

**DEVELOPMENT OF WEB BASED STUDENT DISCIPLINE RECORD
MANAGEMENT SYSTEM FOR CITY COLLEGE OF TAGAYTAY**

A Capstone Project

Submitted to the Faculty of

School of Computer Studies

City College of Tagaytay

Pioquinto, Michaela

Sena, Chris Ceejay

Evale, Stella Mae

Pacio, Jeniemae

April 2022

ABSTRACT

Lecture timetabling is a very important process in any educational institution. It is an open-ended program in which courses must be arranged around a set of time slot 'T' and remains so that some constraints are satisfied. It constitutes a class of difficult-to-solve optimization problems that lacks analytical solution method. Data gathering on the current system was analysed to create a requirement definition for the improved timetable system. Literature review was carried out to search the best approach that can help to solve the problem in the timetable system. Genetic Algorithm has been implemented in the Timetable Management System. This is because Genetic Algorithm is able to produce a feasible timetable system. Java, XML and PHP programming languages were used in developing the solution. MySQL database was used as the back-end for the solution. The front-end solution will be implemented in an android mobile operating system for easier accessibility and proximity to users.

CHAPTER I

INTRODUCTION

A disciplinary record is part of a student's educational record and provides information about any cases of misbehavior at school as well as the repercussions leveled by the administration. It might seem rational that a college or university would consider this material, particularly if their violation is about hurting someone physically or argue related. However, a closer review of administrative documents shows that discipline is a normal phenomenon.

Record Management System is a web based that keeps and contains the record mostly in schools. It is comprised of specific sets of processes, tools, and related control functions that are combined to record as well as keep any information related to the institution. It is used by the institutions to manage the records and documentation. The system is then kept in an easily retrievable archive. Records are documents that are retained as evidence of doing particular action. Once a document is declared as a record, it cannot be changed.

The City College of Tagaytay currently have an existing system wherein they collect the discipline records of students in a manual way. The assigned personnel is responsible for monitoring the student's behavior, especially those who are violating the school policies. The process was listing the name of the violators in student violator form, recording them into spreadsheets then printing the record if needed.

There are problems that were being observed by the researchers in the current manual recording system. Manual record management is a time-consuming process. Handwritten reports can be easily lost or misplaced and printed forms are costly. There will be a possibility of accidentally switching details, misplaced, and ending up with inconsistency. As a result, the students will not be informed if they are one of the violators or not. The manual way takes more effort and physical space to keep track of records. When mistakes are made, changes or corrections are needed, often a manual transaction must be completely redone rather than just updated. With manual or partially automated systems information often has to be written down and copied or entered more.

Development of Web Based Student Discipline Record Management System for City College of Tagaytay will provide a great improvement and takes the digital innovation to the next level. It will reduce the potential for permanent data loss and it will lower the cost of using paper and ink for the printing forms. Electronic disciplinary records will be more efficient in addition in monitoring students' behavior.

Background of the Study

The City College of Tagaytay values character as it is the foundation of all worthwhile success. The College believes that intelligence with character is the goal of true education. Furthermore, it upholds the principle that leadership descends from character. Alongside character is knowledge as the institution puts

confidence in the adeptness of every undertaking under all conditions and that education is the premise of progress in society.

The Development of Web Based Student Discipline Record Management System for City College of Tagaytay enables the management of the record of the students who violate the rules and regulations of the school policy. To access the system there are four levels of users who can access the system. Each user's account has limited access based on their user requirement and every user account has roles and responsibilities to maintain and organize the system. This system is very helpful to the organization to make the task more efficient and easier, because it is user-friendly it's easy to use and access the system. To lessen the cost of papers and to avoid data loss. The Web based disciplinary records will be more efficient in addition to monitoring students' behavior. This system will benefit the organization and future researchers.

Objective of the Study

The general objective of the study is to develop a Web Based Student Discipline Record Management System for City College of Tagaytay that is capable of monitoring and managing the records of student violations.

Specifically, it aims to:

1. To design and develop a web-based system that will help the discipline office to manage the discipline records of the students of City College of Tagaytay.

2. Identify all the procedures and requirements needed for the web-based student discipline record management system through data gathering;
3. The proposed system should be able to:
 - a.) Track students discipline records.
 - b.) Add and update students discipline records.
 - c.) Show the statistical records of students that violate every semester.
 - d.) Make a report and attached a photo that will serve as evidence.
 - e.) Provide an account for the students to monitor if they have violations.
4. Evaluate and test the performance of the proposed system.
5. Implement the system in the institution.

Scope and Limitation of the Study

The research will concentrate on the development of a Web-Based Student Discipline Record Management System for City College of Tagaytay, which will give a modern approach to record management through the use of technology, resulting in enhanced accuracy and efficiency in the disciplinary office. The system is intended for four users: the system administrator, administrator, administrative staff, and the student.

System Administrator, the person who is in charge of setting up the administrator's account; will be authorized for system maintenance; database backup, and updates on the system.

Administrator, is responsible for setting up the administrative staff's account; the person who is in charge of adding, deleting, and updating the violations, consequences, and the offenses in the system; can view and monitor the list of student's information and the list of the reports; Can view and monitor the total number of violators.

Administrative Staff, will be able to make a student incident report and fill up other report form requirements needed; who is in charge in add, updating, and archiving the student's account; can view and monitor the student's information and the total number of violators.

Students, the students of City College of Tagaytay preferably used their student numbers and password for entering the system; the student's personal account can view their reported violation including the photo evidence and the full details of the report; can view the student handbook that will serve as a guide for the policy and other guidelines of the institution.

This study will use React, Nodejs, Express, and MongoDB as its technology stacks, and JavaScript as its primary programming language; React will be used in the front-end, while the rest will be used in the back-end. The proposed system will be accessed from a local network and android based devices. The system can be applied on the android mobile device that has the version of Android 5.0 and

up with a minimum of 2GB ram and is not supported on iOS and Apple devices. All image file types with a maximum of five photos per incident report. However, the study is limited to the Discipline's Office and the Student of the City College of Tagaytay. Also, it is not an online-based system.

Significance of the Study

The study focuses on the Development of Web Based Student Discipline Record Management System for City College of Tagaytay. The study will give benefit the college, considering that it is more effective and efficient in managing student discipline records. The discipline officer will be able to keep on track of the records. Records can be added and updated without having so many files on the shelf. Redundancy also can be minimized as the system is able to reject new record that already exists in the system. Thus, the system will be able to solve the Discipline Head's problem in managing student discipline records. This study is beneficial for the following:

City College of Tagaytay Discipline Office. This is the main beneficiary of the study. It will adapt to technological innovation through the implementation of the Development of Web Based Student Discipline Record in City College of Tagaytay.

For the Students. This will give them convenience in obtaining the information, and other important things they need for a better understanding of their course program.

For Researchers. Researchers benefit from the system through the knowledge that they would gain in this research. Enhanced skills in chosen fields, and prepared for the IT industry. It would help them grow as an individual, manage their time, and could be responsible enough in order to fulfill the requirements within a specific period of time.

For the Future Researchers. This study will be a useful reference for the researchers who would plan to make any related study precisely the standard underlying the Bachelor of Science in Information Technology program. They could gain knowledge and to motivates them in conducting a study in the future.

Theoretical Framework

The theoretical framework is a collection of interrelated concepts that will guide the researcher in developing the proposed study.

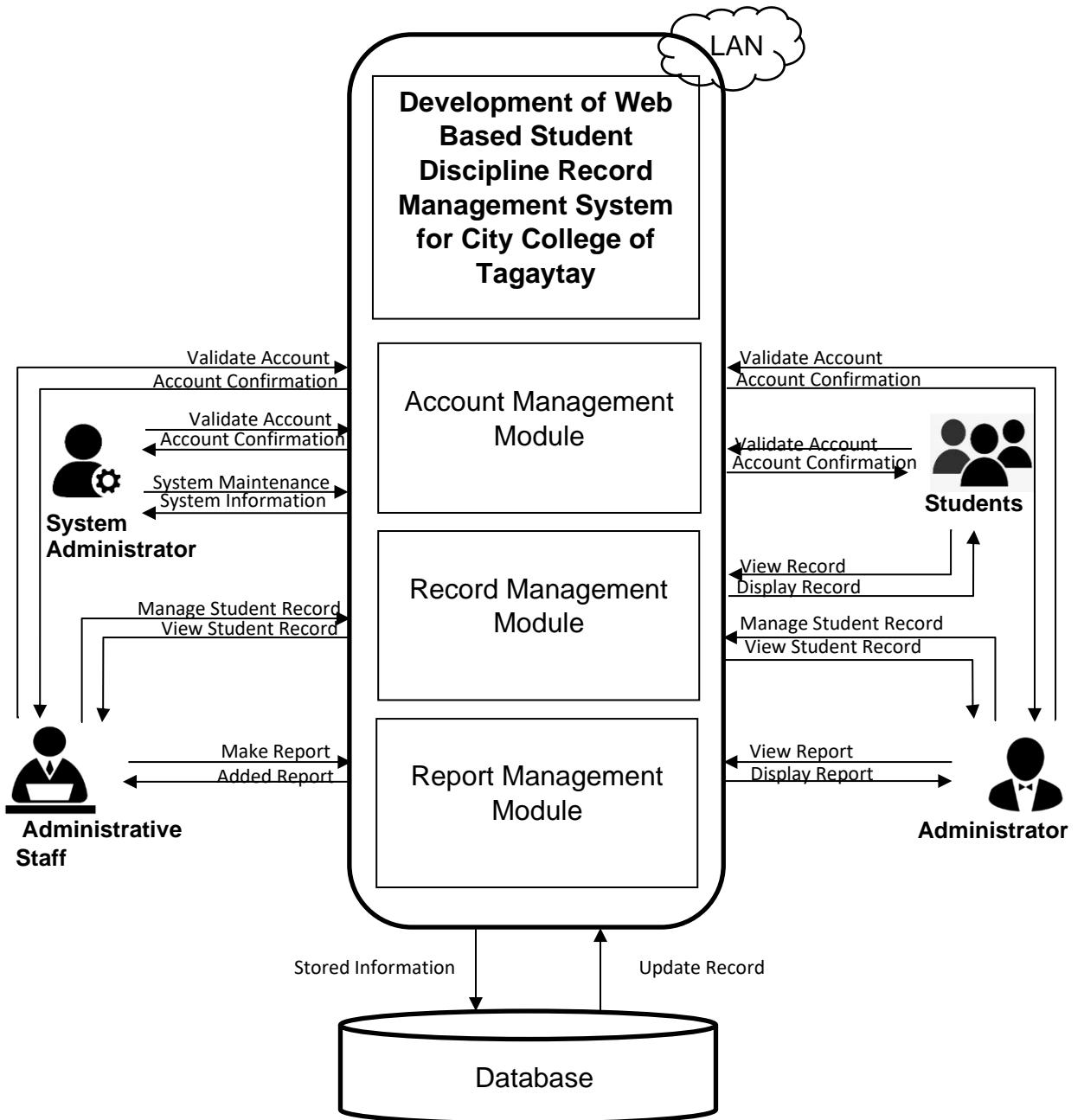


Figure 1. Theoretical Framework of Development of Web Based Student Discipline Record Management System of City College of Tagaytay

Conceptual Model of the Study

On the basis on foregoing concepts, the use case diagram, data flow diagram, and context diagram are included to a conceptual model as shown below.

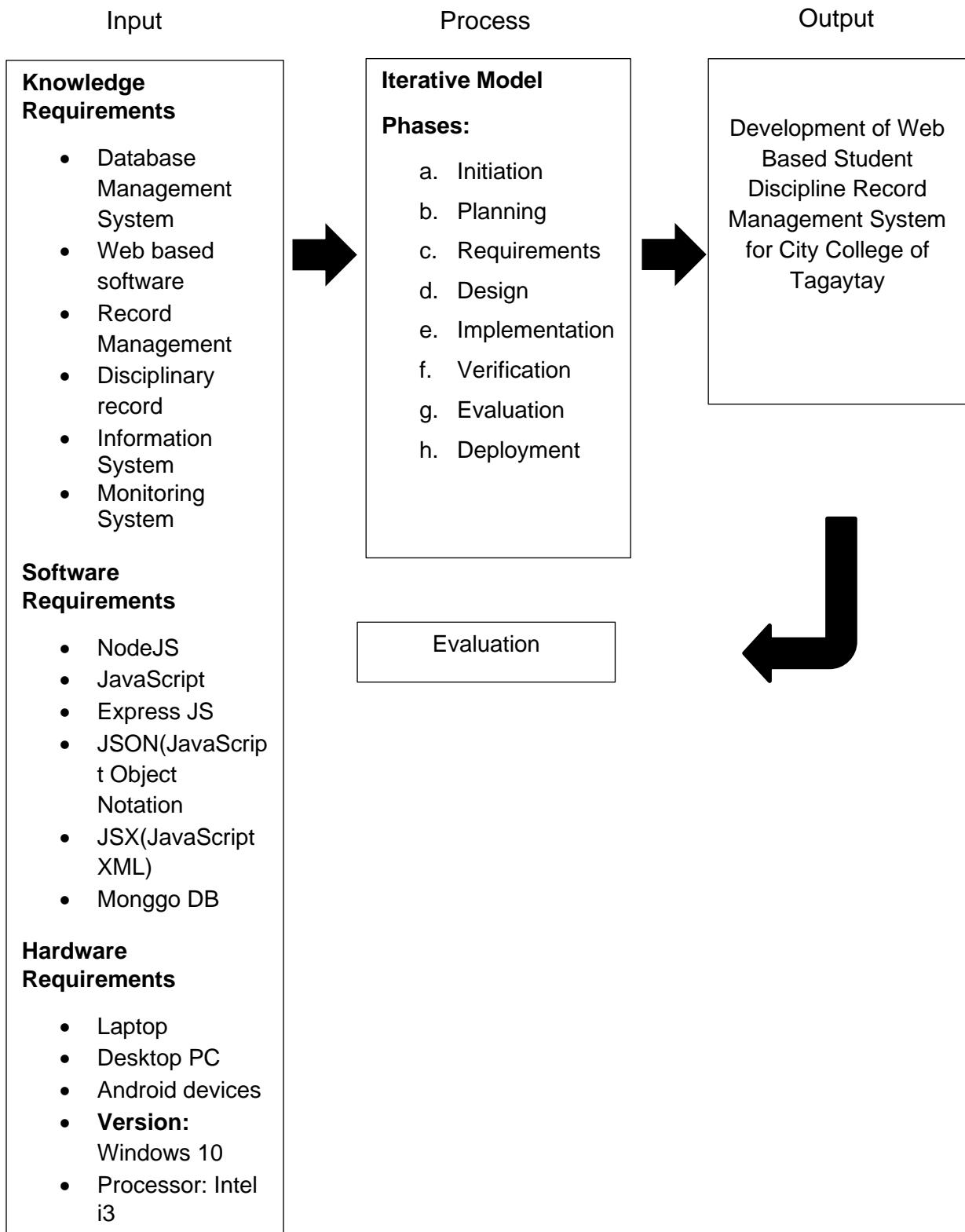


Figure 2. Conceptual Model of Development of Web Based Student Discipline Record Management System of City College of Tagaytay

Figure 2 shows the Input Process Output model, a graphical representation of all the materials and factors required for a system. The IPO model uses to provide information on how the system works and the different stages of the processes involved in order to achieve the objectives of the study. All the phases and the processes needed to do to come up with an output which is called The Development of Web based Student Discipline Record Management System of City College of Tagaytay.

In the input stage, it shows the three requirements needed which are the Knowledge requirements, Software requirements, and Hardware requirements. For the Knowledge Requirements, the researchers need to be familiarized, knowledgeable and with the following knowledge requirements: Database Management System, Web based software have a deep understanding regarding, Record Management, Disciplinary record, Information system, and Monitoring system. For the Software Requirements, the researchers will use a JavaScript library such as react for the frontend, Node js for the backend, to apply and run the proposed system it needed the following operators: android OS, web browser, and Windows OS 10. For the Hardware Requirements, these are the following hardware materials to run and use the proposed system: laptop, desktop PC, and android devices.

In the process stage, the proposed system will undergo the different phases of the iterative model such as Initialization, Planning, Requirements, Design, Implementation, Verification, Evaluation, and Deployment.

After the development of the system, the researchers will move to the next phase, which is the evaluation stage. This is to evaluate and access the overall performance and ability of the system in terms of: (a) Functionality; (b) Reliability; (c) Usability; (d) Efficiency; (e) Maintainability and (f) Portability and for the output the implementation of the proposed system which is the Development of Web Based Student Discipline Record Management System of City College of Tagaytay.

Operational Definition of Terms

- **User** – This includes the system administrator, administrator, administrative staff, and students of City College of Tagaytay.
- **Log in** – It is a security purpose of a system that user needs to provide a unique username and password for them to be able to access the system.
- **Log out** – After using the system, the user needs to log out of his account to exit the system. For this purpose, unauthorized use or access to the system can be avoided.
- **Username** – It is a user-defined and personalized name that should keep private.

- **Password** – It is a secret word, phrase, or a combination of letters, numbers, and special characters that the user needs to provide along with his username to access the system. The password and username of the user should be confidential or private.
- **Records** – Collection of data and information of the violators and non-violators students of City College of Tagaytay.
- **Viewing** – The users can scroll and browse the entire feature of the system.
- **Updates** – This function or operation involves adding and editing the information from a particular record.
- **Track** – Tracking the records to see if they have duties, sanctions, and the total tallies of violations in the semestral term.

CHAPTER II

RELATED LITERATURE AND STUDIES

This chapter contains the following sections: Including a thorough examination of theorems, definitions, basic algorithms, and mathematical models/formulas. Those in this chapter aid in familiarizing readers with knowledge that is related and similar to the current study.

Related Literature

Records Management

A software-based school records management system automates and streamlines most of this process, making it easier to keep records clean, complete, organized, and easy to retrieve. (FlexiSAF, 2012)

Software-Based School Records Management System

A software-based school records management system helps teachers, administrators, and support staff streamline their daily duties. You can easily note whatever happens in the classroom, the school office, or anywhere in the facility. With just a few clicks, authorized users can pull a student's entire history, all of the transactions affiliated with a remodeling project, or even a history of the school's special events or fundraisers. (FlexiSAF, 2012)

Discipline Records

According to Wikipedia discipline records is taken against a student and a sanction imposed, a record of the action including a copy of the Student Conduct/Discipline Report Form, Notice of Hearing Letter, and Decision will be placed in the student's disciplinary file maintained by the Judicial Officer. (DMACC, 2018)

Discipline Software

Discipline software simplifies the difficult and time-consuming task of tracking student behavior and helps improve discipline by ensuring that students are held accountable for their actions. Educators document and track disciplinary incidents, maintain related records, notify parents of infractions, and produce reports, notices, forms, and other documents. (Richard Rediker, 2015)

JavaScript

JavaScript is a programming language in its own right. Front-end web developers utilize JavaScript to provide interactivity and functionality to a web page. Showing notifications or pop-up messages, responding to mouse clicks, creating animations, or validating data are all examples of this. It can also be used to change the content of a web page after it has been loaded dynamically. It's also utilized to store and share data on the backend. (*Shokeen, 2021*)

JavaScript is one of the most popular programming languages in the world. It's straightforward to understand and use for a wide range of applications, from simple site updates to operating games and online applications. (*Steve kok, 2021*)

Database software

Database software is software that is designed to create databases and to store, manage, search, and extract the information contained within them. (Craig Mullins, 2000)

Database Management System or DBMS

A software that communicates with the database itself, applications, and user interfaces to obtain data and parse it. The DBMS also contains the key instruments to govern the database. (Borysov, 2021)

NOSQL (Structured Query Language)

NoSQL databases (aka "not only SQL") are non-tabular databases and store data differently than relational tables. NoSQL databases come in a variety of types based on their data model. The main types are document, key-value, wide-column, and graph. They provide flexible schemas and scale easily with large amounts of data and high user loads.

