user-friendly?				
3. E-Logging System can be useful to the students and faculty members?				
4. The System can perform zero tolerance of error?				
Effectiveness				
1. System can be really trust for getting the user information?				

2. E-Logging System can really help the faculty members to view their information easily?				
3. The System can help the faculty member and student to reduce time of logging in to logbook?				
4. E-Logging System can improve the process of attendance and logbook?				
Accuracy				
1. The System can generate the report of attendance log by date in the system?				
2. The System recorded the user info correctly?				
3. The System will validate the user info accurately?				
4. Attendance record of faculty member and student log info can easily manage by the admin?				

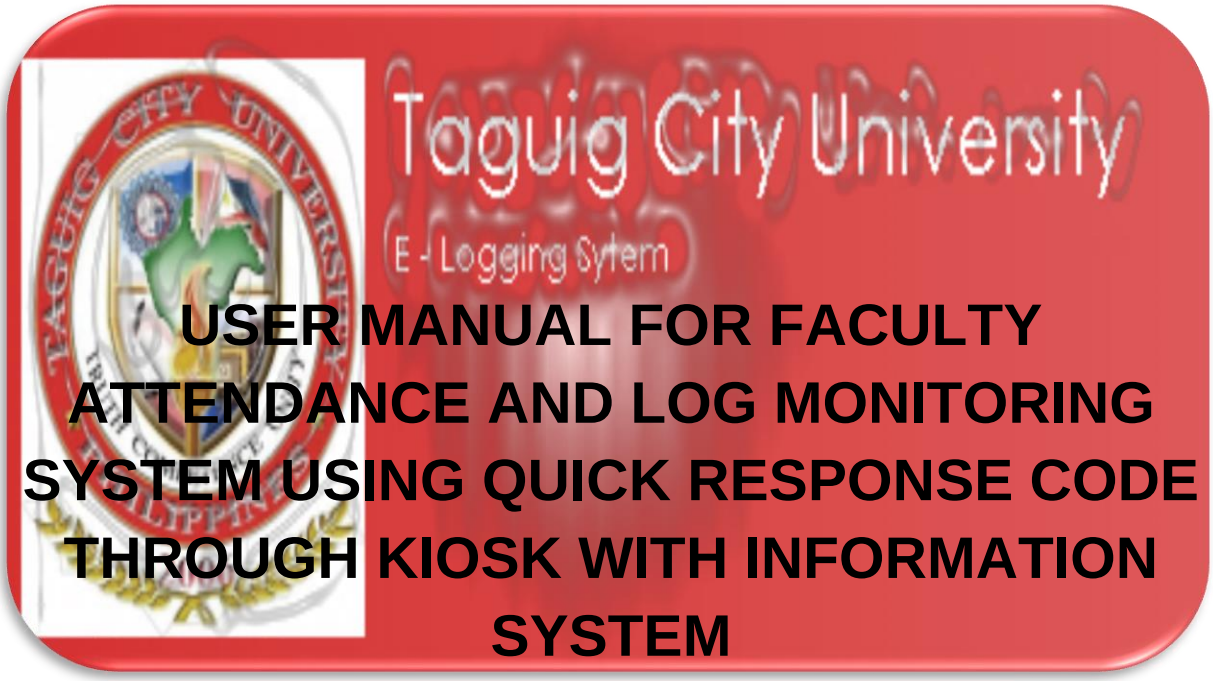
Comments:

_____

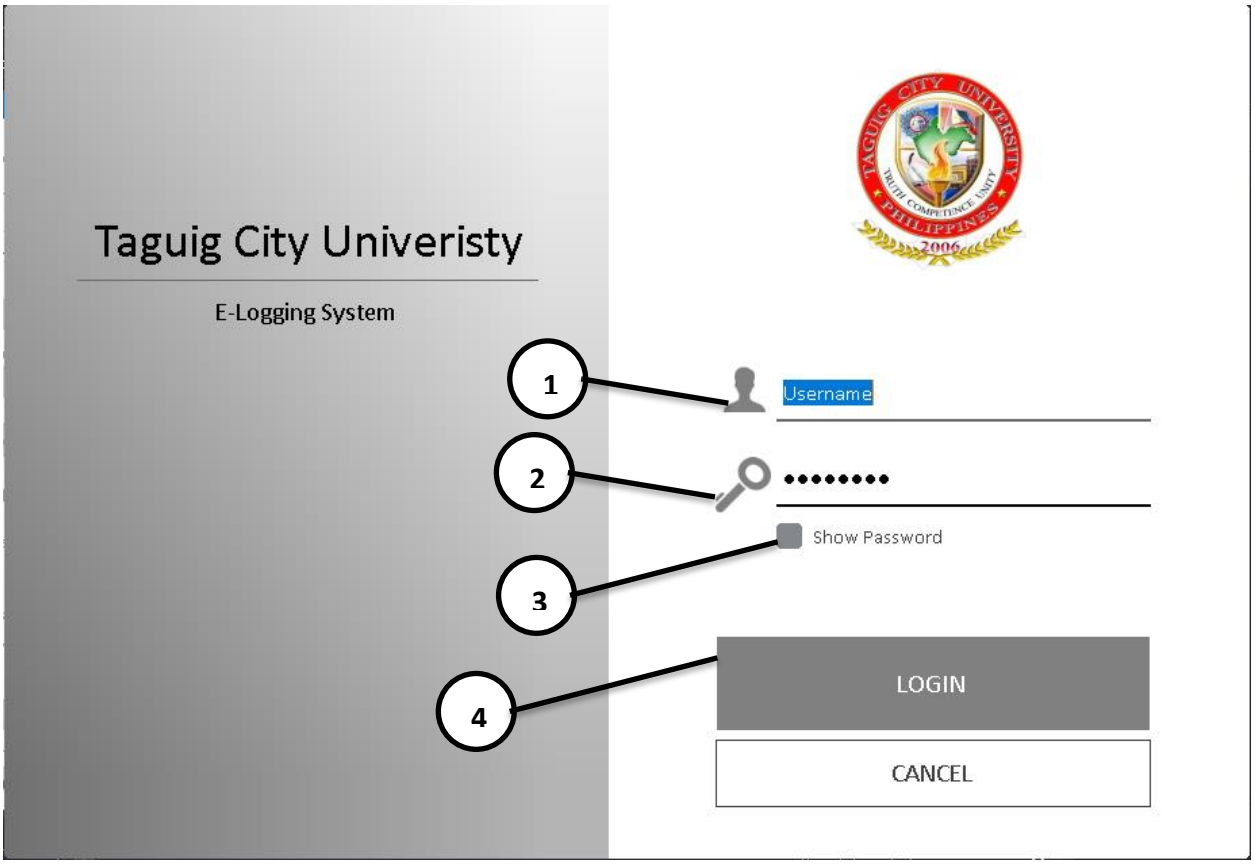
_____

Appendix B

User Manual

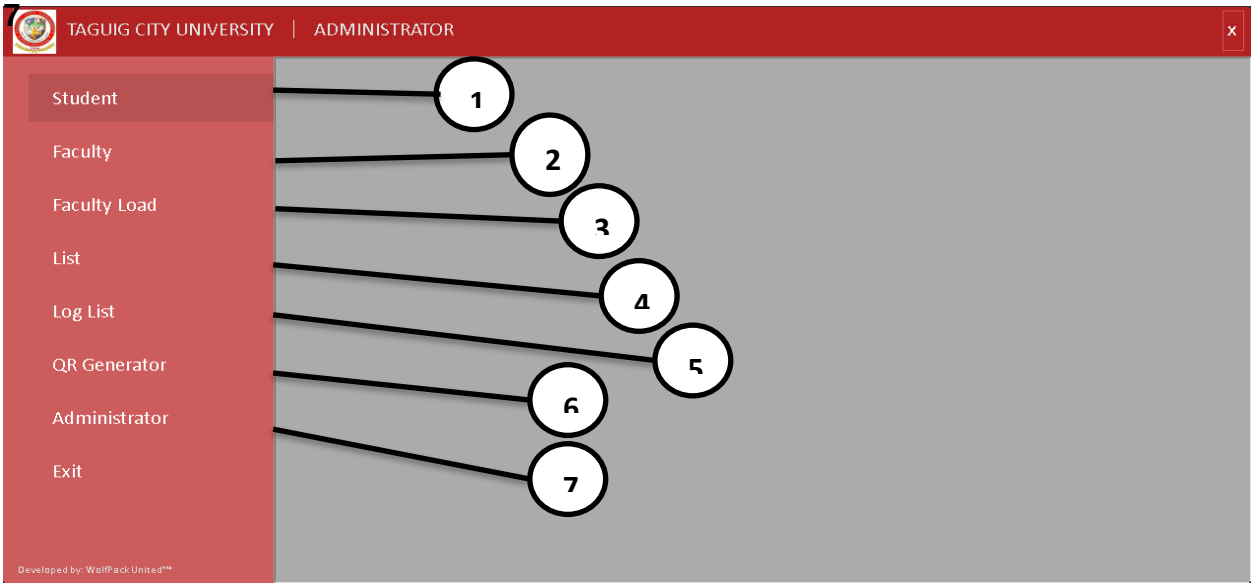


Admin Panel



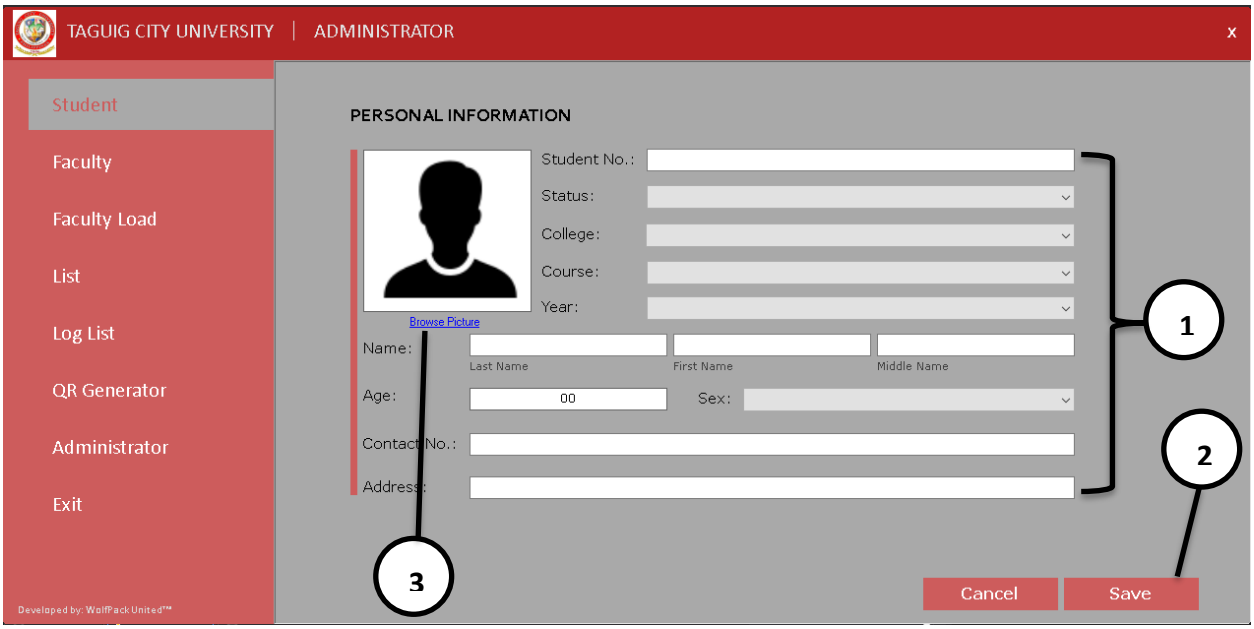
Admin Login

1. **Username –** The system will require the admin user to input their username.
2. **Password –** Admin must input his/her password in the system.
3. **Show Password –** This button will show the password of the admin.
4. **Login –** After inputting username and password, hit the Login button to enter the system.



Admin Dashboard

1. **Student Module –** In this module where you can add student info.
2. **Faculty Module –** In faculty module, the faculty info will be inputted by the admin.
3. **Faculty Load –** Admin will add the faculty subject load.
4. **List Module –** Where you can search the list of the student's info and faculty member info.
5. **Log List –** Show all the log list of faculty members and students item log.
6. **QR Generator –** The QR Generator will only use the student number and faculty id for generating QR Code.
7. **Administrator –** In this module, you can add another admin.

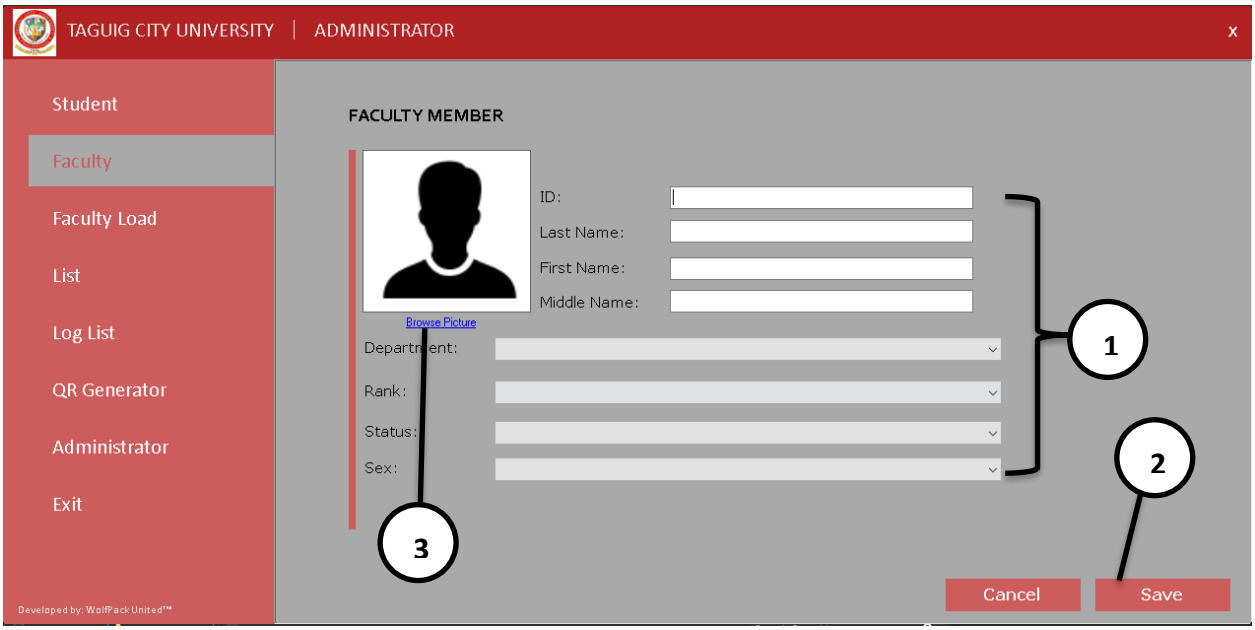


Add Student

1. Fill up the form with all the information of student needed to save in a specific database.

2. **Save Button –** Click the save button to save the information of the student.

3. **Browse Picture –** Upload a picture of the student for additional information.

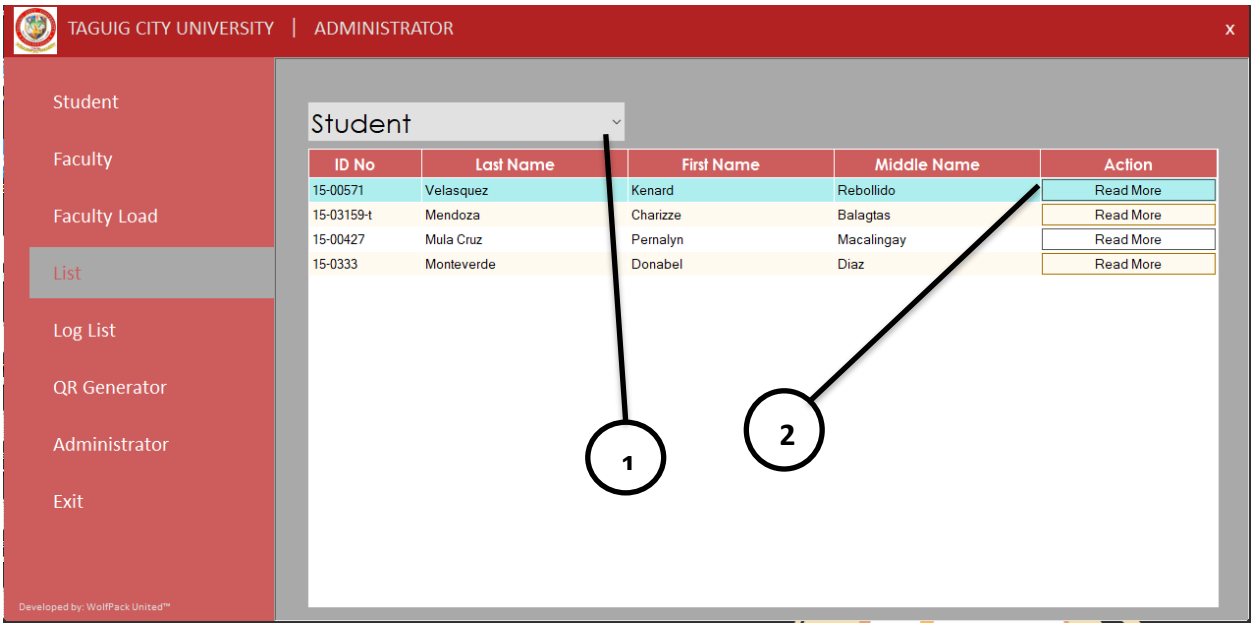


Add Faculty

1. Fill up the form with all the information of faculty member needed to save in a specific database.

2. **Save Button –** Click the save button to save the information of the faculty member.