Frontend

Part of the website users can see and interact with such as the graphical user interface (GUI) and the command line including the design, navigating menus, texts, images, videos, etc. Backend, on the contrary, is the part of the website users cannot see and interact with. (Geeksforgeeks, 2021)

Backend

The server-side of the website. It stores and arranges data, and also makes sure everything on the client-side of the website works fine. It is the part of the website that you cannot see and interact with. It is the portion of software that does not come in direct contact with the users. The parts and characteristics developed by backend designers are indirectly accessed by users through a front-end application. Activities, like writing APIs, creating libraries, and working with system components without user interfaces or even systems of scientific programming, are also included in the backend. (Geeksforgeeks, 2021)

Local area network (LAN)

A collection of devices connected together in one physical location, such as a building, office, or home. A LAN can be small or large, ranging from a home network with one user to an enterprise network with thousands of users and devices in an office or school. (LAN, cisco)

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Software

Collection of instructions that enable the user to interact with a computer, its hardware or perform tasks. It is a computer instruction or data and anything that can be stored electronically. (*Britannica, 2021*)

ISO 9126 Model

The ISO/IEC 9126 standard specifies a software quality model that divides software into six characteristics (factors), each of which is further broken into sub-characteristics (criteria). When the software is employed, the features are exhibited externally as a result of internal software properties. ISO 9126 is an international standard for the evaluation of software. This model is based on previous works by McCall, Boehm, FURPS, etc. ISO 9126 supports strategic decision-making activities, avoiding costly mistakes. (*Syahrul, Nurul, Wan, & Ziti, 2012*)

Operating system

A system software handles the computer programs of the hardware and software resource. It normally provides the common services that necessary for the computer to function. This system is used also in developing and modifying the codes of the application. (*Stallings, 2018*)

Related Studies

Local Studies

Online Student Information System of Benguet State University (OSIS-BSU), Philippines (Yr.2013)

According to Rochelle Pacio (2013) Changes in Information Technology (IT) allow schools to utilize databases and applications such as Online Student Information System (OSIS) thus, making the accessing of records centralized. One of the changes that came about is the online-based applications. These applications improved the traditional- transaction processing systems. Thus, most universities switch to the online-based system because of its effectiveness to acquire, process, store and retrieve information from the Internet. Moreover, the system is accessible to all students' information. Benguet State University (BSU) is still using a semi-computer based system and paper-based student information system. Staff finds it tedious in searching and preparing reports on student's information and also laborious due to repetition of processes done in filling and updating of records. As main goals of the school "to generate and disseminate new knowledge and technologies that will promote sustainable resource development and enrich the competent and effective services geared towards efficiency and economy" the

current system is inconsistent with the asserted school's main goals. The methodology used in the study was Rapid Application Development (RAD). RAD is designed to provide quick software methodology that involves iterative development and quick construction of prototypes.

Student Off-Task Behavior in Computer-Based Learning in the Philippines: Comparison to Prior Research in the USA (Yr.2013)

According to Ma. Mercedes T. Rodrigo et al. (2013) In this paper, researchers discuss three studies that examine the differences in the off-task behavior of students using intelligent tutoring software in the Philippines and the United States. We investigate whether Filipino students using intelligent tutors exhibit significantly less off-task behavior than their American counterparts, in line with the previously observed patterns of off-task behavior in traditional classrooms in East Asia and Southeast Asia. Using identical intelligent tutors in both countries allows us to control for confounds due to differences in curricular. Off-task behavior can be defined as any behavior that does not involve the learning task or material, or where learning from the material is not the primary goal. One suggested path for understanding how to address off-task behavior is to study classrooms where off-task behavior is less common, particularly in Asia, in order to understand why off-task behavior is less common in those settings. The results of the first study suggest that the previously observed differences in off-task behavior between the United States and Asia cannot be attributed simply to differences in curricula. Understanding the relative roles of cultural factors and past experiences with

adaptive educational technology in student off-task behavior is an important area of future work.

Design of a Prototype Web-Based Students' Record Management System: WEBSTREMS (Yr.2013)

According to Samson A. Arekete (2013) Information, a principal resource in any business entity has become an important driver of any system. In the academic community, information is especially very important. Students within the system must register for courses approved for the semester, take examinations and check the outcome of such examinations once approved by the authorities. Years after graduating from the system, students come back for the transcripts or to get some references. It is therefore imperative to handle students' information in a way that is easily accessible, maintainable and preserved. This paper focuses on managing students' information in very efficient and flexible manner. In this paper a prototype design of WEBSTREMS that is a full-featured information system that enables accurate record keeping of students' personal, academic, health and related data.

Web-Based Records Management and Monitoring Application for a Tutorial Company (Yr.2013)

According to Katherine F. Dacanay et al. (2013) This study provides a medium for managing and monitoring records of an online English tutorial which is specifically the bIELTP. The application shall be web-based and shall be utilized

by the administrators and authorized employees of the company. It is the aim of the proponents to come up with an application that has features which are fit for certain daily business processes done with IELTP. It is their aim to provide a means of organizing profiles and other essential details regarding the company's employed tutors as well as their clients who are basically the students. Another aim of the web application would be making data retrieval, student endorsement and report management more convenient. It should also be able to provide a central data storage for all records that is within the scope of the study. Before his study, there was no means of being able to integrate record and data within IELTP. They had computerized means of keeping and managing records but it was not easy to monitor and generate certain reports since there was no central storage of their data. To make the development of this web application possible, certain tools were used by the proponents. The programming language used was Coldfusion MX 7. The database management system used for the centralized data storage was Microsoft SQL Server 2000. Other web development tools such as JavaScript and Cascading Style Sheet or CSS were also used. The web application was coded in the Dreamweaver MX7.

Design of Web-based Management Information System for Academic Degree & Graduate Education (2016)

According to Rui Duan (2016) For every organization, the management information system is not only a computer-based human-machine system that can support and help the administrative supervisor but also an open technology system

for society. It should supply the interaction function that face the organization and environment, besides gather, transmit and save the information. The authors starts with the intension of contingency theory and design a web-based management information system for academic degree & graduate education which is based on analyzing of work flow of domestic academic degree and graduate education system. In college and university, the all functions and whole process of management are an open system of general management. It includes the academic record management, cultivating scheme management, course management, grade management, degree management and directing the students to take up an occupation, etc. Every function department involved in the system has respective special information requirements and there are diversified information connections among them. "The web-based management information system for academic degree & graduate education" is based on the contingency theory and tries to more efficiently manage the academic degree & graduate education from the interrelation and dynamic activity in system.

Computerized Record Management System of one National High School in the Philippines (Yr.2017)

Kurt Phillip Danlog et. al., (2017) , According to them the Computerized Record Management System as designed to provide efficient and accurate recording of records, to maintain and secure the student's records and easy retrieval of student records, to lessen the workload of the staffs. To handles the storage, maintenance and retrieval of information of students. The processes involved in the current student Record Management of Quetegan National High

School include the following: Registration process, Sectioning and Grade Generation. The problems encountered in the current Record Management include the following: Unorganized and difficulty in searching and Updating Records and Unsecured Files. The features of the proposed Computerized Record Management System are Registration, Computerized filling of Records and Automated Report Generation. The Security measures would be appropriate in the proposed Computerized Record Management System would be password security for the server and client in accessing the system. Processes involved in the current Record Management of QNHS are still manual and paper-based system. Features that would be appropriate for the proposed Computerized Record Management System Registration, Computerized filling of Records and Automated Report Generation. Security measures appropriate in the proposed Computerized Record Management System would be restriction for access and physical security of computers.

Electronic Document Management System for Higher Education Institution (Yr.2017)

According to Paul Joseph M. Estrera (2017) This study looked into the current document management problems in Higher Education Institution based on the QMS of ISO 9001. It found several discrepancies in terms of tracking, keeping and transferring of the memoranda and files from one office to another. These files were elicited from several circumstances such as loss of documents and redundancy, to name a few. Because of these problems, an Electronic Document

Management System (EDMS) was introduced. The study used two methods such as the Spiral Model and the In-house Development Program. The EDMS was completed and tested by the three colleges of Capitol University namely, Computer Studies, Business Administration, and Criminology. Moreover, the modules of EDMS were also evaluated by deans and secretaries of the same colleges. The evaluation phase found differences in terms of time spent for the documents that were covered and was further monetized to visualize cost-reduction measures as a tool for its implementation. As the result, EDMS is acceptable in terms of quality, time spent, and cost. It is recommended that the EDMS must be fully implemented in all colleges in the university. It is further recommended that there should be another study to upgrade the EDMS and to make it on-line for a centralized and efficient way of monitoring and tracking the documents.

Classroom Management and Discipline: The Polytechnic University of the Philippines Laboratory High School (PUPLHS) Experience (Yr.2018)

According to Carmencita L. Castolo (2018) the managing the classroom and establishing effective discipline have always been areas of concern for teachers. Despite years of concentrated study concerning the relationship of classroom control by the teacher and academic achievement by the student, there is no single set of guidelines established for the classroom teacher to address the aforementioned concerns. Classroom management is a situational phenomenon;

there are no universal prescriptions for student control under all circumstances. This paper describes the differences between classroom management and discipline, and lists secrets of success from teachers with very good classroom management and excellent classroom discipline. The mission, objectives, core values, and rules and policies for inside and outside the classroom at Polytechnic University of the Philippines Laboratory High School (PUPLHS) are shared as an example for establishing sophisticated management techniques to ensure satisfactory classroom discipline.

Web Based Students' Record Management System for Tertiary Institutions (2019)

According to Emmanuel Nabueze (2019) In This paper discusses the Web Based Students' Record Management System for Tertiary Institutions. This paper was borne out due to the problems associated with student academic record management which include improper course registration, late release of students' result, reconciliation of students' result, malpractices at various students clearing units, inaccuracy due to manual and tedious calculation and record retrieval difficulties in the institution. The objective of this paper is to develop a portal that would incorporate online registration, profile creation, students' final clearance and payment, transcript processing, checking of admission status, verification of both O'level /A'level and degree certificates and checking of results, thus it is expected to reduce paperwork and automate the record generation process in the tertiary institution. The methodology deployed in packaging this paper is the Object

Oriented Analysis and Design Methodology (OOADM) while the programming languages used was Hypertext Markup Language (HTML), Hypertext Preprocessor (PHP), Cascading Style sheet (CSS), Java Script (JS), and My Structural Query Language (MySQL). The result aims to provide solution to inefficiency and at the same time maintain information accuracy and ease of access to students, lecturers, parents and management in the tertiary institution.

Managing School Operations and Resources in The New Normal And Performance Of The Public Schools In One Division In The Philippines (Yr.2021)

According to Erma S. Valenzuela et al.(2021) All organizations require effective and efficient management. Being effective is evident if one is doing a certain task appropriately, while efficiency is observed if the task is done with accuracy. It is through management that the vision, mission, and goals of an organization are realized through the efforts of those people who walk in one direction to attain the desired goal. In this time of uncertainty where everything must stop, the competencies of the school leaders in management need to be strengthened to ensure better school performance. The purpose of this study was to determine if there was a link between school leaders' abilities to manage school operations and resources and the performance of public schools in the Schools Division of Laguna. To evaluate the relationship between the independent and dependent variables, the descriptive-correlational study design was used, and employed statistical methods such as Pearson r, Chi-square, Spearman rho

correlational analysis, and multiple linear regression were used. Findings revealed that there is a significant relationship between the level of management competencies of school heads and the school's performance in terms of quality and efficiency. All the given competencies in managing school operations and resources, such as record management, financial management, school facilities and equipment, staff management, school safety for disaster preparedness, mitigation and resiliency, and management of emerging opportunities have a significant impact on the school's quality and efficiency. Further, the management competencies of school heads in terms of management of staff singly and significantly predict the quality and efficiency of the school. Thus, it was recommended to conduct an annual Induction Program for all new school heads to provide them salient information about managing the school operations and resources; and give the school heads technical assistance through the conduct of training, workshop, coaching, and mentoring; include topics in records management and school facilities in the professional development programs of SDO Laguna and conduct other related research in the future.

Foreign Studies

Managing students' electronic disciplinary records via E-merit web content management system (Yr.2011)

According to Mohd Idzwan Mohd Salleh et al. (2011) E-Merit is a web content management system that is developed to help Malaysian secondary

schools manage discipline problems among their students more effectively in order to increase the academic performance to a greater height. Students' misconduct problems at the present level occurred due to lack of self-awareness and lack of parental control. The uniqueness of this application as compared with other E-Discipline systems are the teachers not only can record misconduct cases among their students but they will be given opportunity for improving themselves through counseling and community service programs. In addition, parents can check their children records of academic achievement, co-curricular, discipline and presence in the school for taking a preventive action before being suspended. Notification via e-mail and Short Messaging System will be automatically received when their children are involved in any activity of wrongdoings. Merit stated here not merely the measurement of student disciplinary cases but also their level of academic achievements and co-curricular activities either they are excellent, good, satisfactory or fail. The application is designed using Open Source Software that provides three categories of user access namely teacher, student and parent in which only the teacher is fully entitled to make any additions and changes to student's records. The benefits of the system are included its ability to increase the efficiency of managing students' electronic records, to reduce the burden of teachers' works as well as to be a best tool in assisting the detection and prevention of discipline problems. Therefore, E-Merit is expected to be commercialized as the best platform not only among the schools but also the public and private institutions of higher learning to excel its corporate image through the

development of students' intellectual capital aligned with the national philosophy of education.

The Development of the Web-based My Discipline and Counseling Online Management System (Yr.2011)

According to Rio Sumarni Shariffudin, et al. (2011) they published the study of The Development of the Web-based My Discipline and Counseling Online Management System identifying solution regarding students' discipline and counseling management in terms of inconsistent rules and disciplinary action in schools; inadequate existing systems in schools and the State Education Department. It also involved the design and development of My Discipline and Counseling Online Management System (MyDCOMS) and evaluation of MyDCOMS functionality in terms of easy-to-use in the management of discipline and counseling. This research used a qualitative approach namely case study in the process of collecting data. It involved implementing system requirements analysis and identifying problems in the management of discipline and counseling in schools and the State Education Department. It can be used to access discipline and counselling information, provide communication networking facility for a variety user, facilitate in the production of reports and analysis; and recording counseling sessions. MyDCOMS is also able to the acquire information resources to support discipline and counseling management and helped in monitoring the implementation of the discipline and counseling activities.

Student Discipline Data Tracker v.1 (Yr.2011)

According to Lawrence E. Steel (2011) One of the most difficult tasks facing today's busy school administrative teams is tracking and managing student discipline. Administrators must balance the rights of students with cultivating classroom environments conducive to learning. Breakdowns in communication, procedure, and due process can lead to unpleasant situations, and ultimately, a disruptive school environment. Student Discipline Data Tracker v.1 is the most complete tool available to school administrators to track and manage disciplinary issues effectively and accurately. Created with an awareness of major court decisions regarding school discipline, the program includes pop-up tips and hints to alert users to possible procedural issues. The program creates an "electronic paper trail" of student disciplinary incidents that can be accessed by any member of the administrative team. No longer will it be necessary to divide the students into subgroups assigned to a particular administrator. Each member of the team will be able to instantly call up discipline histories and assign appropriate consequences. Student Discipline Data Tracker v.1 makes managing consequences easy. At the click of a button, users can create student sign-in sheets for detention and other consequences of disciplinary issues, print suspension notification letters and lists, as well as generate statistical reports based on customized search criteria.

Development of Web-Based e-Discipline System: A Case Study for the Kingdom of Saudi Arabia (Yr.2015)

According to Adnan Mustafa AlBar et al. (2015) stated that the Saudi Arabia applauds education because of its critical importance in developing the country's

human potential. In the 21st century, private education facilities have opened all over the Kingdom. Education is a central aspect for the development and training of family and community life. Parents and teachers are deeply involved in their children's and student's education, respectively. Currently, the continuous involvement of technology in the education system promises to build an advanced education system by using all kinds of information and communication technology (ICT) resources. The research highlights the need for close relations between administrators, teachers, and students. Concerned with this issue, this paper aims to provide a much needed web-based eDiscipline application system that controls and monitors the classroom environment using high technology and trained teachers. The development of an e-Discipline web-based application is based on three-tier system architecture. In this paper, we present a prototype of an e-Discipline application environment to be operated by the Ministry of Higher Education, which will supervise and train the teachers and administrative staff.

Discipline Monitoring System: A School Self-Study Project for Montgomery County Public Schools. (Yr.2015)

According to Richardson et al. (2015) The Discipline Monitoring System (DMS) is a computer-assisted model allowing individual secondary schools to analyze their disciplinary actions. The Montgomery County Public Schools (Maryland) adopted this model to manipulate the following data: who is suspended, who is referred, who makes referrals, characteristics of these persons, and events (including location) surrounding the disciplinary incident. The idea is to discover trends and patterns contributing to disciplinary problems.

The model's database management system can be run on schools' administrative microcomputers. Users can enter data from existing school records and generate predefined reports. Source material originates from student referral and suspension forms. Once administrators generate reports, they can discuss findings with staff and seek areas of possible improvement. Administrators can also use the information to make year-to-year comparisons and identify possible new trends. They can also identify student and teacher profiles possibly associated with a disproportionate number of suspensions and incidents. To benefit from the DMS, schools must first examine their disciplinary definitions and procedures. Since the model permits schools to do decentralized self-study projects, central office responsibility is lightened. Such projects will become increasingly feasible as schools are provided with more sophisticated hardware and software.

Excellent School Records Behaviour for Effective Management of Educational Systems (Yr.2015)

According to Rose Ngozi Amanchukwu (2015). The school records include books, documents, diskettes and files that contain information on what goes on in school as well as other relevant information pertaining to the growth and development of the school. This article theoretically debated the role school record to effective educational management, the importance of keeping records in school, types of school records, and characteristics of good record management in

schools. This article aims to offer an excellent package to support stakeholders in educational management and/or administration. It is comprehensive and thorough, yet flexible and encompassing. Stakeholders can both learn about and develop skills in school record keeping aimed at enhancing school management, planning and supervision. We conclude that poor records management results in difficulties in administering, development and supervision of educational systems. In fact, poor school records management and the lack of staff development with regards to the entire information cycle are responsible for a number of management and policy implementation problems in schools.

Monitoring system for the effective instruction based on the semi-automatic evaluation of programs during programming classroom lectures (Yr.2015)

According to Riki Nakamura et al. (2015) In this study, they developed a programming practice monitoring system to facilitate teachers to give appropriate instructions to students at the appropriate time during classroom lectures. To help teachers to provide appropriate instruction to learners, they identified parameters that would be useful for teachers during programming exercise in classroom lecture. The researchers constructed a monitoring system with five functions. The system automatically acquired the programs written by students to evaluate their performance, and the teacher can obtain their performance using the five functions. They asked four subjects to test our proposed monitoring system during a simulation of a classroom lecture. The evaluation revealed that the system had a high accuracy in evaluating student programs.

A Qualitative Study of Effective School Discipline Practices: Perceptions of Administrators, Tenured Teachers, and Parents in Twenty Schools (Yr.2017)

According to Mary Faye Nelson (2017), Many educators and parents are gravely concerned about disorder and danger in school environments. In addition to school discipline issues, American classrooms are frequently plagued by minor infractions of misbehavior that disrupt the flow of classroom activities and interfere with learning. The purpose of this qualitative study was to investigate common threads of effective school discipline practices as perceived by administrators, tenured teachers, and parents in 20 schools in East Tennessee. Also attempted to determine if the views of administrators, tenured teachers, and parents are consistent with published research on school discipline practices. Data were collected from administrators, tenured teachers, and parents through an open-ended interview form that she designed. The study offers a number of recommendations regarding components of effective school discipline practices. An effective school discipline practice involves all stakeholders in its design. The principal and the teachers are responsible for carrying out the school discipline practices to foster appropriate behavior from the students. However, parents, students, and community members should be equally represented in the design of discipline procedures. Administrators and teachers need to have quality professional development opportunities to acquire strategies for classroom and school discipline practices. Rewarding students for good behavior and positive contributions to the school community is important. Effective discipline practices are built through consistency and teamwork. Evaluation of school discipline

practices should be ongoing, and strategies for reducing school disruptions should be continuously assessed for improvements.

Digital tracking student behaviour in the classroom encourages compliance, not learning (Yr.2019)

According to Academic rigour, journalistic flair (2019) One of the most popular classroom communication apps in the world is class dojo. It claims to assist teachers to create happier classrooms and bills itself as “the simple way to build an amazing classroom community”. Since it was released in 2011, it has rapidly spread to be used in more than 180 countries worldwide and over half of Australian primary schools. But new research looks beneath ClassDojo’s friendly exterior to carefully consider the implications of tracking student data on discipline and behaviour. The ClassDojo feedback feature works like a traditional classroom points system, but records more information and is done using a computer, iPad or smart-phone. It is an electronic way of tracking student behaviours and providing immediate feedback to students and parents. Teachers can award positive or negative points to students for displaying a range of behaviours. They can use ClassDojo to provide visual and audio cues to students that reflect the positive and negative feedback. “Positive” feedback is coloured green and arrives with a pleasant ding sound. “Needs work” feedback is coloured red and arrives with a harsh buzz sound. These cues can be used publicly so the whole class is made aware feedback has been given.

AntiBullying Software: Student Behavior Management & Discipline Systems (Yr.2020)

BRIM Anti-Bullying Software can also be used to give complete control and tracking of student discipline issues at your school. Student behavior management gives teachers the power to improve student behavior via positive reinforcement and intervention when behavioral issues occur. BRIM simplifies the tracking of both discipline and bullying incident information ensuring that students are held accountable for their actions and provided with assistance when needed. BRIM keeps track of which interventions you perform and can help you identify which are most successful with using BRIM's customizable behavior list, can expand from tracking bullying behaviors to include student discipline issues such as dress code violations, tardiness and more. Teachers and school staff can also use BRIM's online reporting tool to report discipline issues from anywhere around the school. School administrators are instantly notified via email of any and all reported incidents.

CHAPTER III

METHODOLOGY

Project Design

In this chapter, the researchers will show the project design, context diagram, data flow diagram, project methodology, phases of iterative model, operation and testing procedure and also the evaluation procedure.

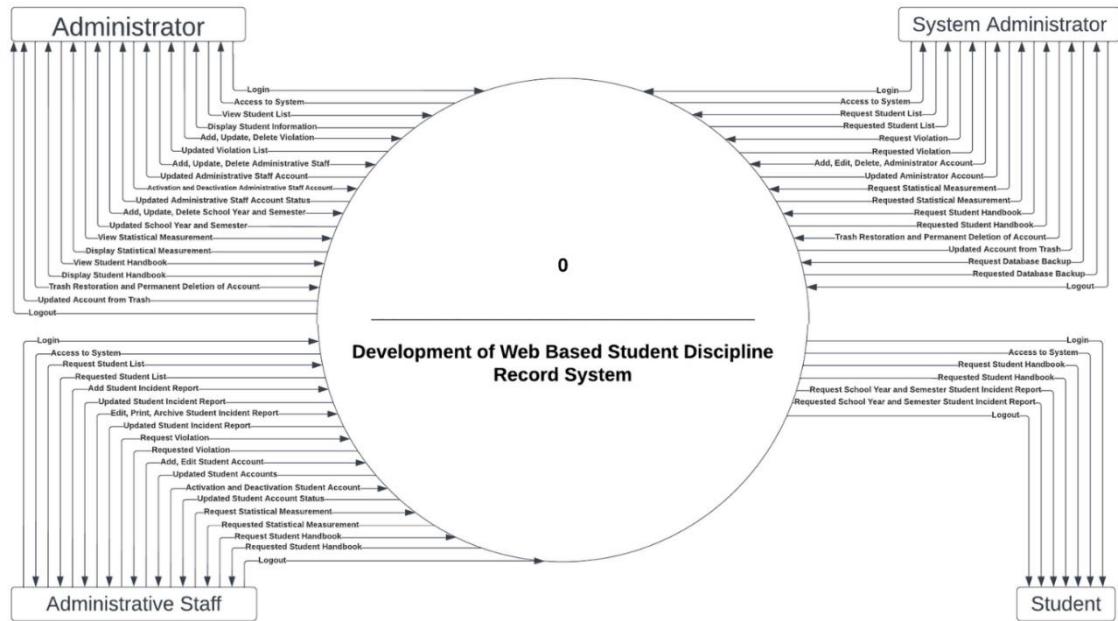


Figure 3. Context Diagram of the Web Based Student Discipline Record Management System for City College of Tagaytay

Figure 3 shows how the student will use the system and how the administrator, system administrator, and administrative staff manage the system.

The administrator are responsible for monitoring the number of students violations and duties. Also, authorized to managed, database backup and access the system. The system administrator will be authorized for system maintenance, database backup and update of the system. The administrative staff will be able to view, upload, update and monitor to keep track and maintain the record regarding to the students who violates the rules and regulations of the school. The students will use their student numbers and password for entering the system. They are responsible for viewing and accessing the system.

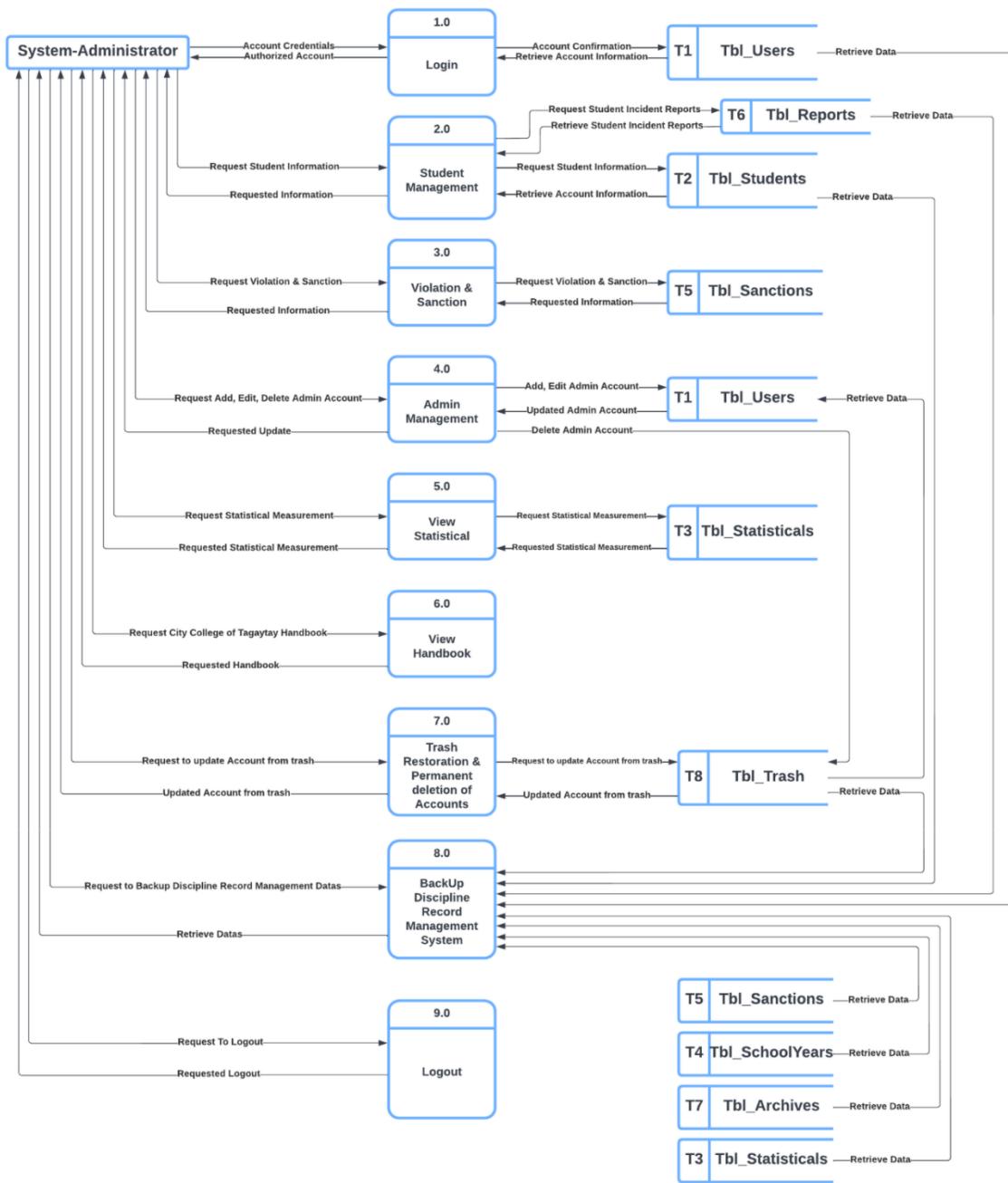


Figure 4. Data Flow Diagram (System Administrator)

The System administrator will login to the system, and the system will validate the administrator account if the account is in the users table the system will grant an authorization to access the system. The System administrator can only view

the student information that will fetch from student table and report table. the system administrator can only view the violation and sanction. On the account management the system administrator can add, edit, and delete the administrator account, and once the selected administrator account was deleted the account will go to the trash table and once the account is in the trash the system administrator can restore it and it will go back to the users table, but once it was permanently deleted it cannot be restore also the system administrator can active or deactivate the administrator account once its deactivated the system cannot grant an access to the system. . In the Statistical measurement is a form that will measure how much student that violates the school rules and regulation. The student handbook is a pdf file that can view, print, and downloaded by the users. The system administrator in the one who can back up the data from the system.

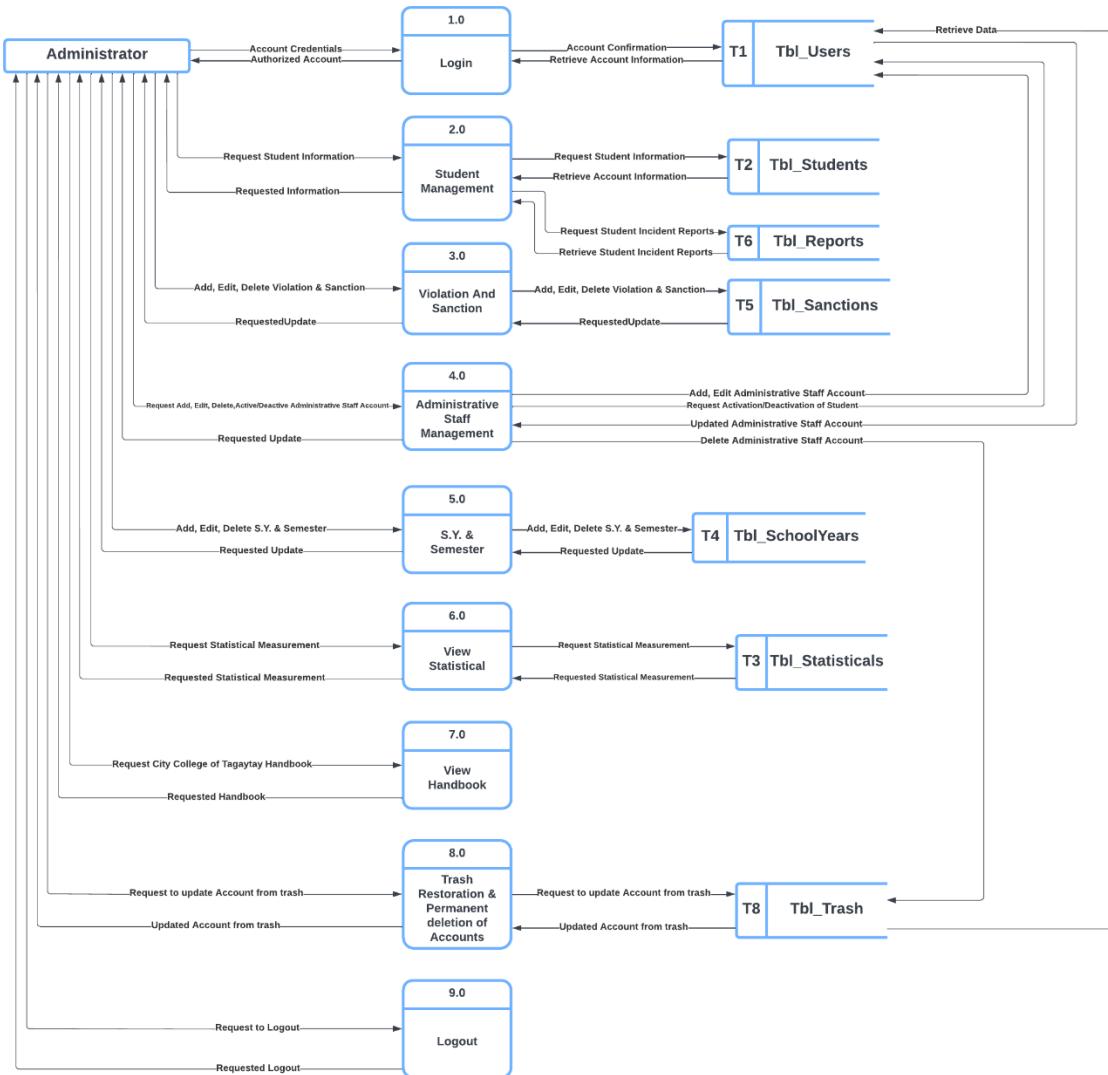


Figure 5. Data Flow Diagram (Administrator)

The Administrator will login to the system, and the system will validate the administrator account if the account is in the users table the system will grant an authorization to access the system. The administrator can only view the student information that will fetch from student table and report table. the administrator is the only one who can add, edit, and delete the violation and sanction. On the account management the administrator can add, edit, and delete the

administrative staff account, and once the selected administrative staff account was deleted the account will go to the trash table and once the account is in the trash the administrator can restore it and it will go back to the users table, but once it was permanently deleted it cannot be restored also the administrator can active or deactivate the administrative staff account once its deactivated it cannot grant an access to the system. In the school year and semester form the administrator can add, edit, and delete, the administrator is the one who can activate and deactivate a school year and semester. a statistical measurement is a form that will measure how many violations the student commit in the school rules and regulation. The student handbook is a pdf file that can view, printed, and downloaded by the users.

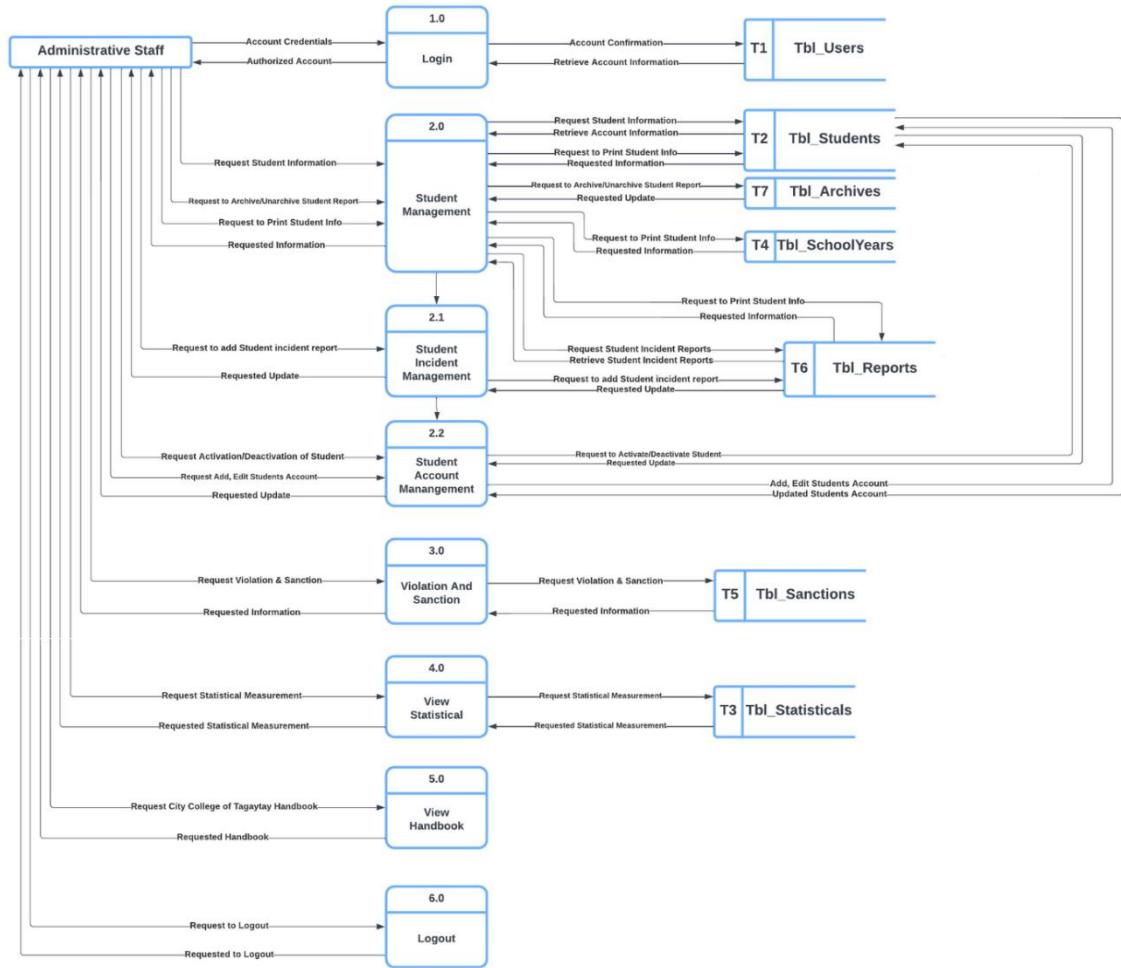


Figure 6. Data Flow Diagram (Administrative Staff)

The Administrative staff will login to the system, and the system will validate the administrator account if the account is in the users table the system will grant an authorization to access the system. The Administrative staff can view the student information and the administrative staff is the one who can file a report to the student with a given information such as the name of the student, incident description and on, photos for evidence. Administrative staff can print the incident report of the student by fetching information of the student in the student table for the student basic information, report table for their incident report, and school

year table for the active school year and semester. Once the student complies with the duty given, the administrative staff can archive their incident report and put their report on the archive table. Also, the administrative staff is the one that adds, edit, and delete the student from the system and activate or deactivate their account. The administrative staff can only view the violation and sanction. The Statistical measurement is the one that will measure how many violations that the student commit in the school rules and regulation. The student handbook is a pdf file that can view, printed, and downloaded by the users.

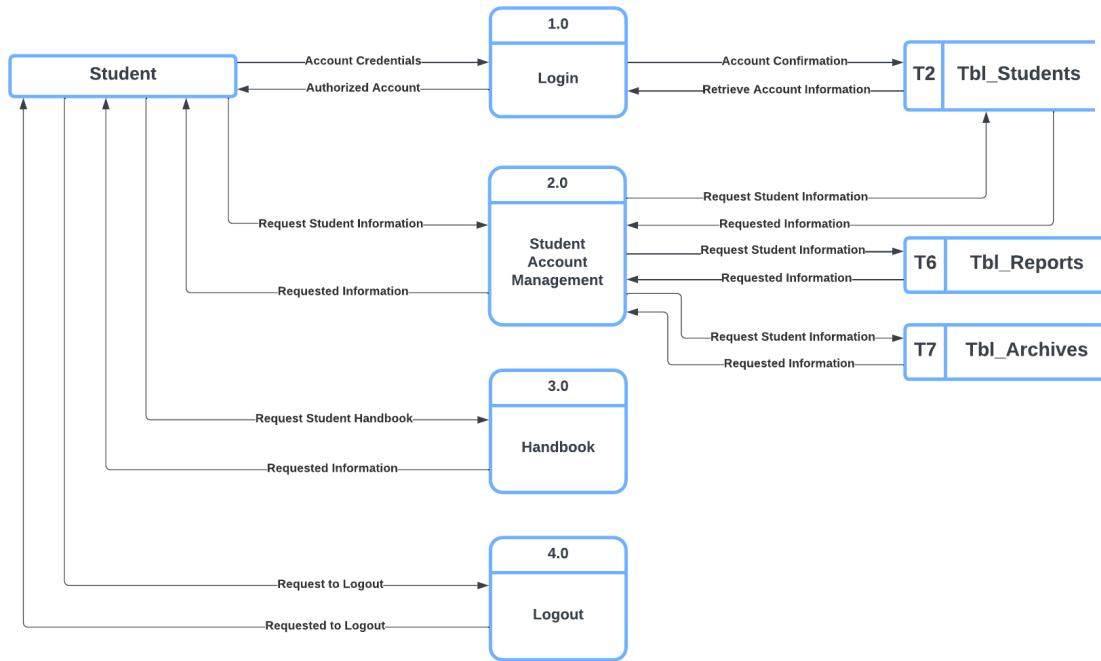


Figure 7. Data Flow Diagram (Student)

The student will login to the system, and the system will validate the student account if the account is in the student table the system will grant an authorization to access the system. The student can view their basic information and their incident report. The student can also view their previous incident report by click the year and semester in their side bar. The student handbook is a pdf file that can view, print and download by the users.

Project Methodology

To meet the objective set of the Development of Web Based Student Discipline Record Management System for City College Of Tagaytay, the researchers used the Iterative Model. The Iterative Model has different phases that must followed sequentially.

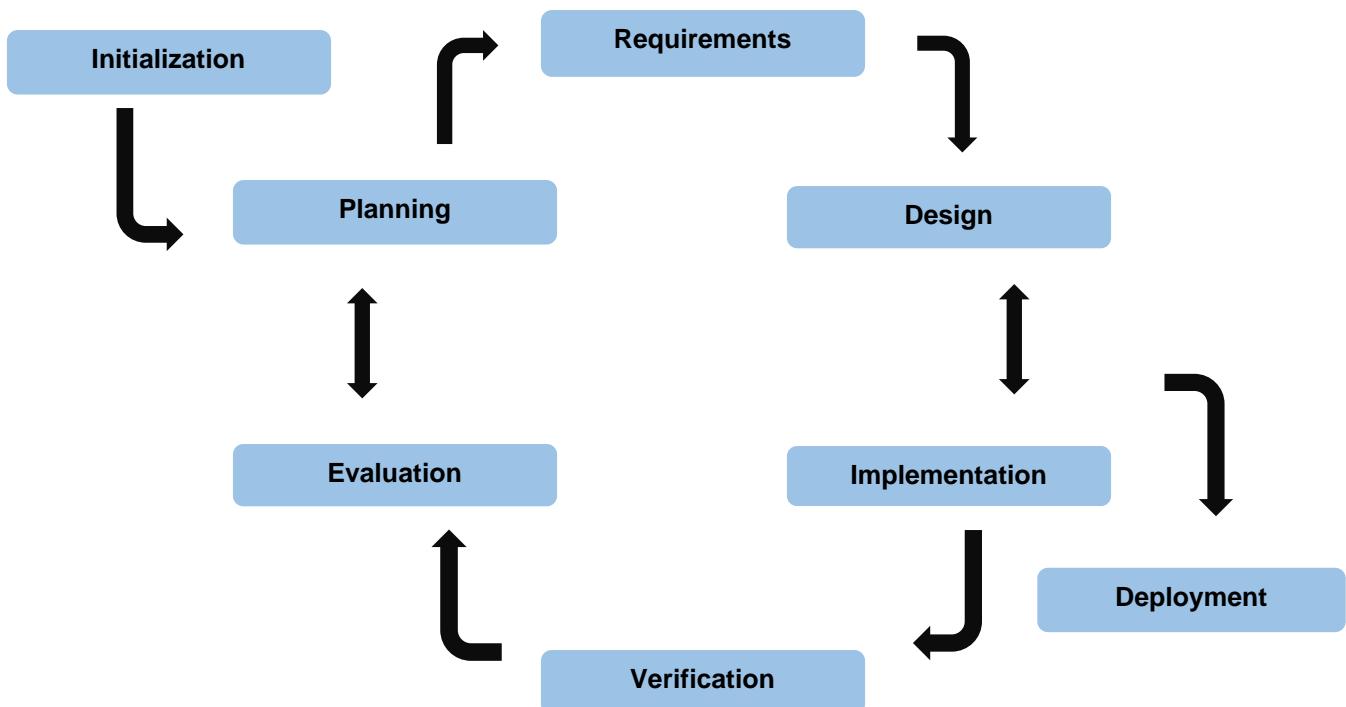


Figure 8. Iterative Model of the Development of Web Based Student Discipline Record Management System for City College of Tagaytay

The iterative model is a particular implementation of a software development life cycle (SDLC) that focuses on an initial, simplified implementation, which then progressively gains more complexity and a broader feature set until the

final system is complete. When discussing the iterative method, the concept of incremental development will also often be used liberally and interchangeably, which describes the incremental alterations made during the design and implementation of each iteration.