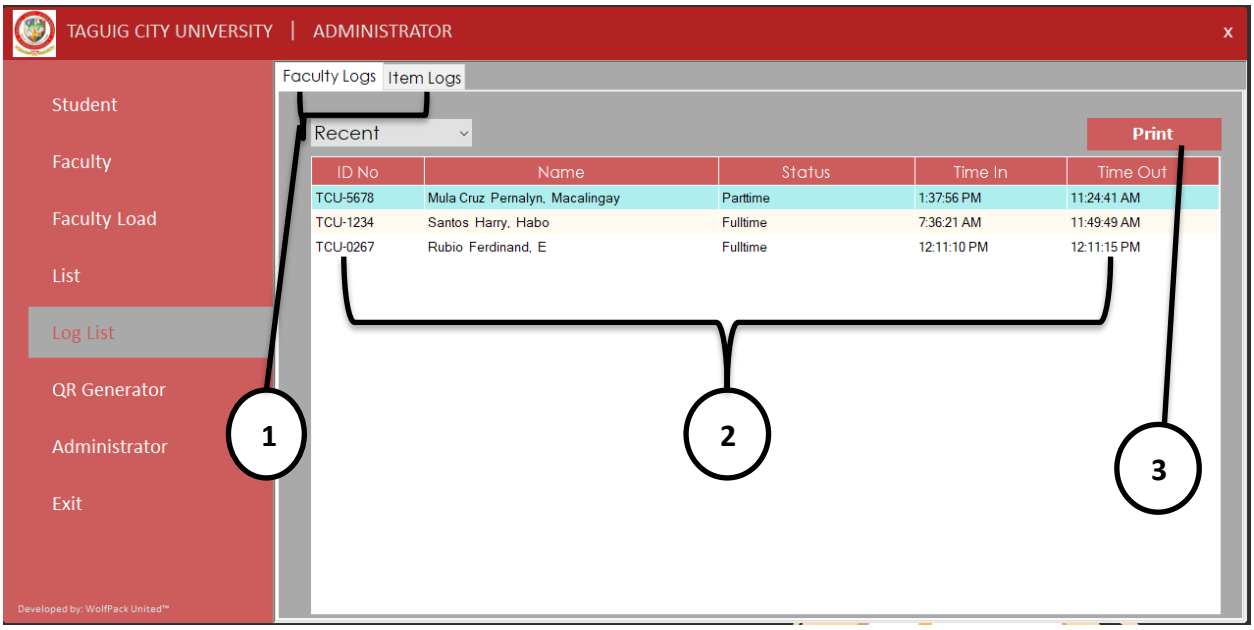
3. **Browse Picture –** Upload a picture of the student for additional information.



Student and Faculty Members List

1. **Dropdown List Button –** You can search the student info and faculty member by filtering. The student info or faculty member will appear in the table after filtering the data.

2. **Read More Button –** This button will show all the information of student or faculty member.



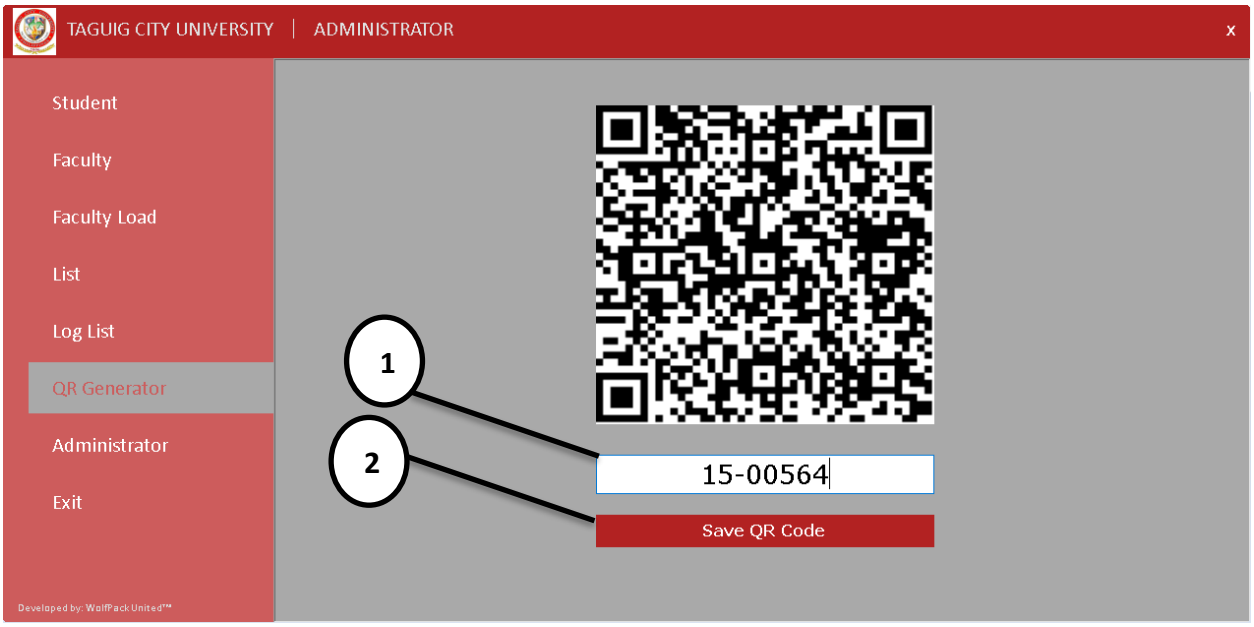
Log List (Faculty Member and Student)

1. **Faculty Logs & Item Logs –** Shows all the log record of faculty member and students item log.

2. This table will show all the log record of the faculty member or student item log.

3. **Print Button –** This button will print all the log record of student item log or faculty member.

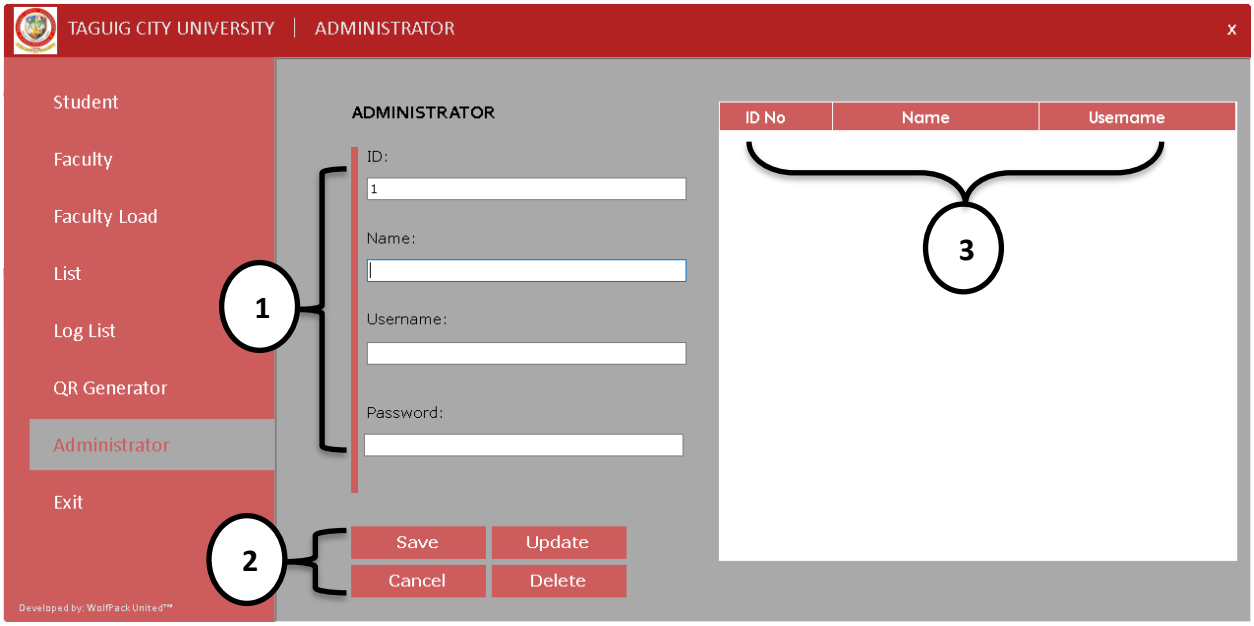
PDF File Format of Student's Item Log Record



QR Generator (Faculty Member & Student)

1. Input student number or faculty member to generate QR Code.

2. **Save QR Code Button –** By clicking this button, the generated QR Code will be save as image or jpg file.