The Process

Initialization Phase.

In this phase, the researchers will initialize and identify the problem of the Disciplinary Office of City College of Tagaytay in their current manual process of disciplinary record system. The researchers will also make an initial idea and concept on what system they will go to make to improve and enhance the existing system of the City College of Tagaytay.

Planning phase.

The researchers made a project plan that would help in managing the system in a given time to finish it. The project plan includes the detailed tasks and the time schedule for completion. The researchers conducted research to get some information that relates to the system and the problems that researchers may encounter, which was used for the Development of Web Based Student Discipline Record Management System for City College of Tagaytay.

Requirements phase.

The researchers gathered the requirements and analyzed the data we have taken through a survey for the software. Iteration should eventually result in

a requirements phase that produces a complete and final specification of requirements.

Design phase.

The researchers made a project design that would show how the system would work and understand the requirements of the system to have an idea of what the system should will look like. The researchers described the features of the context diagram, and data flow diagram. This served as a guide in the development of the system.

Implementation Phase.

In this phase, the researchers start coding. After modification and improvement of the system, testing, and evaluation phase the system is ready to be deployed. In this phase, the researchers will ensure that the system was properly working.

Testing phase.

Once this current build iteration has been coded and implemented, the next step is to go through a series of testing procedures to identify and locate any potential bugs or issues that have cropped up.

Deployment Phase.

In this phase, the developed system is delivered to intended users for them to access the system. They can use it for daily operations to monitor and

track the record of the violator's and maintain the organized of data in the specific institution.

Evaluation phase.

In this phase, in which the software will be evaluated, the current requirements will be reviewed, changed and additions to requirements will be proposed based on the recommendation and feedback.

In the preliminary evaluation, the researchers will review all the necessary things/factors that will need in the completion of the system based on the system.

Results will be analyzed to determine if the desired output is met through the given input. The final evaluation sheet will be given to respondents. The comments, suggestions, and recommendations are used to improve and enhance the system. The study used the Evaluation Criteria for software.

Table 1. System Evaluation Sheet Numerical and Descriptive Scale

NUMERICAL RATING	INTERPRETATION	DEFINITION
4.21- 5.00	Excellent	The system fully meets and far exceeds the most expectations.
3.41- 4.20	Very Good	The system fully meets all and exceeds several expectations.
2.61- 3.40	Good	The system fully meets all expectations.

1.81- 2.60	Fair	The system does not fully meet all expectations.
1.00- 1.80	Poor	The system fails to meet expectation to a significant degree in several areas.

Table 1 shows the numerical rating and its equivalent interpretation to scale the result of project evaluation.

The gathered data will be computed by using Mean Range Formula to conclude if the developed system will meet the System Factors Standard for Acceptance.

Chapter IV

RESULTS AND DISCUSSION

This chapter presents the Project Structure, Project Description and Screen Hierarchy of the system.

Project Description

The “Development of Web Based Student Discipline Record Management System for the City College of Tagaytay” was developed to give assist to the students and will provide a new record management system by the use of improve web-based system that will provide an increased accuracy and efficiency in the disciplinary office. To ensure the quality of the product and become responsive to client requirements the researchers employed a well organize iterative methodology. The methodology was utilized by the researchers in order to follow sequentially and modify the system more quickly in order to ensure that it is error-free, and the researchers may easily discover and correct the error to develop a quality system.

The proponents use system methodology, which is the iterative model in the whole study. The method consists of eight (8) phases, which are the initialization, planning, requirements, design, implementation, testing, deployment, and evaluation.

The first phase is initialization this phase, the researchers will initialize and identify the problem of the Disciplinary Office of City College of Tagaytay in their current manual process of disciplinary record system. The researchers will also make an initial idea and concept on what system they will going to make to improve and enhance the existing system of the City College of Tagaytay.

The second phase is planning, the project plan includes the detailed tasks and the time schedule for completion. The researchers conducted research to get some information that relates to the system and the problems that researchers may encounter, which was used for the Development of Web Based Student Discipline Record Management System for City College Of Tagaytay.

The third phase is requirements, the researchers gathered the requirements and analyzed the data we have taken through a survey for the software. Iteration should eventually result in a requirements phase that produces a complete and final specification of requirements.

The fourth phase is design, a project design that would show how the system would work and understand the requirements of the system to have an idea of what the system should look like. The researchers described the features of the context diagram, and data flow diagram. This served as a guide in the development of the system.

The fifth phase is implementation, in this phase, the researchers start coding. After modification and improvement of the system, testing, and evaluation

phase the system is ready to be deployed. In this phase, the researchers will ensure that the system was properly working.

The sixth phase is testing, once this current build iteration has been coded and implemented, the next step is to go through a series of testing procedures to identify and locate any potential bugs or issues that have cropped up.

The seventh phase is deployment, in this phase, the developed system is delivered to intended users for them to access the system. They can use it for daily operations to monitor and track the record of violations and maintain the organization of data in the specific institution.

Lastly is the evaluation phase, in this phase, in which the software will be evaluated, the current requirements will be reviewed, changed and additions to requirements will be proposed based on the recommendation and feedback.

Project Structure

The developed study holds the system administrator data, administrator data, administrative data, and the student's data including the accounts the username and the password, the reports, and records. The system has (four) users which are the system administrator, administrator, administrative staff, and the students. Each user account has limited access based on their user requirement and has roles and responsibilities to maintain and organize the system.

Screen Hierarchy:

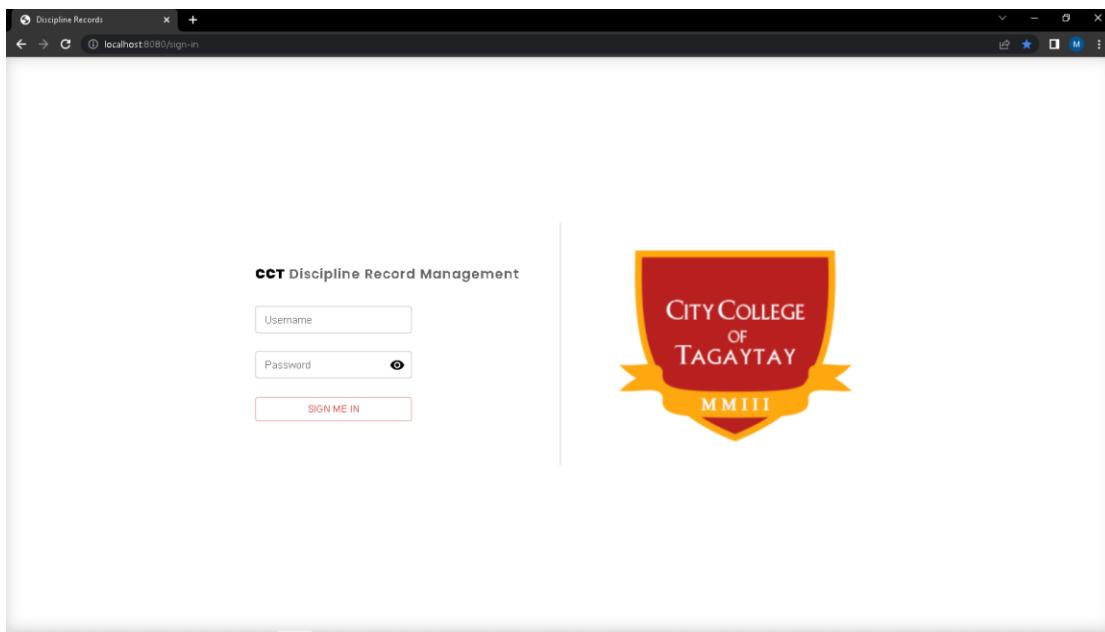


Figure 1. Log-in Form

Figure 1 shows the login form for the Student Discipline Record Management System for City College of Tagaytay. The input box is where the username and password will be inputted. The sign me in button will send the data to be authenticated and the system will send page depending on the user level of the account.

Student Account

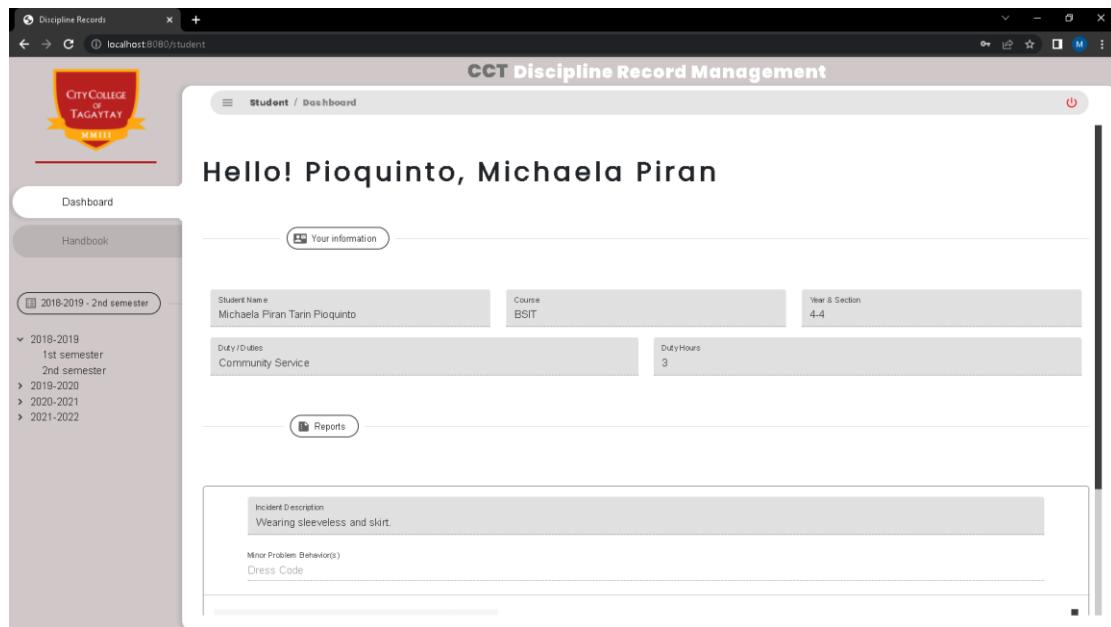


Figure 2. Student Dashboard

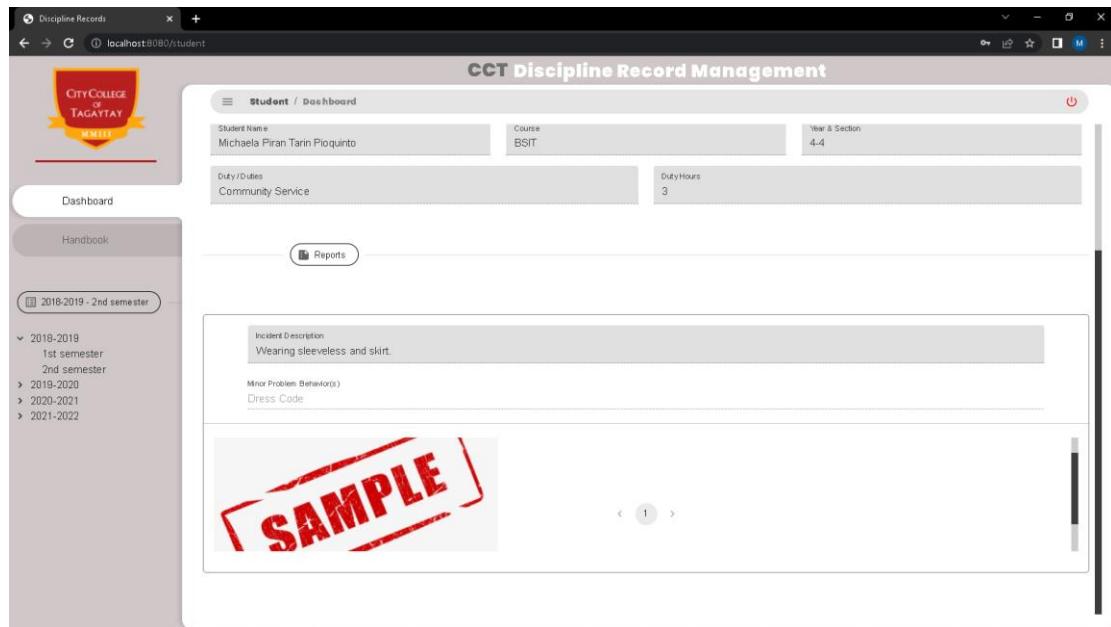


Figure 3. Student Dashboard

Figure 2 and figure 3 shows the student information including the (student name, course, year and section) and incident report including the (duty/duties, duty hours, incident description, violation, and photo evidence).

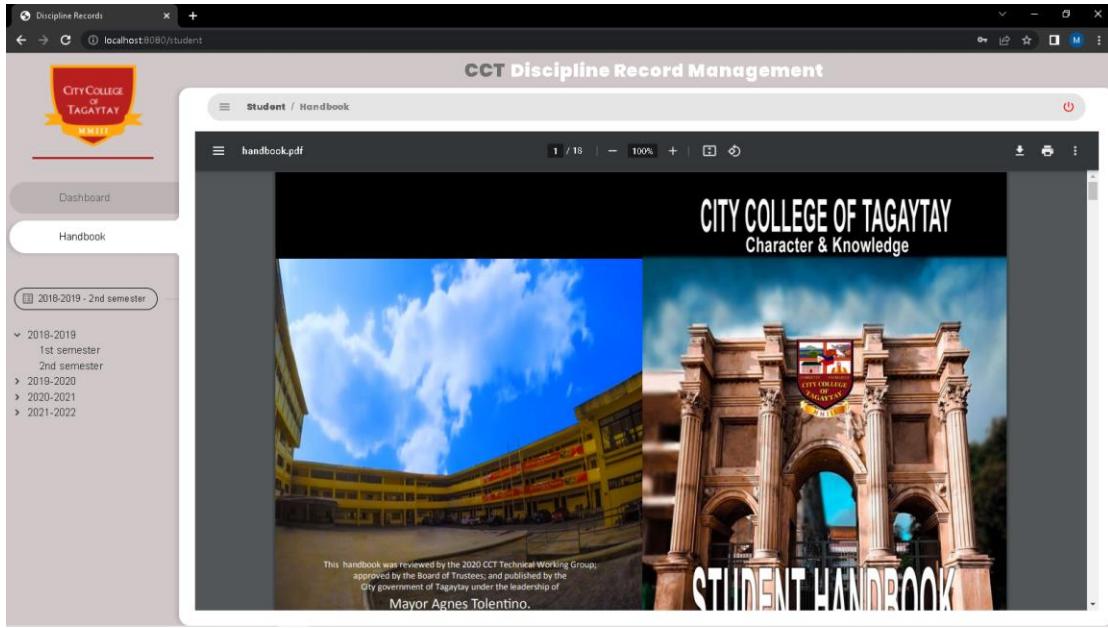


Figure 4. Student Handbook

Figure 4 shows the student handbook policies and guidelines. The student can download and print the copy of the student handbook.

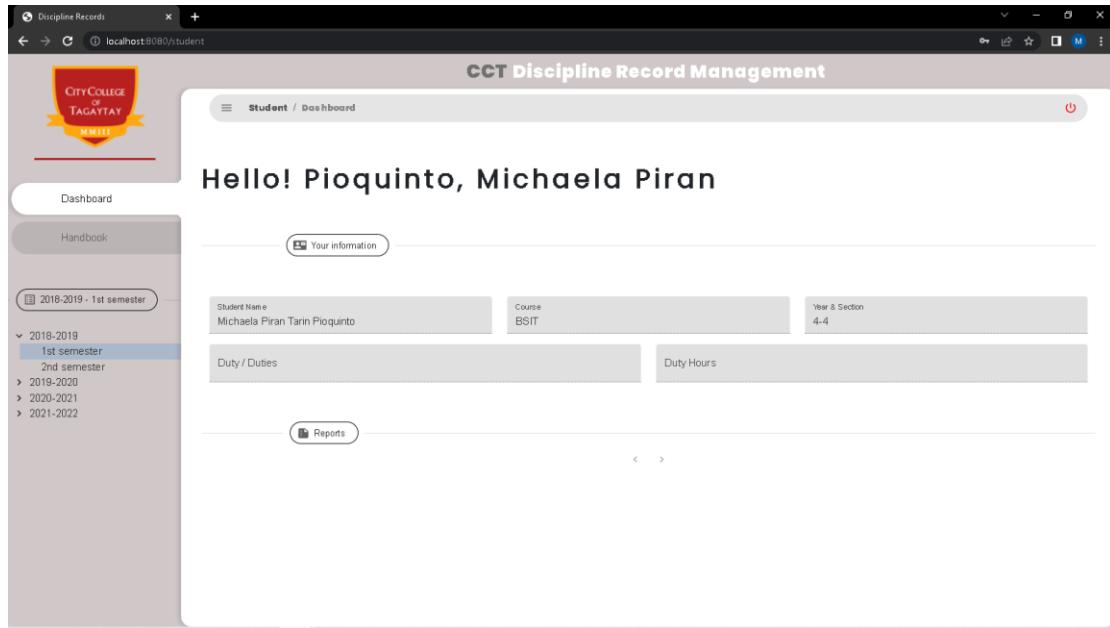


Figure 5. School Year and Semester Sidebar

Figure 5 shows the school year and semester sidebar. The student can view their previous incident report by clicking the year and semester in the side bar.

Administrative Staff Account

The screenshot shows a web-based administrative dashboard for discipline records. At the top, there's a header bar with the title "CCT Discipline Record Management". Below it, a sub-header says "Administrative-Staff / Dashboard". On the left, there's a vertical sidebar with a logo for "CITY COLLEGE OF TAGAYTAY" and a menu with options: Dashboard, Violation, Account, Deactivated Students, Reports, Statistical, and Handbook. The main area contains a table with student data:

Student ID	Full Name	Course / Year / Section	Action
I801168	Chris Ceeejay Poblete Sena	BSIT 4-4	ADD INCIDENT
I801215	Jeniermae Ortiz Pacio	BSIT 4-4	ADD INCIDENT
I801222	Michaela Piran Torin Pioquinto	BSIT 4-4	ADD INCIDENT
I801618	Stella Mae Ranua Evole	BSIT 4-4	ADD INCIDENT

Figure 6. Administrative Staff Dashboard

Figure 6 shows the student list where the Administrative Staff can search the student using their student id and add an incident report using the add incident button.