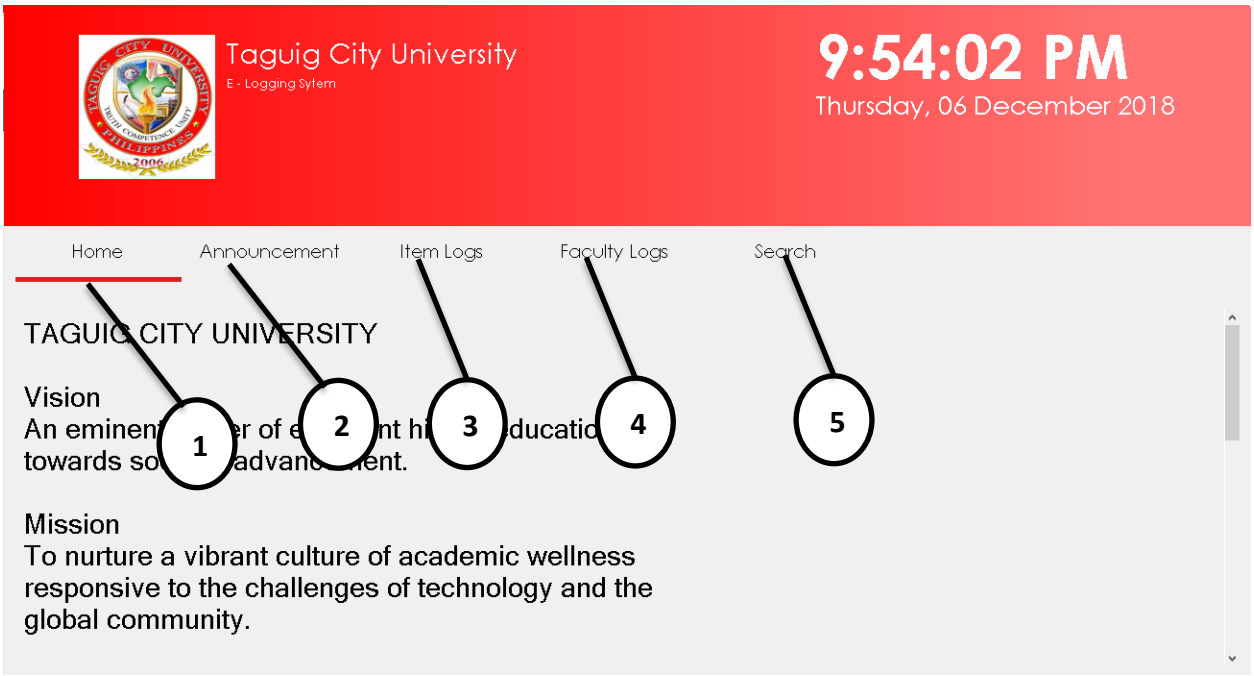


Add Admin

1. Fill up the form with all the information of admin needed to save in a specific database.

2. **Save, Update and Delete Button –** Save button will perform the saving of administrator info. Update button will update the administrator info. Delete button, it will delete the selected admin in the table.

3. It will show the record of registered admin in the table.



Dashboard

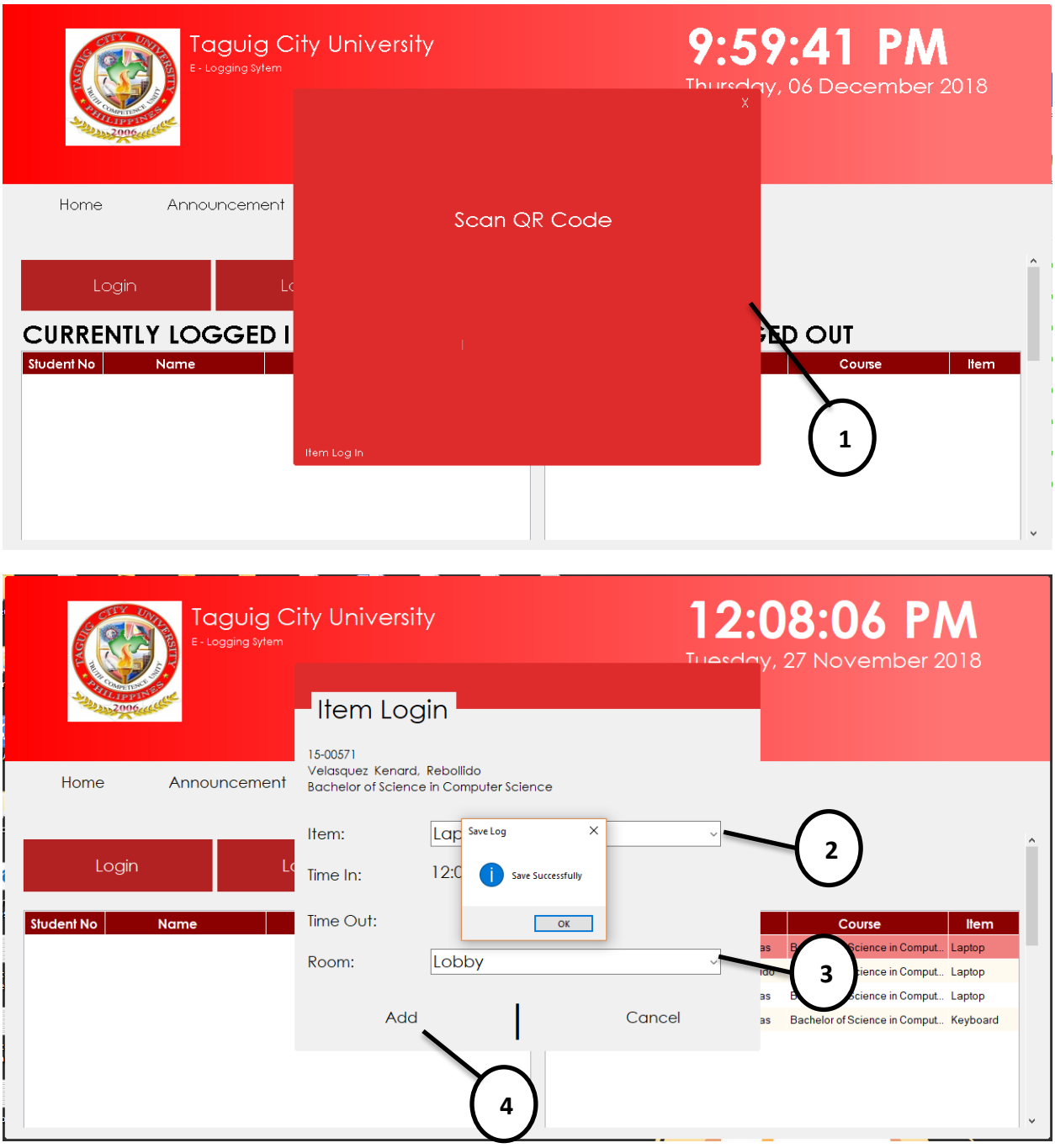
1. Shows the Mission and Vision of Taguig City University.

2. Shows some of the announcement in Taguig City University like the University Academic and Curricular Activity.

3. **Item Logs –** where student will scan their QR Code for item logs.

4. **Faculty Logs –** where faculty members scan their QR Code for their attendance.

5. **Search –** show all the logs of faculty members and students.