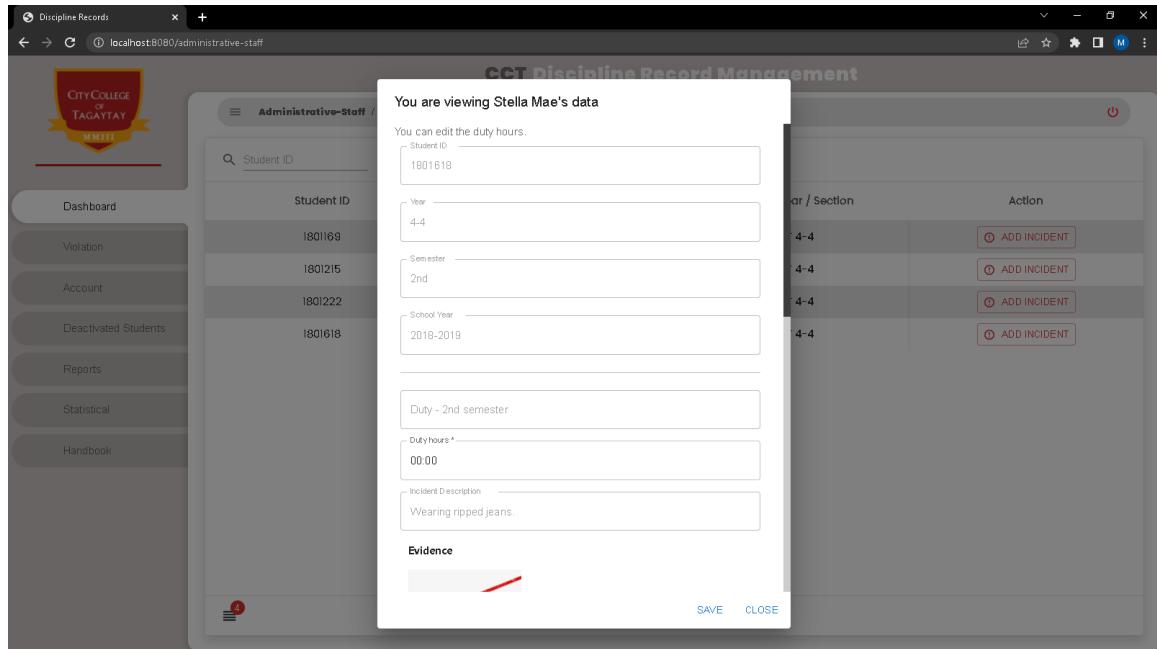


Figure 7. View Student Information and Report

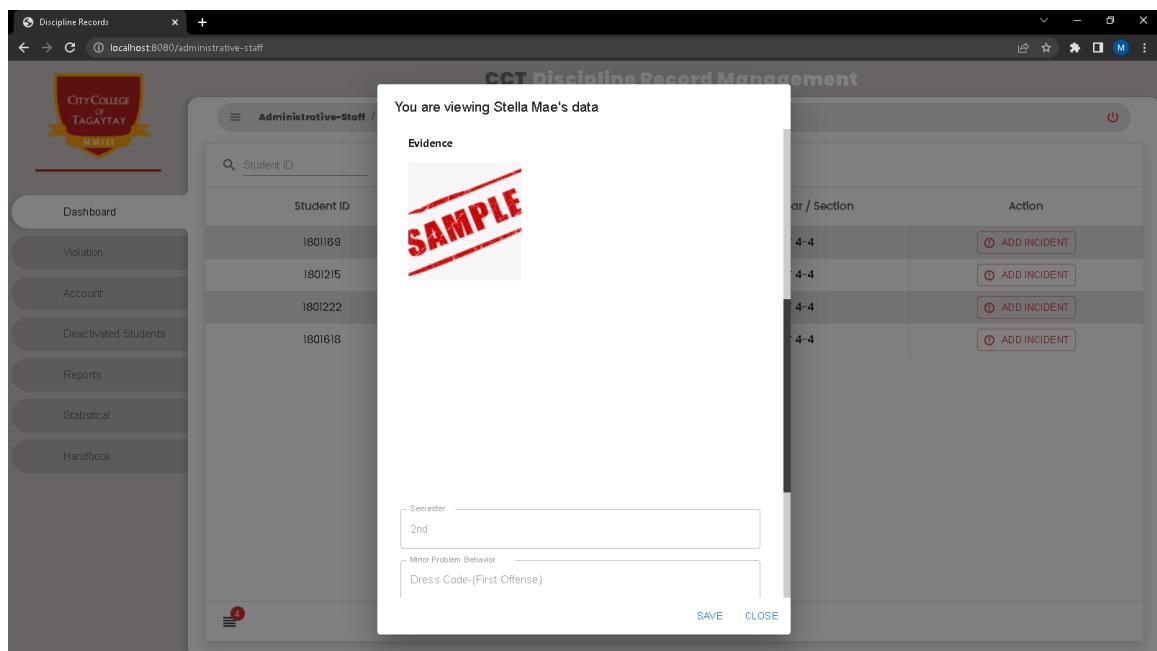


Figure 8. View Student Information and Report

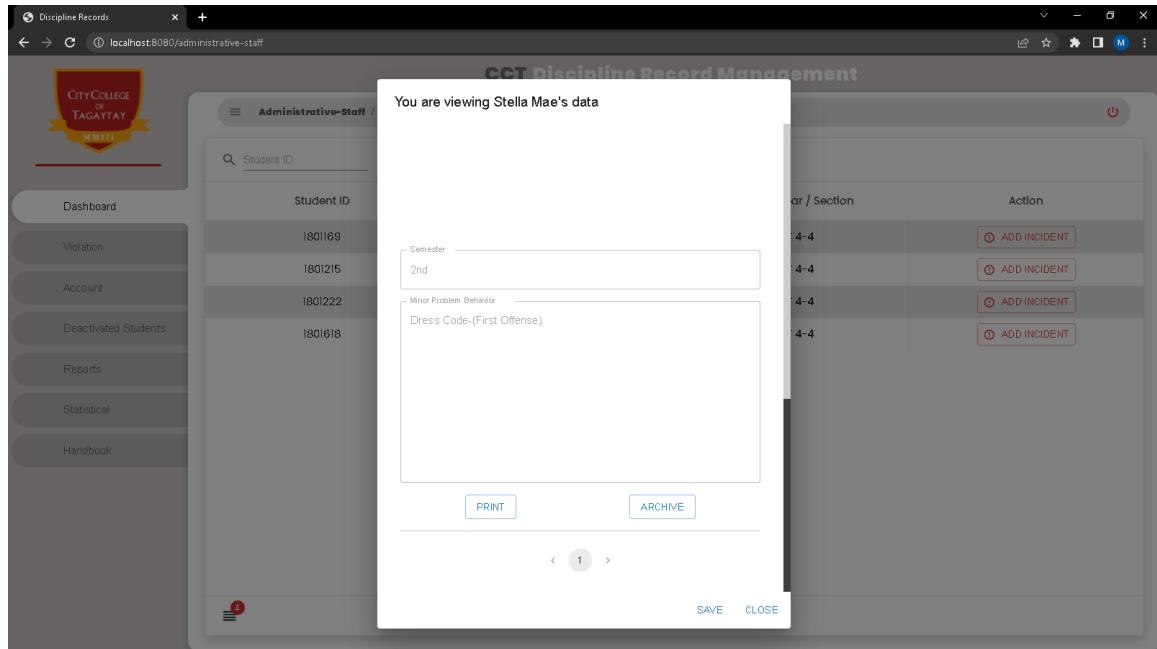


Figure 9. View Student Information and Report

Figures 7 to figure 9 show the information and incident report of the student, the Administrative Staff can print and archive the incident report.

The screenshot shows a web-based application titled "CCT Discipline Record Management". The main title "REPORT SENA" is at the top left. In the center, there is a circular logo for "CITY COLLEGE OF TAGAYTAY DISCIPLINE" with the tagline "CHARACTER • KNOWLEDGE". Below the logo, the title "CITY COLLEGE OF TAGAYTAY STUDENT INCIDENT REPORT" is displayed. The form fields include "Reported By" (04/19/2022), "Title/Role" (Incident no. 6), "Date of Report" (04/19/2022), and "Date of Incident" (mm/dd/yyyy). A section titled "STUDENT INCIDENT INFORMATION" contains fields for "Student Name" (Chris Ceejay Poblote Sena), "Course / Yr / Section" (BSIT 4-4), and "Time of Incident" (00:00 AM PM). A "CLOSE" button is located at the bottom right.

Figure 10. Student Incident Report Form

This screenshot shows a different view of the "CCT Discipline Record Management" application. It features a "REPORT SENA" header and several input fields: "Student ID" (1801169), "Semester" (2nd semester), "Duty", "Duty Time" (Format: 00 hrs/mns), "Location", "Specific Area of Location", "Additional Person(s) Involved", and "Witnesses". A "CLOSE" button is located at the bottom right.

Figure 11. Student Incident Report Form

The screenshot shows a web-based application window titled "CCT Discipline Record Management". The main title bar says "REPORT SENA". Below it, there is a large text input field labeled "Incident Description *". Underneath this field is a button labeled "UPLOAD IMAGE". To the right of the "UPLOAD IMAGE" button is a placeholder text "Add an Image" and a small "+" icon. Below these controls is another text input field labeled "Description of Unacceptable / Unsafe Behavior or Conditions (if applicable)". In the bottom right corner of the form area, there is a blue "CLOSE" button.

Figure 12. Student Incident Report Form

The screenshot shows a continuation of the "CCT Discipline Record Management" application. The main title bar says "REPORT SENA". Below it, there is a large text input field labeled "Resulting Action Executed or Planned". Below this field are two smaller text input fields: "Faculty / Employee Name *" and "Head / Chairperson Name *". Between these two fields is a button labeled "GRIEVANCE". Further down, there is a section titled "PROBLEM BEHAVIOR:" followed by the instruction "MINORS: (REQUIRED IF THERE IS NO MAJOR PROBLEM BEHAVIOR)". There are two checkboxes: one for "Not wearing prescribed school uniform" and one for "Not wearing I.D.". In the bottom right corner of the form area, there is a blue "CLOSE" button.

Figure 13. Student Incident Report Form

REPORT SENA

GRIEVANCE

PROBLEM BEHAVIOR:

MINORS: (REQUIRED IF THERE IS NO MAJOR PROBLEM BEHAVIOR)

- Not wearing prescribed school uniform
- Dress Code
- Loitering
- Careless / unauthorized use of school property
- Other _____
- Not wearing I.D
- Using vulgar words and rough behavior
- Littering
- Unauthorized posting of announcements, posters and notices.

MAJORS: (AUTOMATIC OFFICE REFERRAL)

- Using another persons, ID/COR, lending of ID/COR
- Unauthorized possession of examination materials, and other documents
- Cheating during examination
- Grave act of disrespect
- Bullying in any form
- Forging, Falsifying or Tampering of any Academic , Official Records of Documents
- Having somebody else take an examination for another
- Plagiarism
- Involvement in any form of attack to other person
- Other _____

CLOSE

Figure 14. Student Incident Report Form

REPORT SENA

ADMINISTRATIVE DECISION: (Required if there is a major problem behavior)

- Conference w/ student
- Community Service
- Other _____
- Parent contact
- Oral Reprimand / Written Apology from the Students
- Detention
- Oral and Written Reprimand / Written Apology from the Students and Counselling

Suspension Dismissal Exclusion

CLEAR RADIO BUTTONS

Initial Action Given

CLOSE

Figure 15. Student Incident Report Form

REPORT SENA

Administrative Comments and/or Follow Up:

SUBMIT

CLOSE

Figure 16. Student Incident Report Form

Figure 10 to figure 16 show the form that the Administrative Staff needs to fill out to file an incident report to the student.

CCT Discipline Record Management

Violation Name	First Offense	Second Offense	Third Offense
Scandalous Display of affection	Reprimand	One-week suspension	Dismissal
Smoking	Reprimand	One (1) week suspension	Two (2) weeks suspension
Unauthorized use of school facilities	Three (3) hours community campus service	Six (6)hours community campus service	Two (2) days suspension

Figure 17. Violation and Sanction

Figure 17 shows the list of violations and sanctions. Administrative Staff can search the violation using its violation name.

The screenshot shows a web-based application titled "CCT Discipline Record Management". The left sidebar contains a logo for "CITY COLLEGE OF TAGAYTAY" and a navigation menu with links: Dashboard, Violation, Account, Deactivated Students, Reports, Statistical, and Handbook. The main content area is titled "Administrative-Staff / Account" and displays a table with four columns: Student ID, Full name, Course / Year / Section, and Status. The table contains four rows of data:

Student ID	Full name	Course / Year / Section	Status
I801168	Sena, Chris Ceeejay Poblete	BSIT 4-4	<input type="checkbox"/>
I801215	Pacio, Jenier Mae Ortiz	BSIT 4-4	<input type="checkbox"/>
I801222	Picquinto, Michaela Piran Tarin	BSIT 4-4	<input type="checkbox"/>
I801618	Evale, Stella Mae Ranua	BSIT 4-4	<input type="checkbox"/>

Figure 18. Student Account List

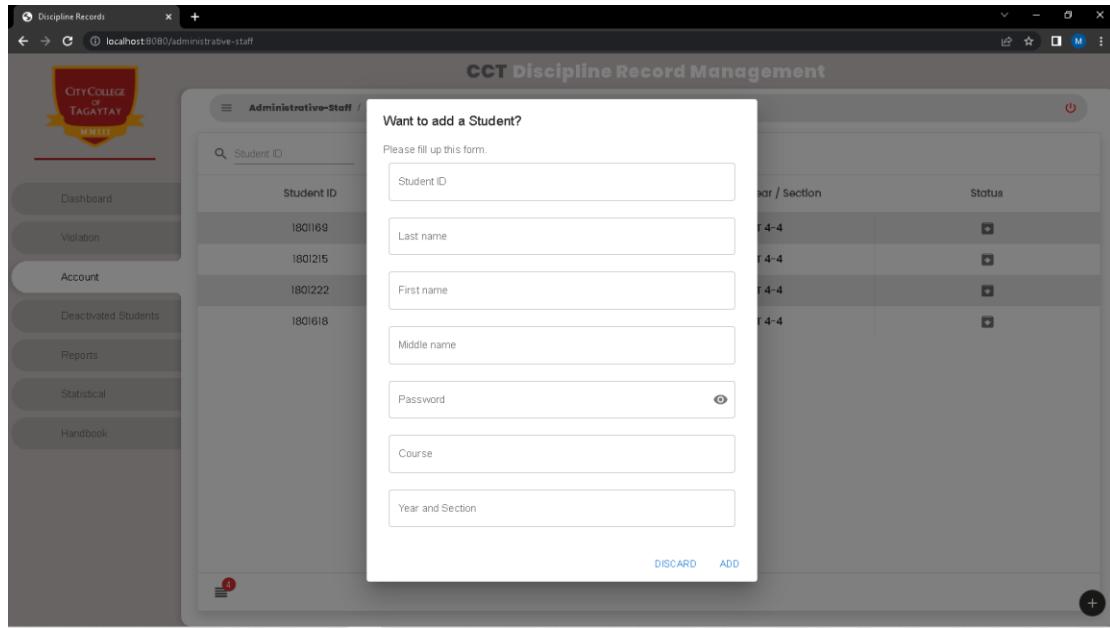


Figure 19. Student Account List

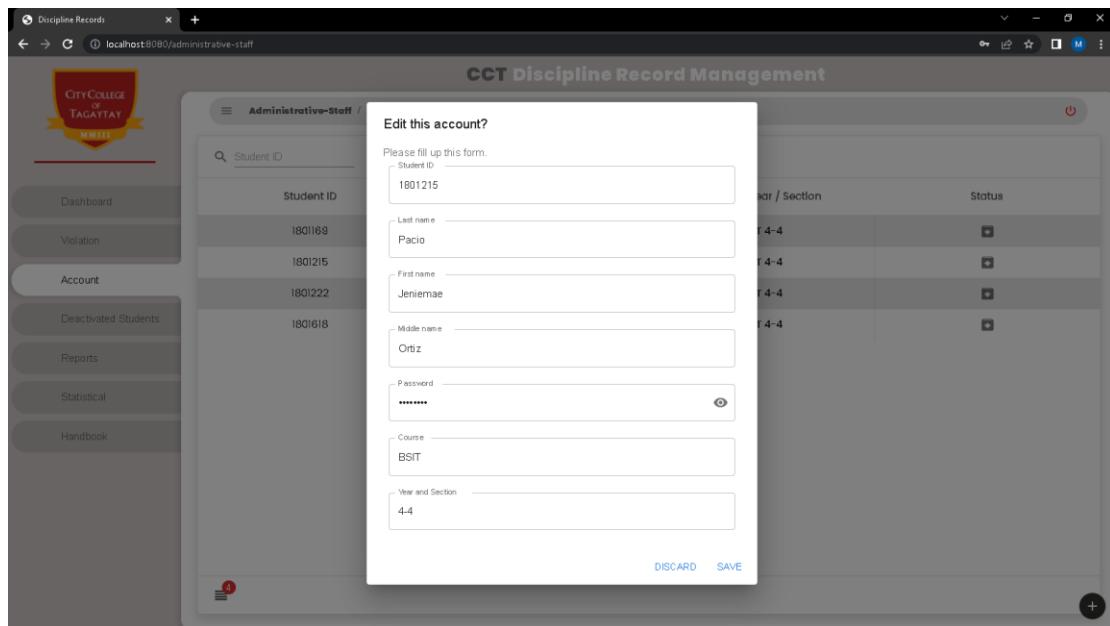
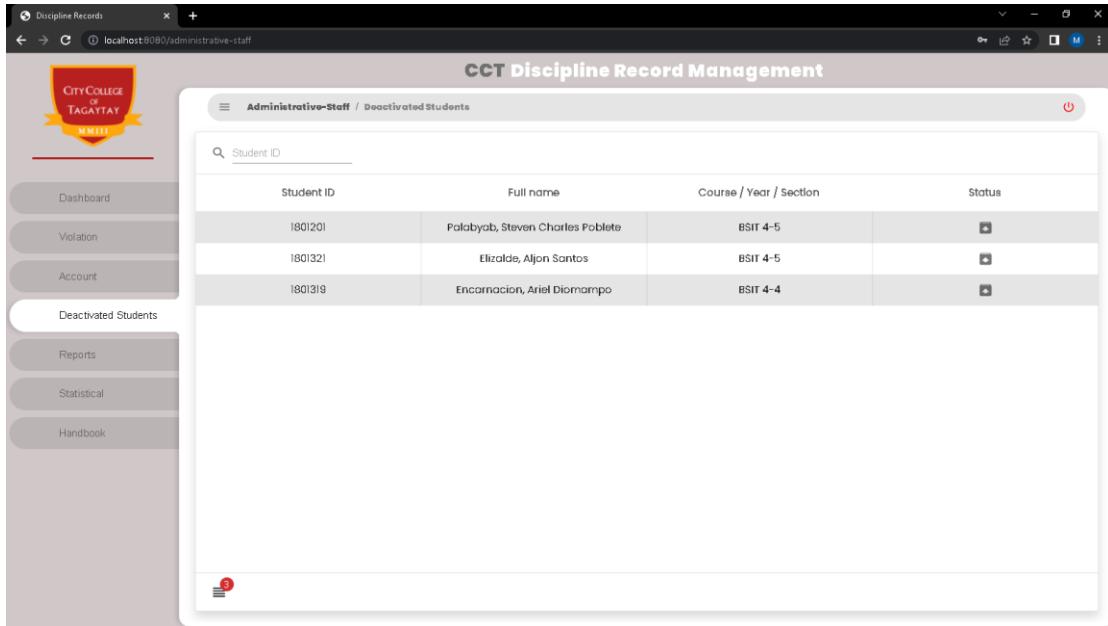


Figure 20. Student Account List

Figure 18 to figure 20 shows the list of students' accounts, wherein Administrative Staff can add the student's account and search students using the

student id. The Administrative Staff can add, edit and delete the Administrator account.



The screenshot shows a web-based application titled "CCT Discipline Record Management". The main title bar says "CCT Discipline Record Management" and the sub-page title is "Administrative-Staff / Deactivated Students". On the left, there is a vertical sidebar with the "CITY COLLEGE TAGAYTAY" logo at the top. Below the logo, the sidebar has several buttons: "Dashboard", "Violation", "Account", "Deactivated Students" (which is highlighted in white), "Reports", "Statistical", and "Handbook". The main content area displays a table with three rows of deactivated student information. The columns are "Student ID", "Full name", "Course / Year / Section", and "Status". The first row contains Student ID 1801201, Full name Palabyab, Steven Charles Poblete, Course BSIT 4-5, and Status (indicated by a small icon). The second row contains Student ID 1801321, Full name Elizalde, Aljon Santos, Course BSIT 4-5, and Status. The third row contains Student ID 1801319, Full name Encarnacion, Ariel Diomampo, Course BSIT 4-4, and Status. A search bar labeled "Student ID" is located above the table. At the bottom of the main content area, there is a small red circular icon with a question mark.

Student ID	Full name	Course / Year / Section	Status
1801201	Palabyab, Steven Charles Poblete	BSIT 4-5	[Status Icon]
1801321	Elizalde, Aljon Santos	BSIT 4-5	[Status Icon]
1801319	Encarnacion, Ariel Diomampo	BSIT 4-4	[Status Icon]

Figure 21. Deactivated Student Account List

Figure 21 shows the list of the deactivated student account. The Administrative Staff can activate the deactivated students' account, and can search the student using the student id.

The screenshot shows a web-based application titled "CCT Discipline Record Management". The left sidebar contains a logo for "City College of Tagaytay" and a navigation menu with links: Dashboard, Violation, Account, Deactivated Students, Reports (which is selected), Statistical, and Handbook. The main content area is titled "Administrative-Staff / Reports" and displays a table of active student incidents. The table has columns: Student ID, Student Name, Incident Description, Reported By, Date Of Report, Problem Behavior, and Action. Three rows of data are shown:

Student ID	Student Name	Incident Description	Reported By	Date Of Report	Problem Behavior	Action
1801222	Michaela Piran Tarin Pioquinto	Wearing sleeveless and skirt.	Chris Ceejay Sena	4-18-2022	Dress Code	
1801215	Jeniema Ortiz Pacio	Wearing different school uniform.	Stella Mae Evale	4-18-2022	Not wearing prescribed school uniform	
1801618	Stella Mae Ranua Evale	Wearing ripped jeans.	Jeniema Pacio	4-18-2022	Dress Code	

At the bottom right of the table area, it says "NON-ARCHIVED".

Figure 22. Active Student Incident Report List

Figure 22 shows the students active incident report list

The screenshot shows the same web-based application as Figure 22, but the main content area is titled "Administrative-Staff / Reports" and displays a table of inactive student incidents. The table has the same structure as Figure 22. Two rows of data are shown:

Student ID	Student Name	Incident Description	Reported By	Date Of Report	Problem Behavior	Action
1801169	Chris Ceejay Poblete Sena	Scattering garbage in hallway.	Michaela Piran Pioquinto	4-18-2022	Littering	
1801169	Chris Ceejay Poblete Sena	Wearing ripped jeans.	Michaela Piran Pioquinto	4-19-2022	Dress Code	

At the bottom right of the table area, it says "ARCHIVED".

Figure 23. Inactive Student Incident Report List

Figure 23 shows the students in-active incident report list

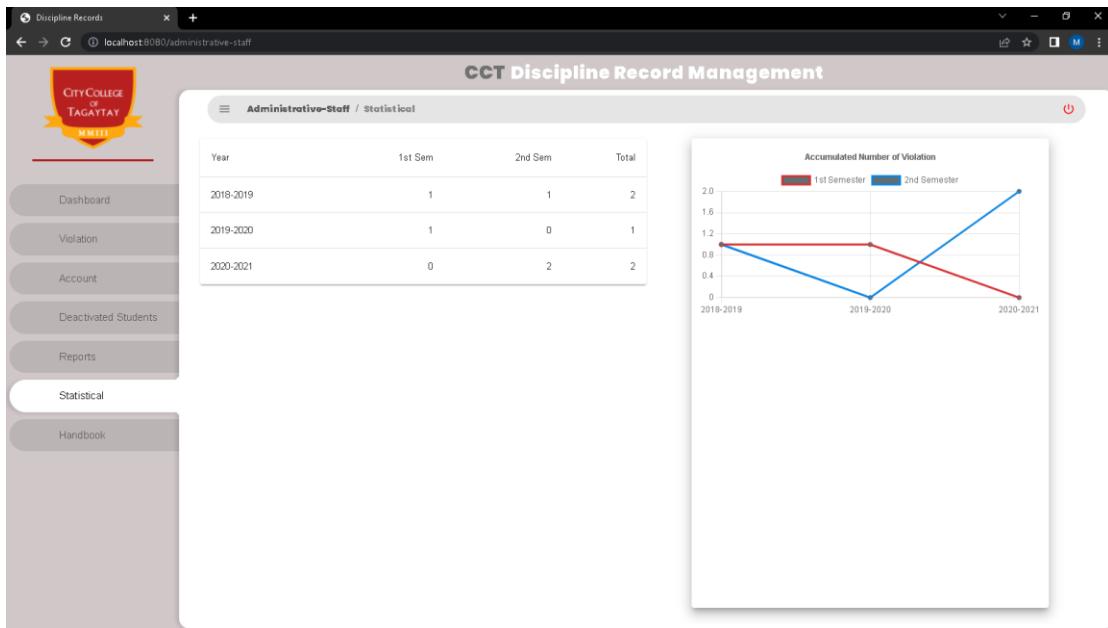


Figure 24. Statistical Measurement of Violations

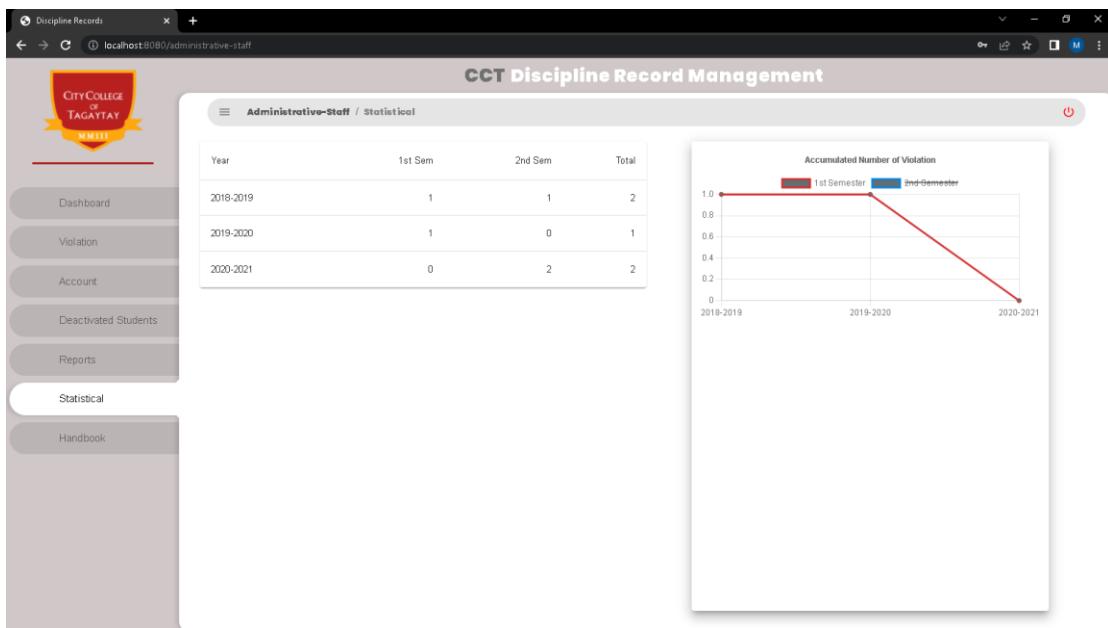


Figure 25. Statistical Measurement of Violations

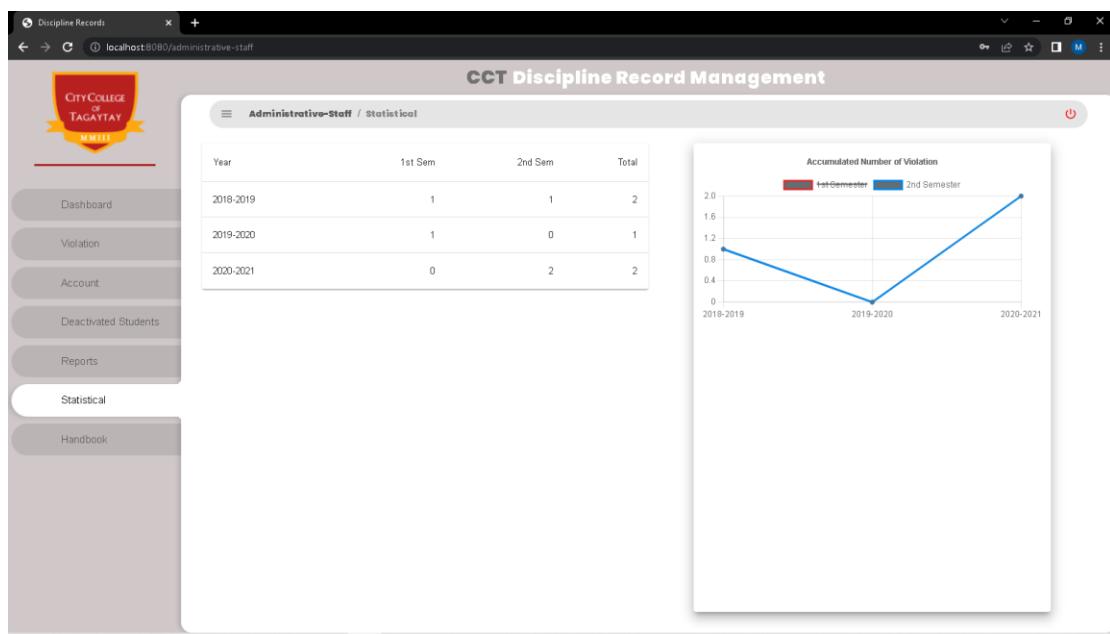


Figure 26. Statistical Measurement of Violations

Figure 24 to figure 26 shows the total violations in every school year and semester, the Administrative Staff can filter the 1st and 2nd semester.

Administrator Account

The screenshot shows the CCT Discipline Record Management system's administrator dashboard. On the left is a sidebar with a logo for 'CITY COLLEGE OF TAGAYTAY MMIII' and a navigation menu including 'Dashboard', 'Violation', 'Account', 'S.Y & Semester', 'Statistical', 'Handbook', and 'Trash'. The main area has a title 'CCT Discipline Record Management' and a sub-header 'Administrator / Dashboard'. It features a search bar for 'Student ID' and a table with columns 'Student ID', 'Full Name', and 'Course / Year / Section'. The table contains four rows of data:

Student ID	Full Name	Course / Year / Section
1801169	Chris Ceejay Poblete Sena	BSIT 4-4
1801215	Jenierme Ortiz Pacio	BSIT 4-4
1801222	Michaela Piran Tarin Picquinto	BSIT 4-4
1801618	Stella Mae Ranua Evale	BSIT 4-4

Figure 27. Administrator Dashboard

This screenshot shows a modal window titled 'You are viewing Michaela Piran's data' overlaid on the administrator dashboard. The modal contains fields for 'Student ID' (1801222), 'Year' (4-4), 'Semester' (2nd), 'School Year' (2018-2019), 'Duty - 2nd semester', 'Duty hours*' (00:00), and 'Incident Description' (Wearing sleeveless and skirt). At the bottom of the modal is a section labeled 'Evidence' with a small red icon. In the top right corner of the modal is a 'CLOSE' button.

Figure 28. Administrator Dashboard

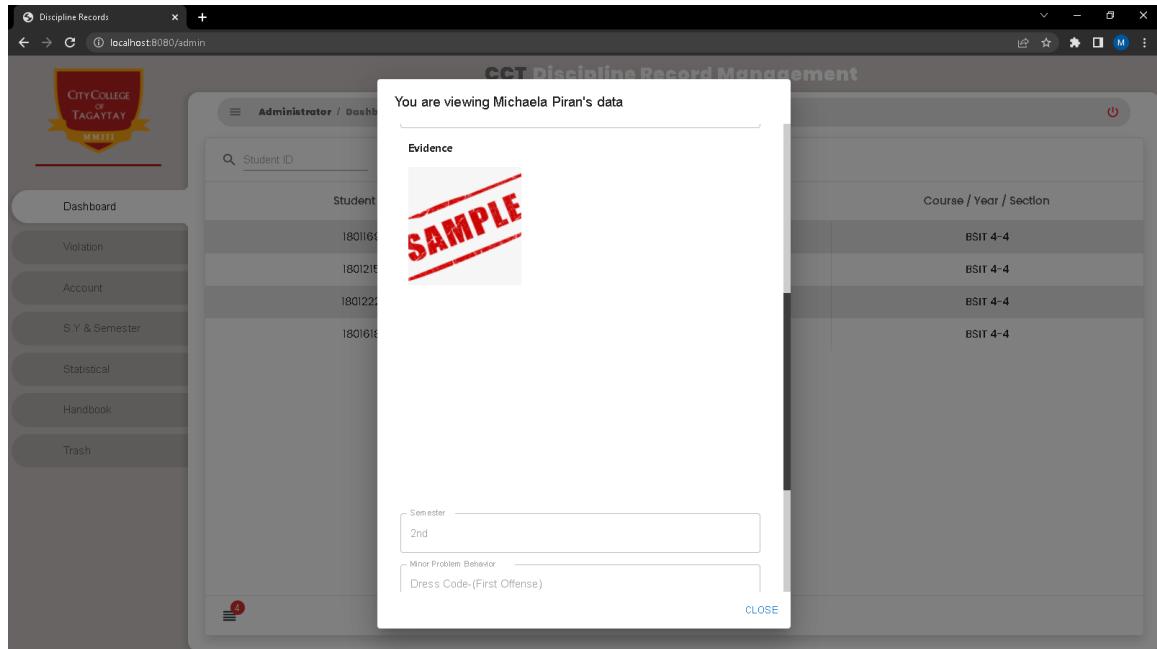


Figure 29. Administrator Dashboard

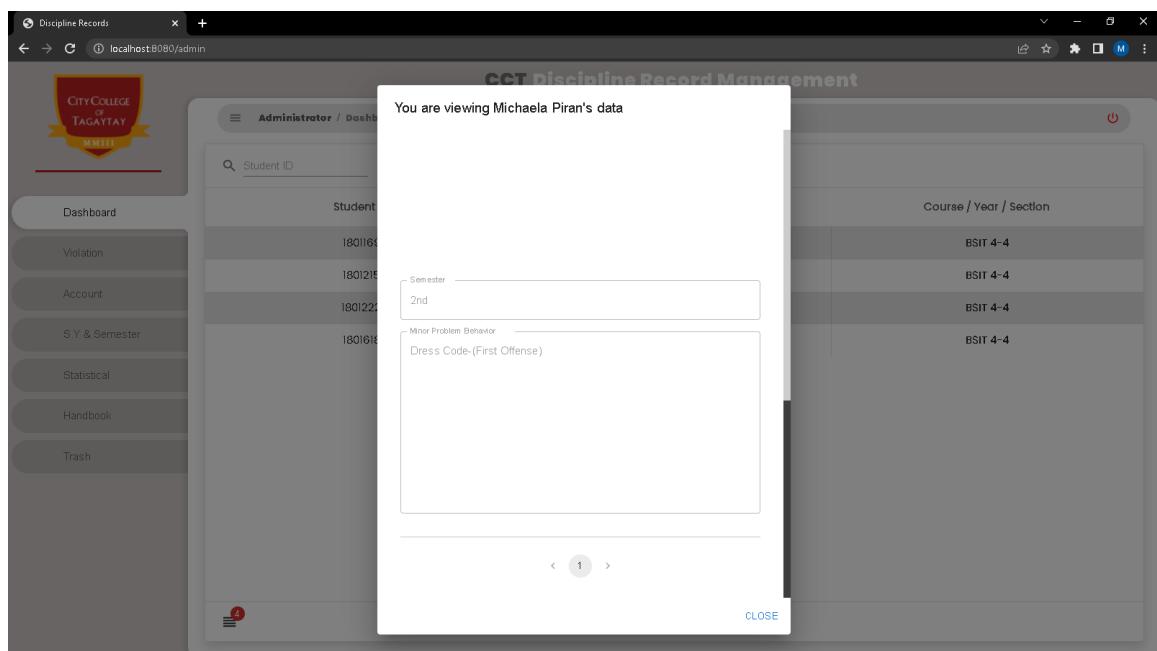


Figure 30. Administrator Dashboard

Figure 27 to figure 30 shows the list of students and view their information and incident report. The Administrator can search the student using the student id.

The screenshot displays a web-based application titled "CCT Discipline Record Management". The main content area is titled "Administrator / Violation". A search bar labeled "Violation Name" is present. Below it is a table with columns: "Violation Name", "First Offense", "Second Offense", "Third Offense", and "Action". The table contains three rows of data:

Violation Name	First Offense	Second Offense	Third Offense	Action
Scandalous Display of affection	Reprimand	One-week suspension	Dismissal	
Smoking	Reprimand	One (1) week suspension	Two (2) weeks suspension	
Unauthorized use of school facilities	Three (3) hours community campus service	Six (6)hours community campus service	Two (2) days suspension	

A sidebar on the left lists navigation options: Dashboard, Violation (which is selected), Account, S.Y & Semester, Statistical, Handbook, and Trash. The URL in the browser is "localhost:8080/admin".

Figure 31. Violation and Sanction List

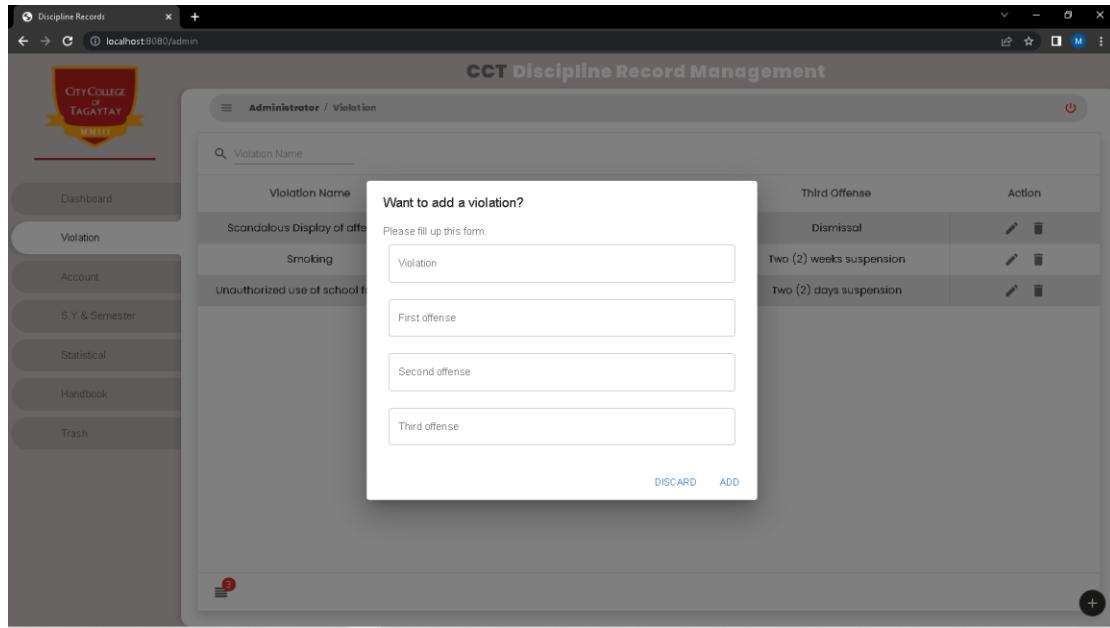


Figure 32. Violation and Sanction List

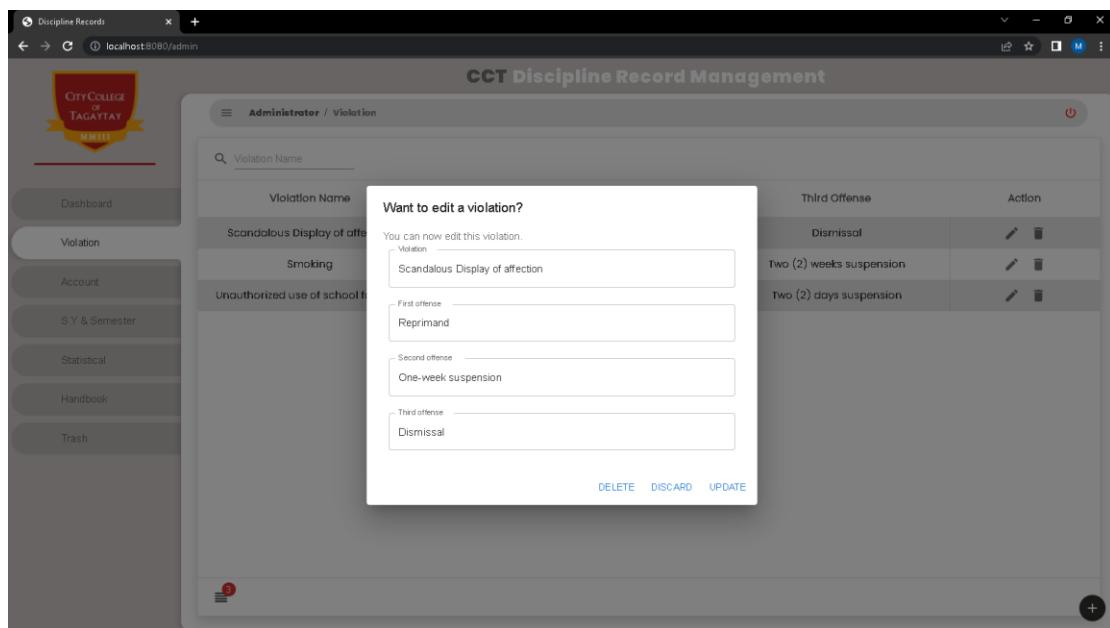


Figure 33. Violation and Sanction List

Figure 31 to figure 33 shows the list of violations and sanctions. Administrator can add, edit and delete the violation and sanction.

The screenshot shows a web-based application titled "CCT Discipline Record Management". On the left, there is a vertical sidebar with the "CITY COLLEGE OF TAGUIG" logo at the top. Below the logo, the sidebar contains several menu items: Dashboard, Violation, Account (which is currently selected), S.Y & Semester, Statistical, Handbook, and Trash. The main content area is titled "Administrator / Account". It features a search bar labeled "Username" and a table with three columns: "Username", "Role", and "Status". A single row is visible in the table, showing "adminstaff" in the Username column, "Administrative Staff" in the Role column, and a blue circular icon with "Activated" next to it. At the bottom right of the main content area, there is a small red circular icon with a white number "1".

Figure 34. Administrative Staff Account List

This screenshot shows the same web-based application as Figure 34. A modal window is open in the center of the screen, titled "Want to add an Administrative Staff?". The modal contains a form with six input fields: "Last Name", "First Name", "Middle Name", "Username", "Email", and "Password". Below the form are two buttons: "DISCARD" and "ADD". The background of the main content area is dimmed, and the "Account" menu item in the sidebar is highlighted with a light gray background.