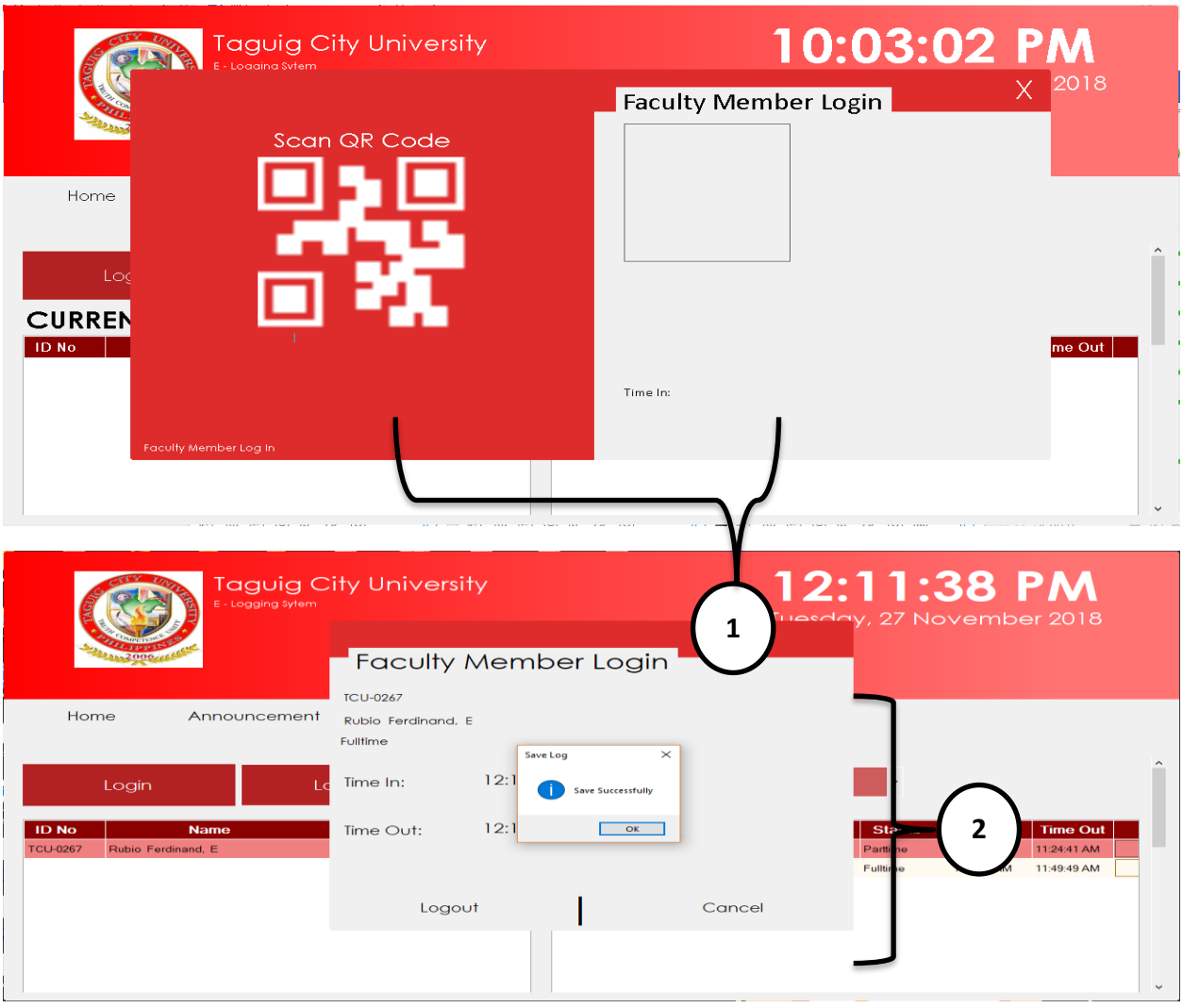
Student Item Log

1. **Scan QR Code Form –** student must scan their QR Code in the scanner for them log their item.

2. Student will choose what item they will log.

3. Student will choose what room they will use the item.

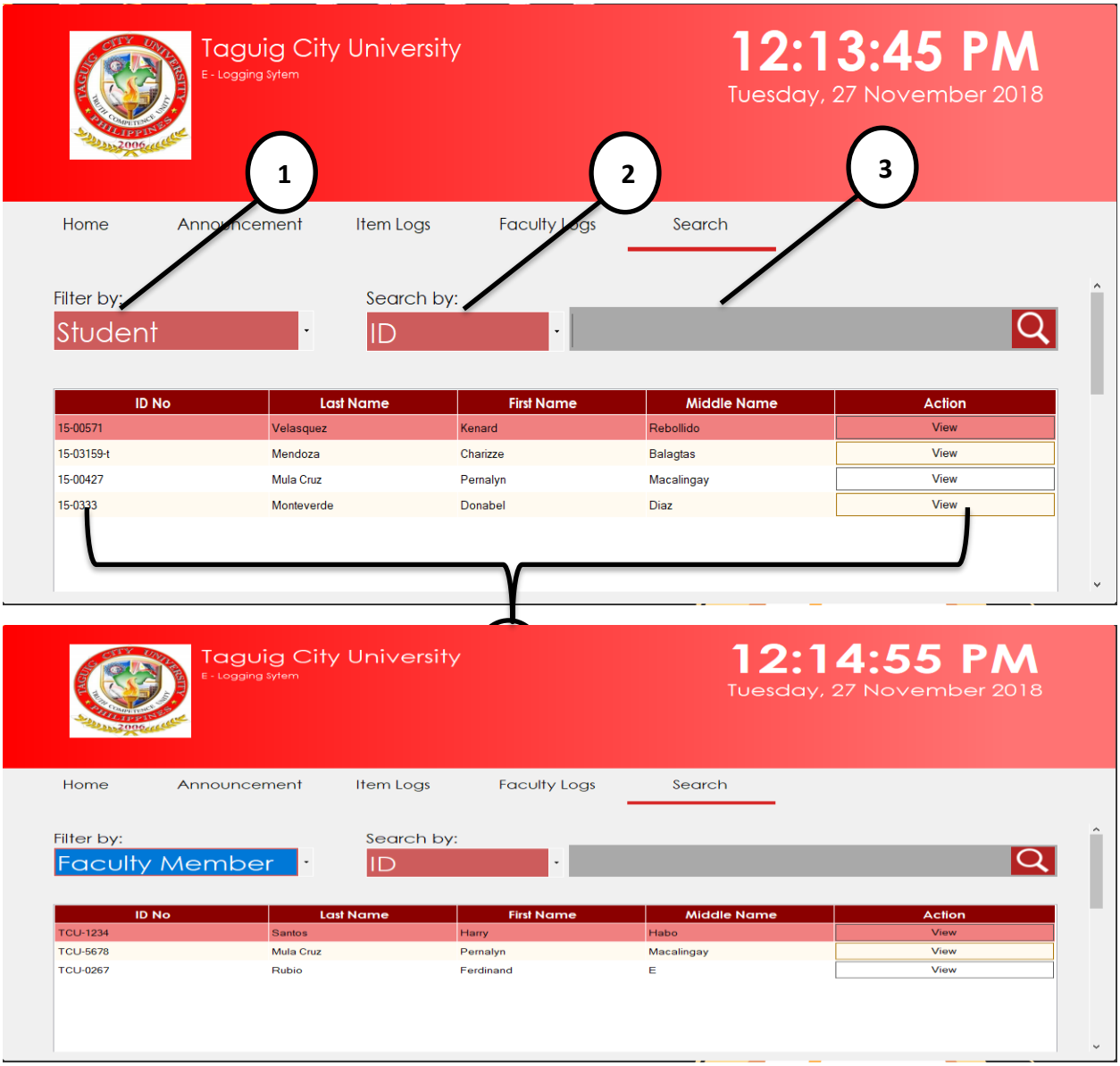
4. Click add button to save the transaction.



Faculty Member Login and Logout

1. Just like the process in student log, faculty members will also scan their QR Code the scanner to save their attendance and the time of their attendance will automatically display in this form.

2. Faculty member will scan their QR Code again for them to log out.



Search Faculty or Student

1. Filter the record of student or faculty member that you want to search.
2. Search by category like ID, Last Name or First Name.
3. After filtering and selecting the category. Type the ID, Last Name or First Name.
4. The data will automatically show in the table after filtering the data.