Figure 35. Administrative Staff Account List

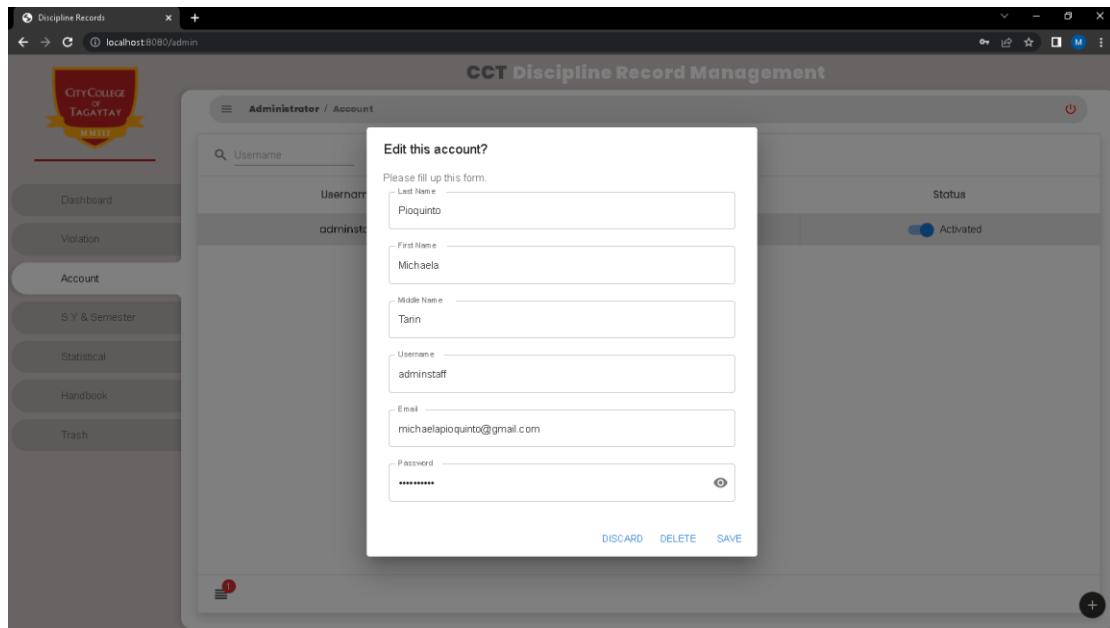


Figure 36. Administrative Staff Account List

Figure 34 to figure 36 shows the list of administrative staff account. The administrator can add, edit and delete the administrative staff account.

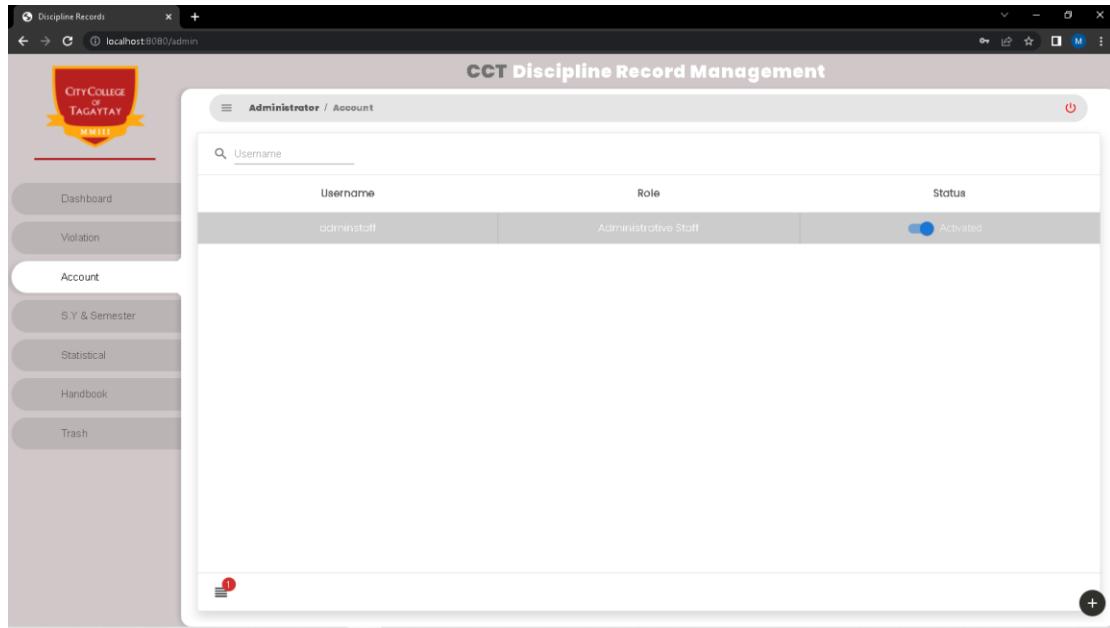
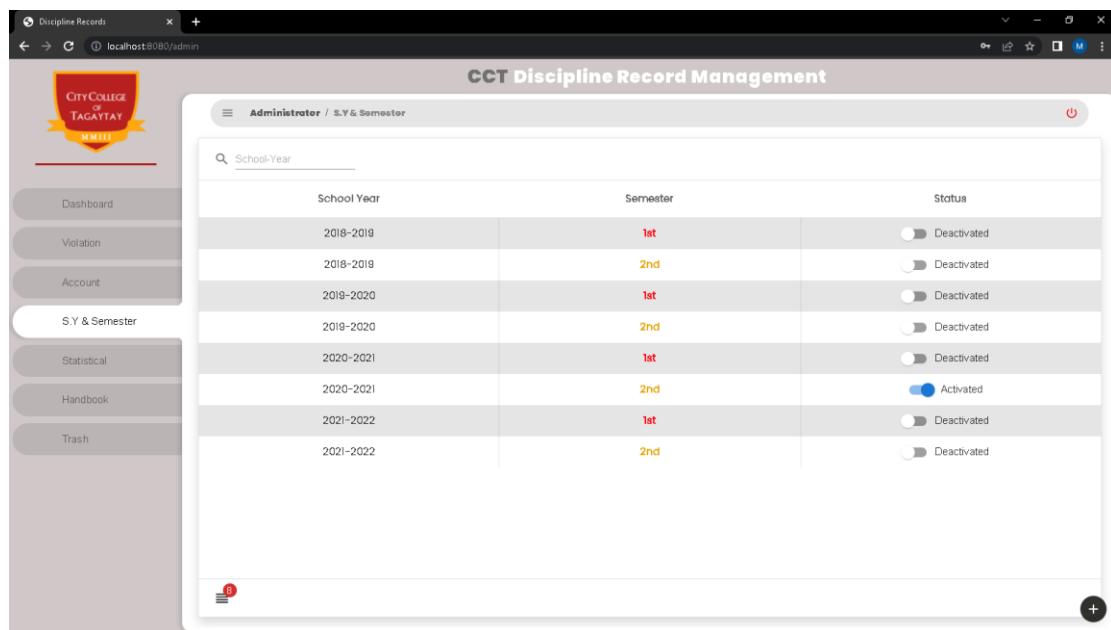


Figure 37. Activated and Deactivated Administrative Staff Account



Figure 38. Activated and Deactivated Administrative Staff Account

Figure 37 and figure 38 shows the status of the Administrative Staff account. The Administrator can activate and deactivate the status of the account.



The screenshot shows a web-based administrative interface titled "CCT Discipline Record Management". The left sidebar contains navigation links: Dashboard, Violation, Account, S.Y & Semester (which is the active page), Statistical, Handbook, and Trash. The main content area displays a table titled "Administrator / S.Y & Semester". The table has columns for "School Year", "Semester", and "Status". The data is as follows:

School Year	Semester	Status
2018-2019	1st	<input type="checkbox"/> Deactivated
2018-2019	2nd	<input type="checkbox"/> Deactivated
2019-2020	1st	<input type="checkbox"/> Deactivated
2019-2020	2nd	<input type="checkbox"/> Deactivated
2020-2021	1st	<input type="checkbox"/> Deactivated
2020-2021	2nd	<input checked="" type="checkbox"/> Activated
2021-2022	1st	<input type="checkbox"/> Deactivated
2021-2022	2nd	<input type="checkbox"/> Deactivated

Figure 39. School Year and Semester List

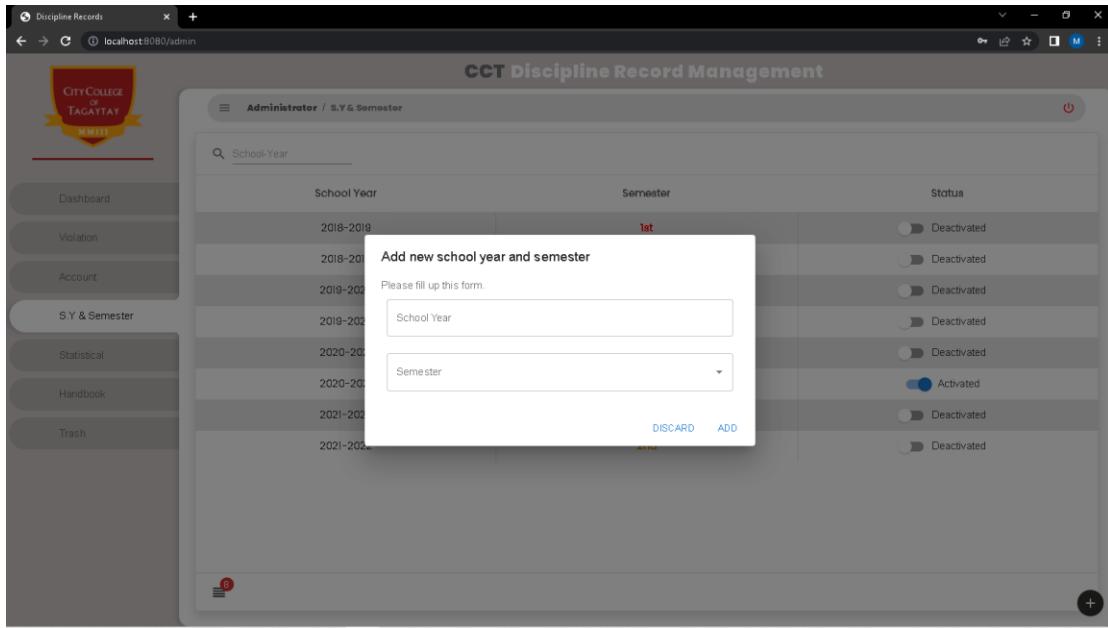


Figure 40. School Year and Semester List

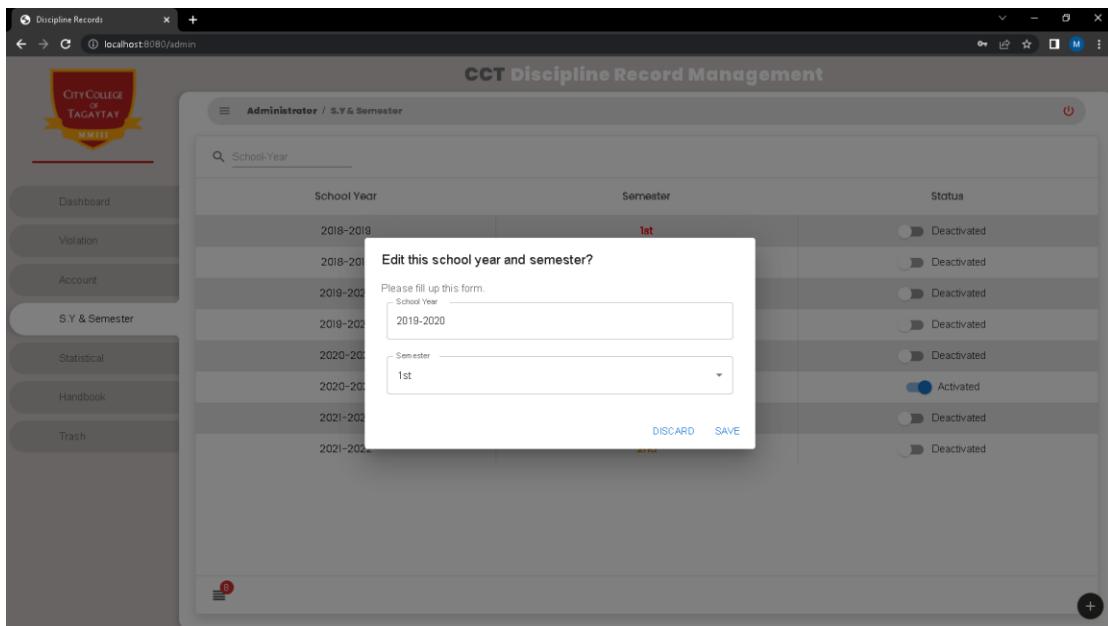


Figure 41. School Year and Semester List

Figure 39 to figure 41 shows the list of school year and semester. The administrator can add, edit, and delete the school year and semester.

The screenshot shows a web-based application titled "CCT Discipline Record Management". The left sidebar contains a logo for "CITY COLLEGE OF TAGUIG" and a navigation menu with links: Dashboard, Violation, Account, S.Y & Semester (which is highlighted), Statistical, Handbook, and Trash. The main content area is titled "Administrator / S.Y & Semester". It features a table with columns: School Year, Semester, and Status. The table lists the following data:

School Year	Semester	Status
2018-2019	1st	Activated
2018-2019	2nd	Deactivated
2019-2020	1st	Deactivated
2019-2020	2nd	Deactivated
2020-2021	1st	Deactivated
2020-2021	2nd	Deactivated
2021-2022	1st	Deactivated
2021-2022	2nd	Deactivated

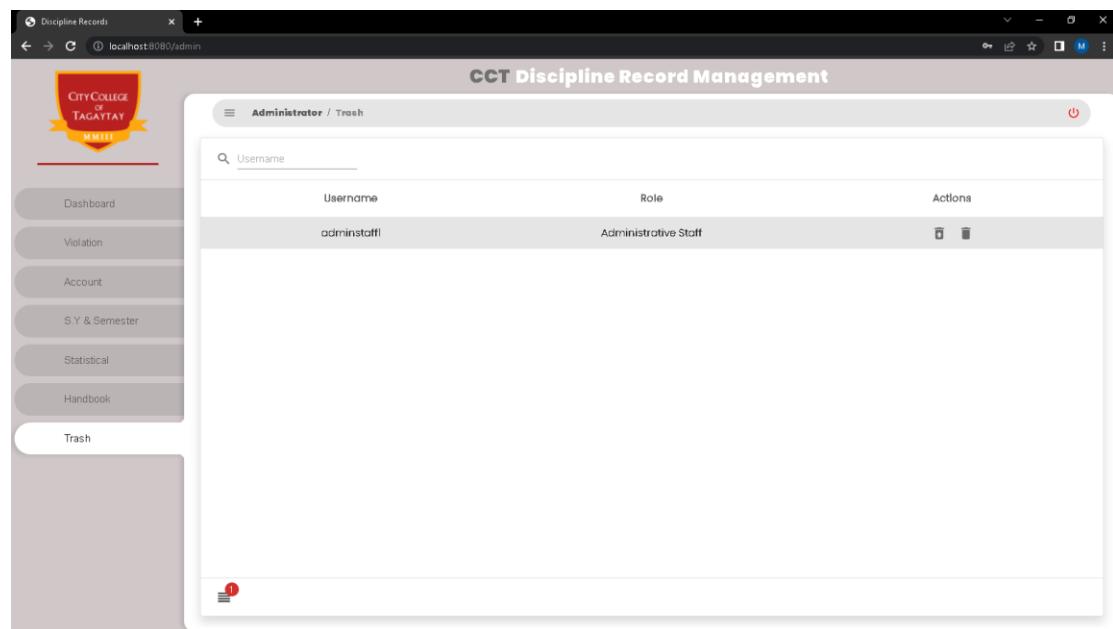
Figure 42. Activated and Deactivated School Year and Semester

This screenshot is identical to Figure 42, showing the same web-based application interface and data table. The table lists the following data:

School Year	Semester	Status
2018-2019	1st	Deactivated
2018-2019	2nd	Activated
2019-2020	1st	Deactivated
2019-2020	2nd	Deactivated
2020-2021	1st	Deactivated
2020-2021	2nd	Deactivated
2021-2022	1st	Deactivated
2021-2022	2nd	Deactivated

Figure 43. Activated and Deactivated School Year and Semester

Figure 42 and figure 43 shows the status of the school year and semester. The Administrator can activate and deactivate the status of the school year and semester.



The screenshot displays a web-based application titled "CCT Discipline Record Management". The main header includes the college's logo and the title. Below the header, a navigation bar shows the current path: "Administrator / Trash". On the left, there is a vertical sidebar with several menu items: Dashboard, Violation, Account, S.Y & Semester, Statistical, Handbook, and Trash. The "Trash" item is currently selected and highlighted. The main content area is titled "Administrator / Trash" and contains a table with two columns: "Username" and "Role". A single row is visible, showing "adminstaff1" as the Username and "Administrative Staff" as the Role. To the right of the table, there are two small icons: a trash can and a restore button. At the bottom of the content area, there is a small red circular icon with the number "1".

Figure 44. Recycle Bin of Administrative Staff Account

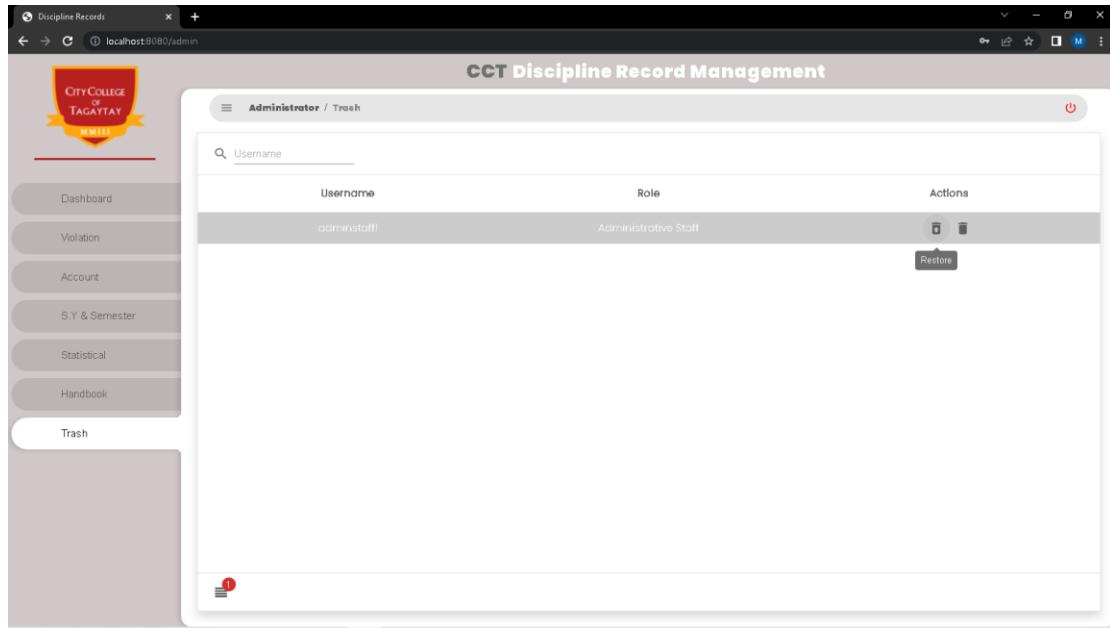


Figure 45. Recycle Bin of Administrative Staff Account

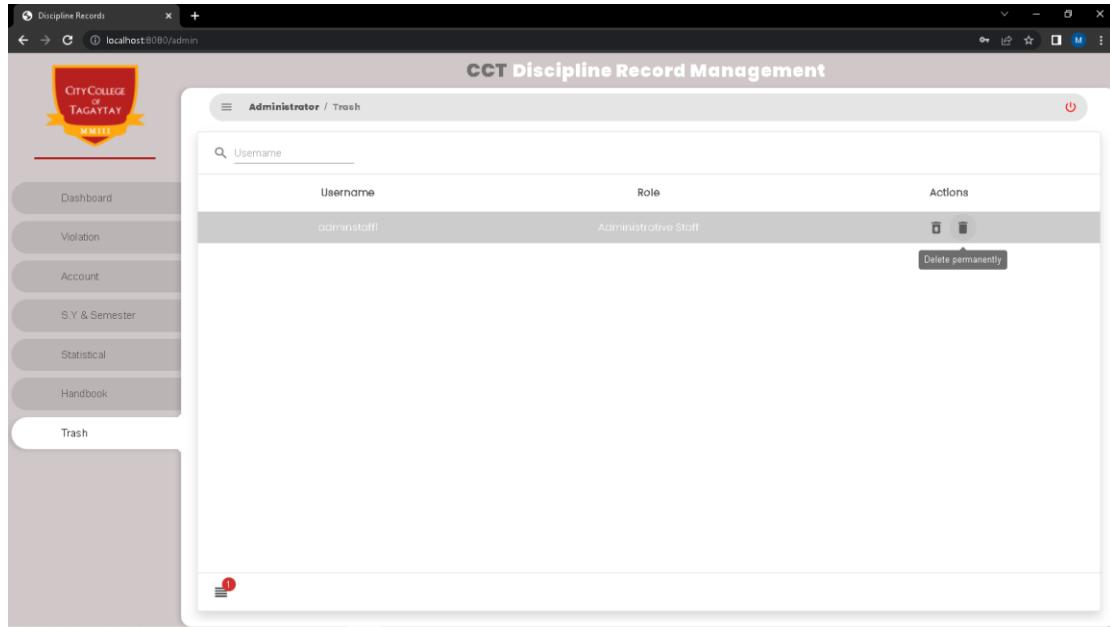


Figure 46. Recycle Bin of Administrative Staff Account

Figure 44 to 46 shows the list of deleted Administrative Staff account. The Administrator can restore the account and delete it permanently.