Appendix C

Codes

***// Add Faculty Member Module //**

```
Imports System.Data.SqlClient

Imports System.IO

Public Class frmaddfaculty


    Private Sub lnkBrowsePic_LinkClicked(sender As Object, e As
LinkLabelLinkClickedEventArgs) Handles lnkBrowsePic.LinkClicked

        Dim Openfile As New OpenFileDialog


        Openfile.Filter = "Choose Image(*.JPG;*.PNG;*.GIF)|*.jpg;*.png;*.gif"

        Openfile.ShowDialog()

        pbPicture.Image = System.Drawing.Image.FromFile(Openfile.FileName)

    End Sub


    Private Sub btnCancel_Click(sender As Object, e As EventArgs) Handles btnCancel.Click

        If MsgBox("Do you want to cancel?", MsgBoxStyle.YesNo, "Close Module") =
MsgBoxResult.Yes Then

            Dispose()

            frmdashboard.btnFaculty.BackColor = Color.DarkSlateGray

        Else

        End If
```

```
End Sub


Private Sub frmaddfaculty_Load(sender As Object, e As EventArgs) Handles Me.Load
    pnlFaculty.BringToFront()
End Sub


Public Sub save()
    Try
        Dim con As New SqlConnection("Server=LAPTOP-
GE6K1990\SQLEXPRESS;Database=db_thesis;Integrated Security=true")
        Dim sqLcmd As New SqlCommand("INSERT INTO
tbl_facultyinfo(IdNo,Picture,LastName,FirstName,MiddleName,College,Status,Sex,Rank)
VALUES
(@IdNo,@Picture,@LastName,@FirstName,@MiddleName,@College,@Status,@Sex,@Rank)
", con)
        Dim ms As New MemoryStream
        pbPicture.Image.Save(ms, pbPicture.Image.RawFormat)



        sqLcmd.Parameters.Add("@IdNo", SqlDbType.VarChar).Value = txtId.Text
        sqLcmd.Parameters.Add("@Picture", SqlDbType.Image).Value = ms.ToArray
        sqLcmd.Parameters.Add("@LastName", SqlDbType.VarChar).Value = txtLN.Text
        sqLcmd.Parameters.Add("@FirstName", SqlDbType.VarChar).Value = txtFN.Text
        sqLcmd.Parameters.Add("@MiddleName", SqlDbType.VarChar).Value = txtMN.Text
        sqLcmd.Parameters.Add("@College", SqlDbType.VarChar).Value = cbCollege.Text
        sqLcmd.Parameters.Add("@Status", SqlDbType.VarChar).Value = cbStatus.Text
```

```
sqLcmd.Parameters.Add("@Sex", SqlDbType.VarChar).Value = cbSex.Text
sqLcmd.Parameters.Add("@Rank", SqlDbType.VarChar).Value = cbRank.Text


con.Open()
sqLcmd.ExecuteNonQuery()
con.Close()


txtId.Clear()
txtLN.Clear()
txtFN.Clear()
txtMN.Clear()
cbCollege.Items.Clear()
cbCollege.Items.Add("College of Arts and Sciences")
cbCollege.Items.Add("College of Hospitality and Tourism Management")
cbCollege.Items.Add("College of Engineering Technology and Computer Science")
cbCollege.Items.Add("College of Education")
cbCollege.Items.Add("College of Criminal Justice")
cbCollege.Items.Add("College of Business Management")
cbStatus.Items.Clear()
cbStatus.Items.Add("Fulltime")
cbStatus.Items.Add("Parttime")
cbStatus.Items.Add("Casual")
cbSex.Items.Clear()
cbSex.Items.Add("Male")
```

```
            cbSex.Items.Add("Female")
            cbRank.Items.Clear()
            cbRank.Items.Add("Instructor I")
            cbRank.Items.Add("Instructor II")
            cbRank.Items.Add("Instructor III")
            MsgBox("Saved!", MsgBoxStyle.Information, "Save")
        Catch ex As Exception
            MsgBox(ex.Message)
        End Try
    End Sub

    Private Sub btnSave_Click(sender As Object, e As EventArgs) Handles btnSave.Click
        save()
    End Sub
End Class
```

***// Generate QR Code //**

```
Imports MessagingToolkit.QRCode.Codec
Public Class frmqrgen
    Dim Reader As QRCodeDecoder
    Dim QR_Generator As New QRCodeEncoder
    Private Sub frmqrgen_Load(sender As Object, e As EventArgs) Handles Me.Load
    End Sub
```

```
    Private Sub btnSaveQR_Click(sender As Object, e As EventArgs) Handles btnSaveQR.Click
        Dim SD As New SaveFileDialog
        SD.Filter = "PNG|*.png"
        If SD.ShowDialog() = DialogResult.OK Then
            PictureBox1.Image.Save(SD.FileName, Imaging.ImageFormat.Png)
            MsgBox("QR Code Saved!", MsgBoxStyle.Information, "Save")
            txtQR.Clear()
        End If
    End Sub

    Private Sub txtQR_TextChanged(sender As Object, e As EventArgs) Handles
txtQR.TextChanged
        Try
            PictureBox1.Image = QR_Generator.Encode(txtQR.Text)
        Catch ex As Exception
            MsgBox(ex.Message)
        End Try
    End Sub
End Class
```

***// Admin Login Module //**

```
Imports System.Data.SqlClient
```

```
Public Class frm1Login
    Dim TimesTried As String = 0

    Private Sub btnLogin_Click(sender As Object, e As EventArgs) Handles btnLogin.Click
        login()
    End Sub

    Public Sub login()
        Try
            Dim con As New SqlConnection("Server=LAPTOP-GE6K1990\SQLEXPRESS;Database=db_thesis;Integrated Security=true")
            con.Open()
            Dim reader As SqlDataReader
            Dim sqL As String

            sqL = "SELECT * FROM tbl_admin WHERE Username='" & txtUsername.Text & "' AND Password='" & txtPassword.Text & "'"

            Dim cmd As New SqlCommand(sqL, con)
            reader = cmd.ExecuteReader
            If reader.Read = True Then
                MsgBox("Successfully Login!", MsgBoxStyle.Information, "")
                Me.Hide()
                frmdashboard.ShowDialog()
```

```
            con.Close()
        Else
            TimesTried += 1
            If TimesTried < 3 Then
                If MsgBox("Incorrect Login", MsgBoxStyle.RetryCancel, "") = MsgBoxResult.Cancel
Then
                    Application.Exit()
                Else
                    txtPassword.ResetText()
                    txtPassword.Focus()
                End If
            End If
            If TimesTried = 3 Then
                MessageBox.Show("You have reached the maximum attempts!", "Error",
MessageBoxButtons.OK, MessageBoxIcon.Error)
                Application.Exit()
            End If
        End If
        con.Close()
    Catch ex As Exception
    End Try
End Sub

Private Sub btnCancel_Click(sender As Object, e As EventArgs) Handles btnCancel.Click
```

```
        If MsgBox("Do you want to exit?", MsgBoxStyle.YesNo, "Exit Program") =
MsgBoxResult.Yes Then
            End
        Else
        End If
    End Sub
End Class
```

***// Log List Module //**

```
Imports System.Data.SqlClient
Public Class frmloglist



    Private Sub cbSelect_SelectedIndexChanged(sender As Object, e As EventArgs) Handles
cbSelect.SelectedIndexChanged
        ''''''''FACULTY MEMBER''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''
        If cbSelect.Text = "Recent" Then
            dtpDateLog.Visible = False
            Label1.Visible = False
            cbSort.Visible = False
            loadData()
            If dglog1.Rows.Count = 0 Then
                MsgBox("No Records Found", MsgBoxStyle.Critical, "")
            End If
```

```
        ElseIf cbSelect.Text = "Select Date" Then
            dtpDateLog.Visible = True
            Label1.Visible = True
            cbSort.Visible = True
            dglog1.Rows.Clear()
        End If
    End Sub

    Private Sub dtpDateLog_ValueChanged(sender As Object, e As EventArgs) Handles
dtpDateLog.ValueChanged
        pickData()
        If dglog1.Rows.Count = 0 Then
            MsgBox("No Records Found", MsgBoxStyle.Critical, "")
        End If
    End Sub

    Public Sub loadData()
        Dim dt As String
        dt = Date.Now.ToString("dddd") & ", " & Date.Now.ToString("dd MMMM yyyy")
        Try
            Dim con As New SqlConnection("Server=LAPTOP-
GE6K1990\SQLEXPRESS;Database=db_thesis;Integrated Security=true")
            con.Open()
            Dim dr As SqlDataReader
```

```
        Dim sqL As String
        Dim cmd As New SqlCommand

        sqL = "SELECT * FROM tbl_flogB WHERE DateLog = '" & dt & "'"
        cmd = New SqlCommand(sqL, con)
        dr = cmd.ExecuteReader
        dglog1.Rows.Clear()
        Do While dr.Read = True
            dglog1.Rows.Add(dr(0), dr(1), dr(5), dr(2), dr(3))
        Loop
        con.Close()
    Catch ex As Exception
        MsgBox(ex.Message)
    End Try
End Sub

Public Sub pickData()
    Try
        Dim con As New SqlConnection("Server=LAPTOP-
GE6K1990\SQLEXPRESS;Database=db_thesis;Integrated Security=true")
        con.Open()
        Dim dr As SqlDataReader
        Dim sqL As String
        Dim cmd As New SqlCommand
```

```
        sqL = "SELECT * FROM tbl_flogB WHERE DateLog = '" & dtpDateLog.Text & "'"
        cmd = New SqlCommand(sqL, con)
        dr = cmd.ExecuteReader
        dglog1.Rows.Clear()
        Do While dr.Read = True
            dglog1.Rows.Add(dr(0), dr(1), dr(5), dr(2), dr(3))
        Loop
        con.Close()
    Catch ex As Exception
        MsgBox(ex.Message)
    End Try
End Sub

Private Sub btnPrint_Click(sender As Object, e As EventArgs) Handles btnPrint.Click
    If dglog1.Rows.Count = 0 Then
        MsgBox("Invalid Action", MsgBoxStyle.Critical, "")
    Else
        MsgBox("printing logs...", MsgBoxStyle.Information, "Record Logs")
        frmFacultyLogPrint.Show()
    End If
End Sub
```

```
    Private Sub cbSort_SelectedIndexChanged(sender As Object, e As EventArgs) Handles
cbSort.SelectedIndexChanged

        If cbSort.Text = "Fulltime" Then

            Try

                Dim con As New SqlConnection("Server=LAPTOP-
GE6K1990\SQLEXPRESS;Database=db_thesis;Integrated Security=true")

                con.Open()

                Dim dr As SqlDataReader

                Dim sqL As String

                Dim cmd As New SqlCommand


                sqL = "SELECT * FROM tbl_flogB WHERE Status = '" & cbSort.Text & "' AND
DateLog = '" & dtpDateLog.Text & "'"

                cmd = New SqlCommand(sqL, con)

                dr = cmd.ExecuteReader

                dglog1.Rows.Clear()

                Do While dr.Read = True

                    dglog1.Rows.Add(dr(0), dr(1), dr(5), dr(2), dr(3))

                Loop

                con.Close()

            Catch ex As Exception

                MsgBox(ex.Message)

            End Try

        End If
```

```
        If cbSort.Text = "Parttime" Then
            Try
                Dim con As New SqlConnection("Server=LAPTOP-
GE6K1990\SQLEXPRESS;Database=db_thesis;Integrated Security=true")
                con.Open()
                Dim dr As SqlDataReader
                Dim sqL As String
                Dim cmd As New SqlCommand

                sqL = "SELECT * FROM tbl_flogB WHERE Status = '" & cbSort.Text & "' AND
DateLog = '" & dtpDateLog.Text & "'"
                cmd = New SqlCommand(sqL, con)
                dr = cmd.ExecuteReader
                dglog1.Rows.Clear()
                Do While dr.Read = True
                    dglog1.Rows.Add(dr(0), dr(1), dr(5), dr(2), dr(3))
                Loop
                con.Close()
            Catch ex As Exception
                MsgBox(ex.Message)
            End Try
        End If
        ''''''''''END FACULTY MEMBER''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''
    End Sub
```

```
    Private Sub cbSelect1_SelectedIndexChanged(sender As Object, e As EventArgs) Handles
cbSelect1.SelectedIndexChanged
        ''''''''STUDENTS''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''''
        If cbSelect1.Text = "Recent" Then
            dtpDateLog.Visible = False
            loadData1()
            If dglog2.Rows.Count = 0 Then
                MsgBox("No Records Found", MsgBoxStyle.Critical, "")
            End If

        ElseIf cbSelect1.Text = "Select Date" Then
            dtpDateLog1.Visible = True
            dglog2.Rows.Clear()
        End If
    End Sub

    Private Sub dtpDateLog1_ValueChanged(sender As Object, e As EventArgs) Handles
dtpDateLog1.ValueChanged
        pickData1()
        If dglog2.Rows.Count = 0 Then
            MsgBox("No Records Found", MsgBoxStyle.Critical, "")
        End If
    End Sub

    Public Sub loadData1()
```

```
        Dim dt As String
        dt = Date.Now.ToString("dddd") & ", " & Date.Now.ToString("dd MMMM yyyy")
        Try
            Dim con As New SqlConnection("Server=LAPTOP-
GE6K1990\SQLEXPRESS;Database=db_thesis;Integrated Security=true")
            con.Open()
            Dim dr As SqlDataReader
            Dim sqL As String
            Dim cmd As New SqlCommand

            sqL = "SELECT * FROM tbl_itemlogB WHERE DateLog = '" & dt & "'"
            cmd = New SqlCommand(sqL, con)
            dr = cmd.ExecuteReader
            dglog2.Rows.Clear()
            Do While dr.Read = True
                dglog2.Rows.Add(dr(0), dr(1), dr(3), dr(4), dr(5), dr(6))
            Loop
            con.Close()
        Catch ex As Exception
            MsgBox(ex.Message)
        End Try
    End Sub

    Public Sub pickData1()
```

```
        Try
            Dim con As New SqlConnection("Server=LAPTOP-
GE6K1990\SQLEXPRESS;Database=db_thesis;Integrated Security=true")
            con.Open()
            Dim dr As SqlDataReader
            Dim sqL As String
            Dim cmd As New SqlCommand


            sqL = "SELECT * FROM tbl_itemlogB WHERE DateLog = '" & dtpDateLog1.Text & "'"
            cmd = New SqlCommand(sqL, con)
            dr = cmd.ExecuteReader
            dglog2.Rows.Clear()
            Do While dr.Read = True
                dglog2.Rows.Add(dr(0), dr(1), dr(3), dr(4), dr(5), dr(6))
            Loop
            con.Close()
        Catch ex As Exception
            MsgBox(ex.Message)
        End Try
    End Sub


    Private Sub btnPrint1_Click(sender As Object, e As EventArgs) Handles btnPrint1.Click
        If dglog2.Rows.Count = 0 Then
            MsgBox("Invalid Action", MsgBoxStyle.Critical, "")
```

```
        Else
            MsgBox("printing logs...", MsgBoxStyle.Information, "Record Logs")
            frmItemLogPrint.Show()
        End If
    End Sub
End Class
```

***// Log Faculty Member Module //**

```
Imports System.Data.SqlClient
Imports System.IO

Public Class frmLogFT

    Private Sub frmFTLog_Load(sender As Object, e As EventArgs) Handles MyBase.Load
        txtQr1.Focus()
        txtQr1.Clear()
        txtQr2.Clear()

        lblTCUId.Text = txtQr2.Text
```

```
    getData()
End Sub

Private Sub txtQr2_KeyUp(sender As Object, e As KeyEventArgs) Handles txtQr1.KeyUp
    txtQr1.Text = txtQr1.Text
    Timer1.Start()
End Sub

Private Sub Timer1_Tick(sender As Object, e As EventArgs) Handles Timer1.Tick
    If Timer1.Interval = 1000 Then
        getStatus()
    End If
End Sub

Private Sub Timer2_Tick(sender As Object, e As EventArgs) Handles Timer2.Tick
    If Timer2.Interval = 1000 Then
        saveValid()
        frmTCU.UcFulltime1.load()
        Me.Dispose()
    End If
End Sub

Public Sub getStatus()
    Timer1.Stop()
```

```
        Try
            Dim con As New SqlConnection("Server=192.168.43.4,1433;Database=db_thesis;User
ID = admin; Password = admin;")
            con.Open()
            Dim dr As SqlDataReader
            Dim sqL As String
            Dim cmd As New SqlCommand


            sqL = "SELECT Status FROM tbl_facultyinfo WHERE IdNo = '" & txtQr1.Text & "'"
            cmd = New SqlCommand(sqL, con)
            dr = cmd.ExecuteReader


            If dr.Read = True Then
                getData()
                Timer2.Start()
            Else
                frmError.Show()
            End If
            con.Close()
        Catch ex As Exception
            MsgBox(ex.Message)
        End Try
    End Sub
```

```
Public Sub getData()
    Try
        Dim con As New SqlConnection("Server=192.168.43.4,1433;Database=db_thesis;User
ID = admin; Password = admin;")
        con.Open()
        Dim dr As SqlDataReader
        Dim sqL As String
        Dim cmd As New SqlCommand

        sqL = "SELECT * FROM tbl_facultyinfo WHERE IdNo = '" & txtQr1.Text & "'"
        cmd = New SqlCommand(sqL, con)
        dr = cmd.ExecuteReader
        Dim img() As Byte

        If dr.Read = True Then
            lblTCUId.Visible = True
            lblName.Visible = True
            lblStatus.Visible = True

            img = dr("Picture")
            Dim ms As New MemoryStream(img)
            pbPicture.Image = Image.FromStream(ms)
            lblTCUId.Text = dr("IdNo")
            lblName.Text = dr("LastName") + "  " + dr("FirstName") + ",  " + dr("MiddleName")
```

```
            lblStatus.Text = dr("Status")
            txtTimeIn.Text = frmTCU.lblTime.Text
        End If

        con.Close()
    Catch ex As Exception
        MsgBox(ex.Message)
    End Try
End Sub

Public Sub save()
    Try
        Dim con As New SqlConnection("Server=192.168.43.4,1433;Database=db_thesis;User
ID = admin; Password = admin;")
        Dim sqLcmd As New SqlCommand("INSERT INTO
tbl_flogA(IdNo,Name,TimeIn,DateLog,Status,USTime) VALUES
(@IdNo,@Name,@TimeIn,@DateLog,@Status,@USTime)", con)

        sqLcmd.Parameters.Add("@Idno", SqlDbType.VarChar).Value = lblTCUId.Text
        sqLcmd.Parameters.Add("@Name", SqlDbType.VarChar).Value = lblName.Text
        sqLcmd.Parameters.Add("@TimeIn", SqlDbType.VarChar).Value = txtTimeIn.Text
        sqLcmd.Parameters.Add("@DateLog", SqlDbType.VarChar).Value =
frmTCU.lblDate.Text
        sqLcmd.Parameters.Add("@Status", SqlDbType.VarChar).Value = lblStatus.Text
        sqLcmd.Parameters.Add("@USTime", SqlDbType.VarChar).Value = lblTime.Text
```

```
            con.Open()
            sqLcmd.ExecuteNonQuery()

            MsgBox("Saved Successfully", MsgBoxStyle.Information, "Save Log")
            con.Close()
        Catch ex As Exception
            MsgBox(ex.Message)
        End Try
    End Sub

    Public Sub saveValid()
        Try
            Dim con As New SqlConnection("Server=192.168.43.4,1433;Database=db_thesis;User
ID = admin; Password = admin;")
            con.Open()
            Dim dr As SqlDataReader
            Dim sqL As String
            Dim cmd As New SqlCommand

            sqL = "SELECT * FROM tbl_flogA WHERE IdNo = '" & lblTCUId.Text & "'"
            cmd = New SqlCommand(sqL, con)
            dr = cmd.ExecuteReader

            If dr.Read = True Then
```

```
            Timer2.Stop()
            MsgBox("The ID has already Login!", MsgBoxStyle.Information, "")
            Dispose()
        Else
            Timer2.Stop()
            save()
        End If

        con.Close()
    Catch ex As Exception
        MsgBox(ex.Message)
    End Try
End Sub

Private Sub btnCancel_Click(sender As Object, e As EventArgs) Handles btnCancel.Click
    Me.Dispose()
End Sub
'''TIME''''
Private Function myZero(ByVal value As Integer) As String
    Return value.ToString().PadLeft(2, "0")
End Function

Private Sub Timer3_Tick(sender As Object, e As EventArgs) Handles Timer3.Tick
    Dim txt As String = ""
```

```
        txt &= myZero(DateTime.Now.Hour)

        txt &= ":" & myZero(DateTime.Now.Minute)

        txt &= ":" & myZero(DateTime.Now.Second)

        lblTime.Text = txt

    End Sub


    Private Sub txtTimeIn_TextChanged(sender As Object, e As EventArgs) Handles
txtTimeIn.TextChanged

        Timer3.Stop()

    End Sub

End Class
```

***// Student Log Item Module //**

```
Imports System.Data.SqlClient
Imports System.IO
Public Class frmLogItem

    Private Sub frmlog_Load(sender As Object, e As EventArgs) Handles MyBase.Load
        frmQRScanIL.Timer2.Stop()
        frmQRScanIL.Timer1.Stop()


        lblStudNum.Text = frmQRScanIL.txtQr2.Text
        txtTimeIn.Text = frmTCU.lblTime.Text

        getData()
    End Sub

    Private Sub btnCancel_Click(sender As Object, e As EventArgs) Handles btnCancel.Click
        Me.Dispose()
        frmQRScanIL.Dispose()
    End Sub
```

```
    Public Sub getData()
        Try
            Dim con As New SqlConnection("Server=192.168.43.4,1433;Database=db_thesis;User
ID = admin; Password = admin;")
            con.Open()
            Dim dr As SqlDataReader
            Dim sqL As String
            Dim cmd As New SqlCommand

            sqL = "SELECT * FROM tbl_studentinfo WHERE StudentNo = '" & lblStudNum.Text & "'"
            cmd = New SqlCommand(sqL, con)
            dr = cmd.ExecuteReader
            Dim img() As Byte

            If dr.Read = True Then
                img = dr("Picture")
                Dim ms As New MemoryStream(img)
                pbPicture.Image = Image.FromStream(ms)
                lblStudNum.Text = dr("StudentNo")
                lblName.Text = dr("LastName") + "  " + dr("FirstName") + ",  " + dr("MiddleName")
                lblCourse.Text = dr("Course")
            End If

            con.Close()
        Catch ex As Exception
            MsgBox(ex.Message)
        End Try
    End Sub

    Public Sub save()
        Try
            Dim con As New SqlConnection("Server=192.168.43.4,1433;Database=db_thesis;User
ID = admin; Password = admin;")
            Dim sqLcmd As New SqlCommand("INSERT INTO
tbl_itemlogA(StudentNo,Name,Course,Item,Room,TimeIn,TimeOut,DateLog) VALUES
(@StudentNo,@Name,@Course,@Item,@Room,@TimeIn,@TimeOut,@DateLog)", con)

            sqLcmd.Parameters.Add("@StudentNo", SqlDbType.VarChar).Value = lblStudNum.Text
            sqLcmd.Parameters.Add("@Name", SqlDbType.VarChar).Value = lblName.Text
            sqLcmd.Parameters.Add("@Course", SqlDbType.VarChar).Value = lblCourse.Text
            sqLcmd.Parameters.Add("@Item", SqlDbType.VarChar).Value = cbItem.Text
            sqLcmd.Parameters.Add("@Room", SqlDbType.VarChar).Value = cbRoom.Text
            sqLcmd.Parameters.Add("@TimeIn", SqlDbType.VarChar).Value = txtTimeIn.Text
            sqLcmd.Parameters.Add("@TimeOut", SqlDbType.VarChar).Value = txtTimeOut.Text
            sqLcmd.Parameters.Add("@DateLog", SqlDbType.VarChar).Value =
frmTCU.lblDate.Text
```

```
            con.Open()
            sqLcmd.ExecuteNonQuery()
            MsgBox("Saved Successfully", MsgBoxStyle.Information, "Save Log")
            con.Close()
        Catch ex As Exception
            MsgBox(ex.Message)
        End Try
    End Sub

    Public Sub saveValid()
        Try
            Dim con As New SqlConnection("Server=192.168.43.4,1433;Database=db_thesis;User
ID = admin; Password = admin;")
            con.Open()
            Dim dr As SqlDataReader
            Dim sqL As String
            Dim cmd As New SqlCommand

            sqL = "SELECT * FROM tbl_itemlogA WHERE StudentNo = '" & lblStudNum.Text & "'"
            cmd = New SqlCommand(sqL, con)
            dr = cmd.ExecuteReader

            If dr.Read = True Then
                MsgBox("The ID has already Login!", MsgBoxStyle.Information, "")
            Else
                save()
            End If

            con.Close()
        Catch ex As Exception
            MsgBox(ex.Message)
        End Try
    End Sub

    Private Sub btnAdd_Click(sender As Object, e As EventArgs) Handles btnAdd.Click
        If cbItem.Text = "" Then
            MsgBox("Please select Item and Room", MsgBoxStyle.Critical, "Error")
        ElseIf cbRoom.Text = "" Then
            MsgBox("Please select Item and Room", MsgBoxStyle.Critical, "Error")
        Else
            saveValid()
            frmTCU.UcLogs1.load()
            frmTCU.UcLogs1.load1()
            Me.Dispose()
            frmQRScanIL.Dispose()
```

```
        End If

    End Sub

    Private Sub cbItem_SelectedIndexChanged(sender As Object, e As EventArgs) Handles
cbItem.SelectedIndexChanged
        If cbItem.Text = "Others" Then
            frmKeyboard.Show()
        End If
    End Sub
End Class
```

CERTIFICATION

This is to certify that the undersigned has reviewed and went through all the pages of the proposed research entitled"**Faculty Attendance and Log Monitoring Using Quick Response Code Through Kiosk With Information System"** develop by **Kenard R. Velasquez, Rommel B. Patricio, Charizze B. Mendoza and Cedrick B. Bercasio** is aligned with the set of structural rules that govern the composition of sentences, phrases, and words in the English language. In addition, all corrections and recommendations made have been done and/or incorporated the final document.

Signed:

Ms. Camille Grace M. Dumala-og

Thesis Grammarian