System Administrator Account

The screenshot shows a web-based application titled "CCT Discipline Record Management". The left sidebar contains a logo for "CITY COLLEGE OF TAGAYTAY MMIII" and navigation links: Dashboard, Violation, Account, Statistical, Handbook, and Trash. A "BACK UP" button is also present. The main content area displays a table with four rows of student data:

Student ID	Full Name	Course / Year / Section
I801169	Chris Ceejay Poblete Sena	BSIT 4-4
I801215	Jenierme Ortiz Pacio	BSIT 4-4
I801222	Michaela Piran Tarin Picquinto	BSIT 4-4

Figure 47. System Administrator Dashboard

The screenshot shows a modal window titled "You are viewing Michaela Piran's data". The modal contains the following fields:

- Student ID: I801222
- Year: 4-4
- Semester: 2nd
- School Year: 2018-2019
- Duty - 2nd semester
- Duty hours*: 00:00
- Incident Description: Wearing sleeveless and skirt.

The modal has a "CLOSE" button at the bottom right. The background of the dashboard shows the same student list as Figure 47.

Figure 48. System Administrator Dashboard

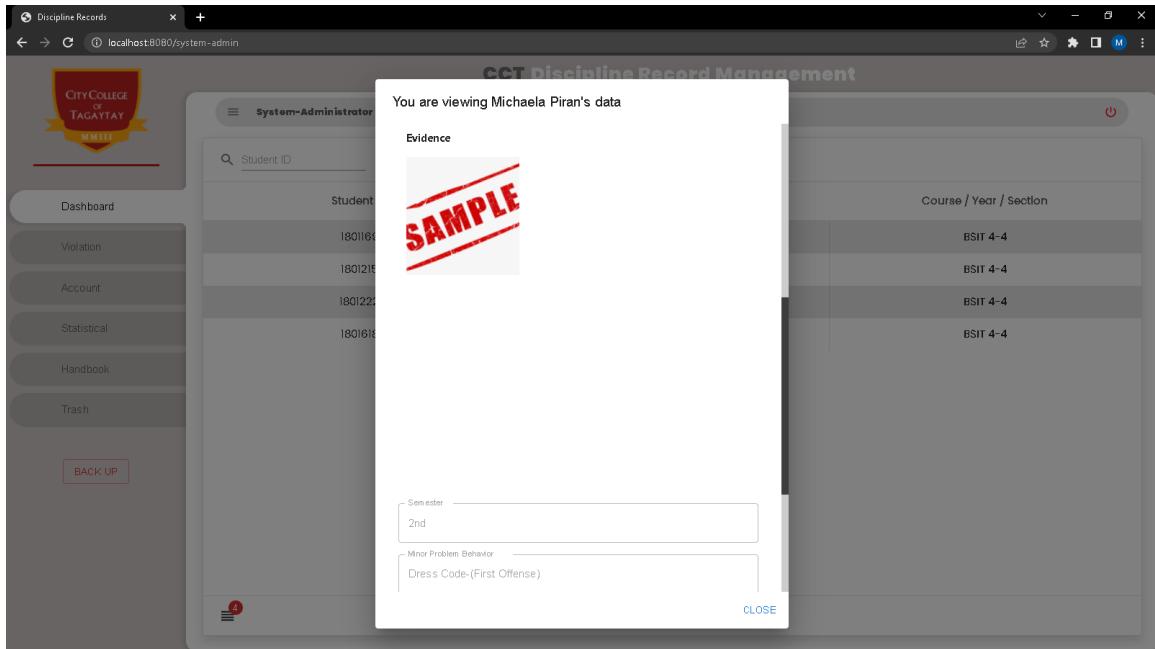


Figure 49. System Administrator Dashboard

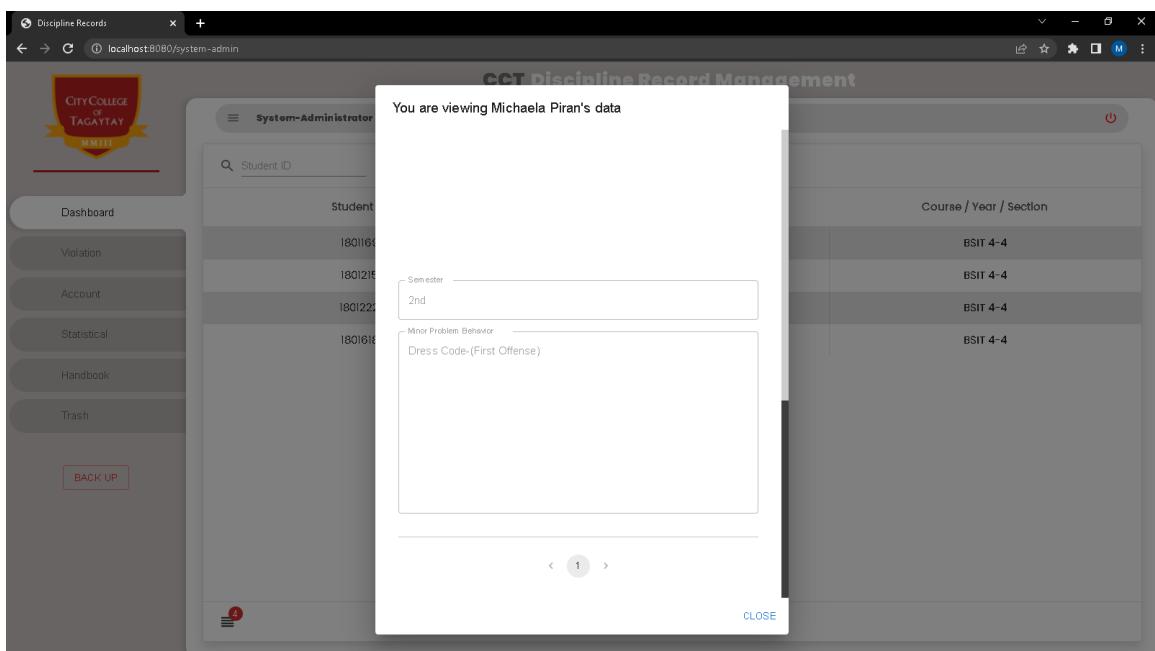
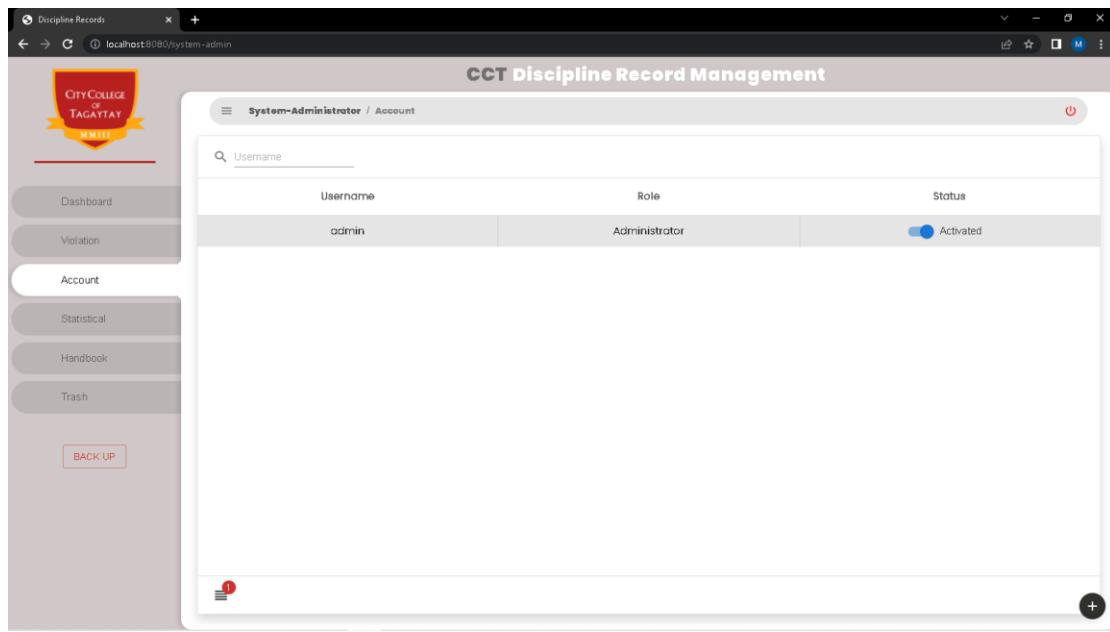


Figure 50. System Administrator Dashboard

Figure 47 to figure 50 shows the list of students. The System Administrator can search for the student using the student id and can view the student information and its incident report.



The screenshot displays a web-based application titled "CCT Discipline Record Management". The interface includes a sidebar on the left with the college's logo and navigation links: Dashboard, Violation, Account (which is highlighted), Statistical, Handbook, and Trash. A "BACK UP" button is also present. The main content area is titled "System-Administrator / Account" and contains a table with one row of data. The table columns are "Username", "Role", and "Status". The data row shows "admin" as the Username, "Administrator" as the Role, and a blue circle with "Activated" next to it. There are "Edit" and "Delete" icons at the bottom right of the table row. The URL in the browser bar is "localhost:8080/system-admin".

Username	Role	Status
admin	Administrator	Activated

Figure 51. Administrator Account List

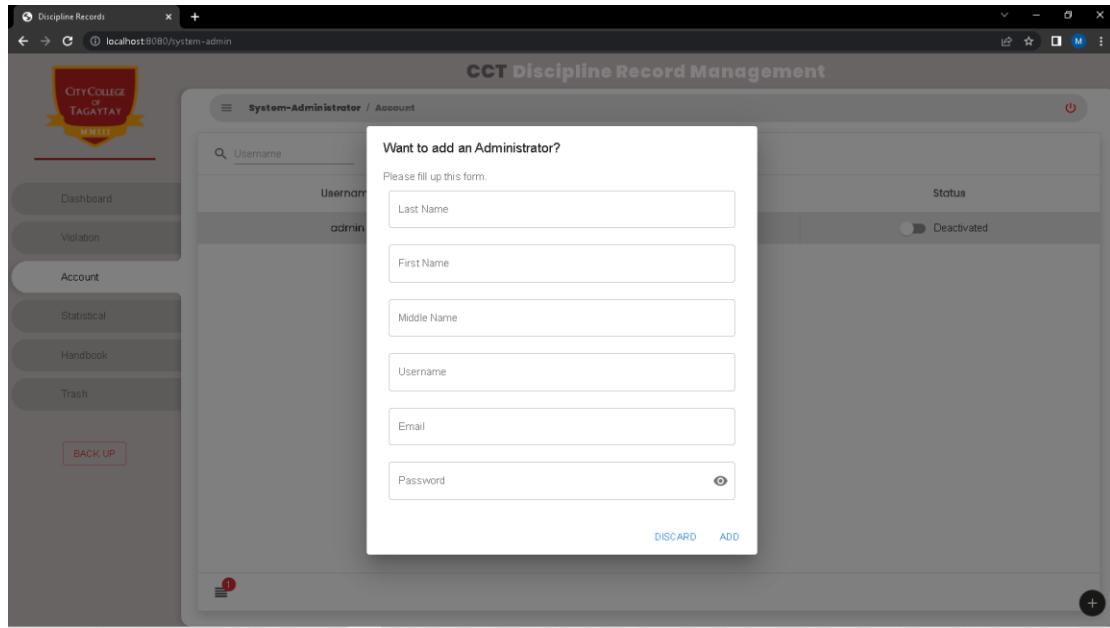


Figure 52. Administrator Account List

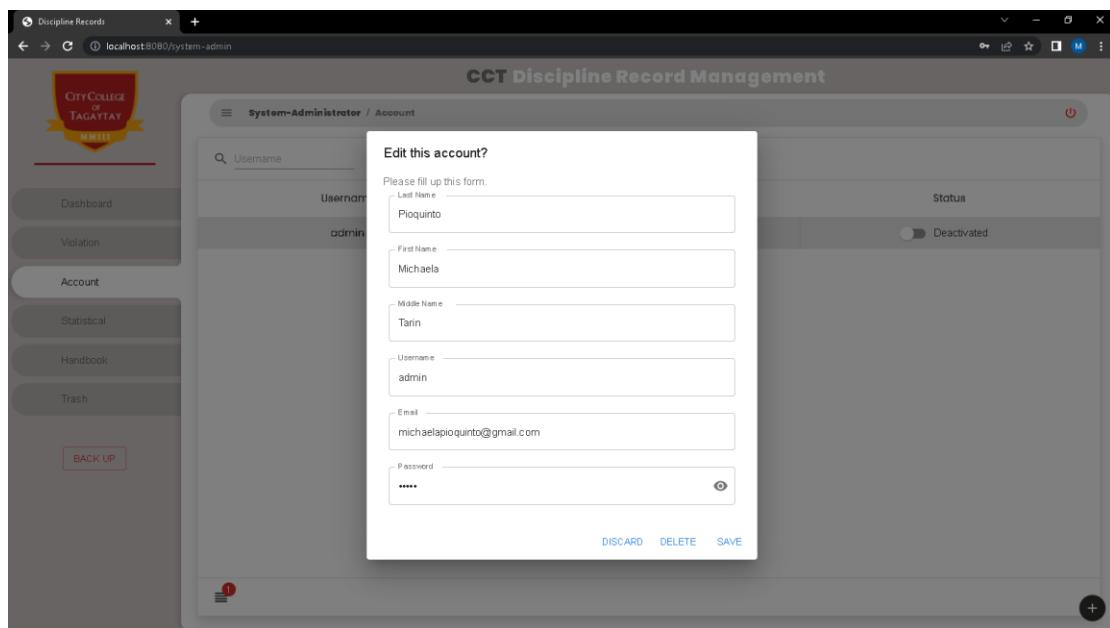


Figure 53. Administrator Account List

Figure 51 to figure 53 shows the list of the Administrator account. The System Administrator can add, edit and delete the Administrator account.

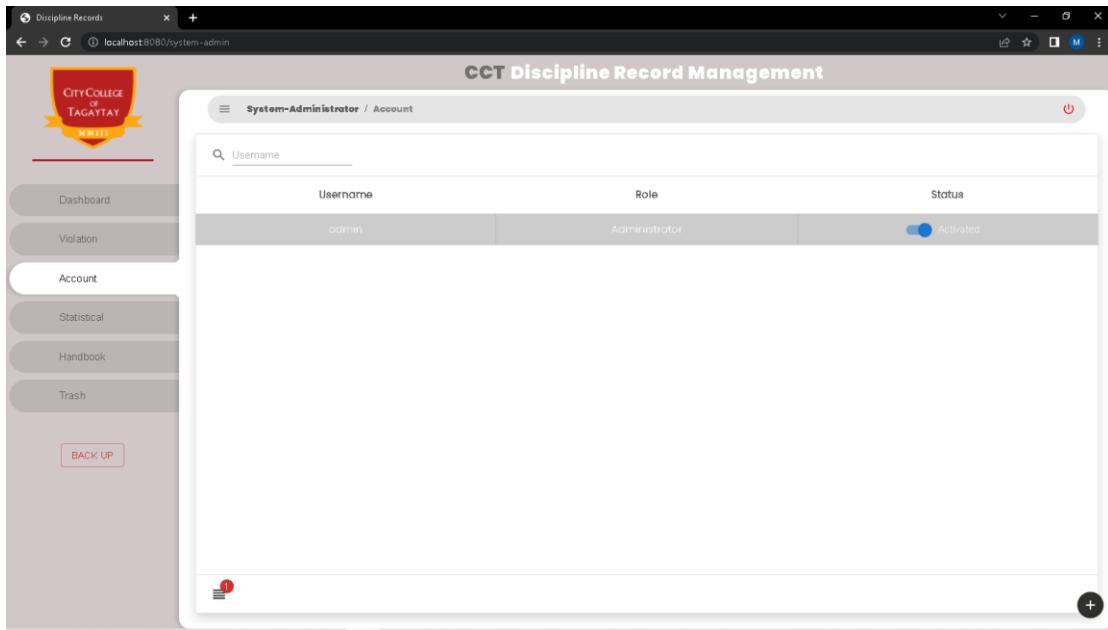


Figure 54. Activated and Deactivated Administrator Account

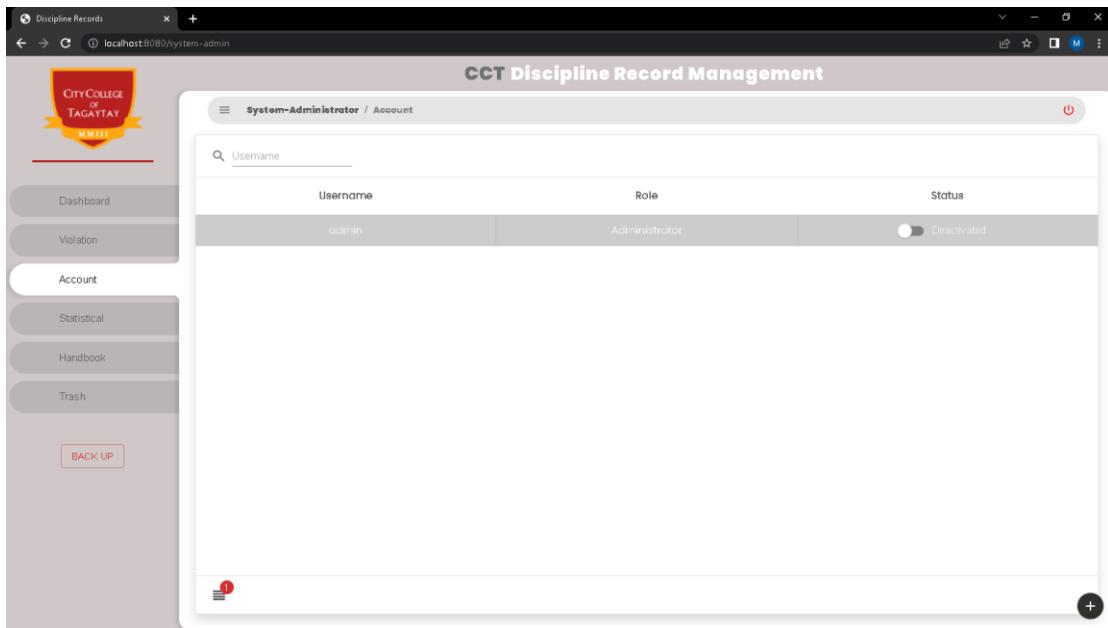
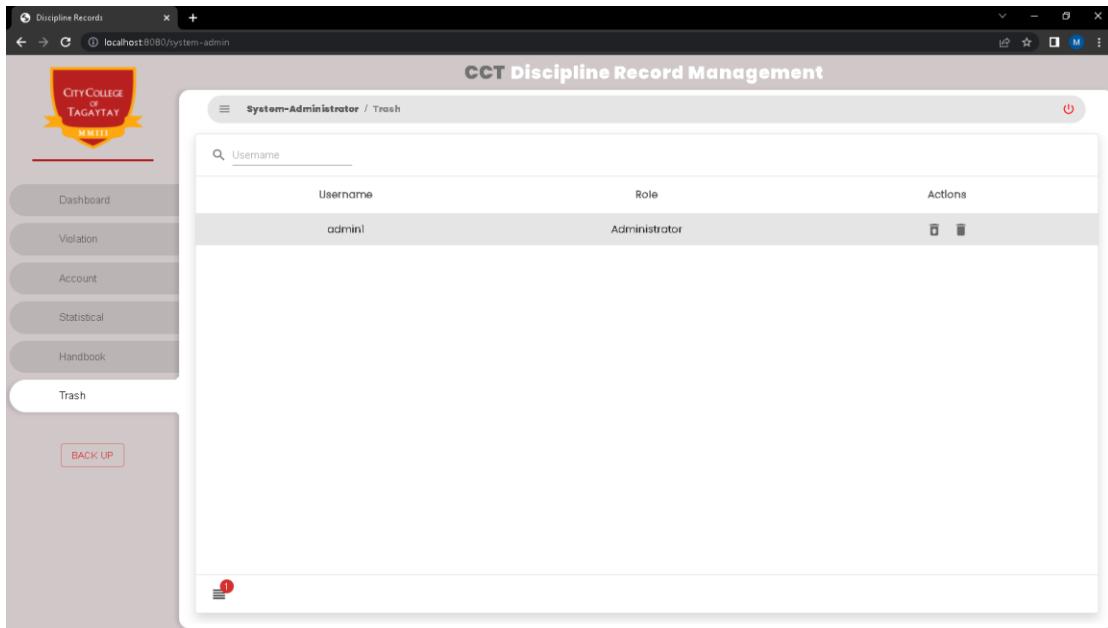


Figure 55. Activated and Deactivated Administrator Account

Figure 54 and figure 55 shows the status of the Administrator account. The System Administrator can activate and deactivate the status of the account.



The screenshot displays a web-based application titled "CCT Discipline Record Management". The main header includes the college logo for "City College of TAGATTAY" and the title "CCT Discipline Record Management". Below the header, a breadcrumb navigation shows "System-Administrator / Trash". A search bar labeled "Username" is present. A table lists the deleted administrator account with the following data:

Username	Role	Actions
admin1	Administrator	

The sidebar on the left contains links for "Dashboard", "Violation", "Account", "Statistical", "Handbook", and "Trash". A "BACK UP" button is located at the bottom of the sidebar. The overall interface is clean and modern, typical of a web-based management system.

Figure 56. Recycle Bin of Administrator Account

Figure 56 shows the list of deleted Administrator account. The System Administrator can restore the account and delete it permanently.

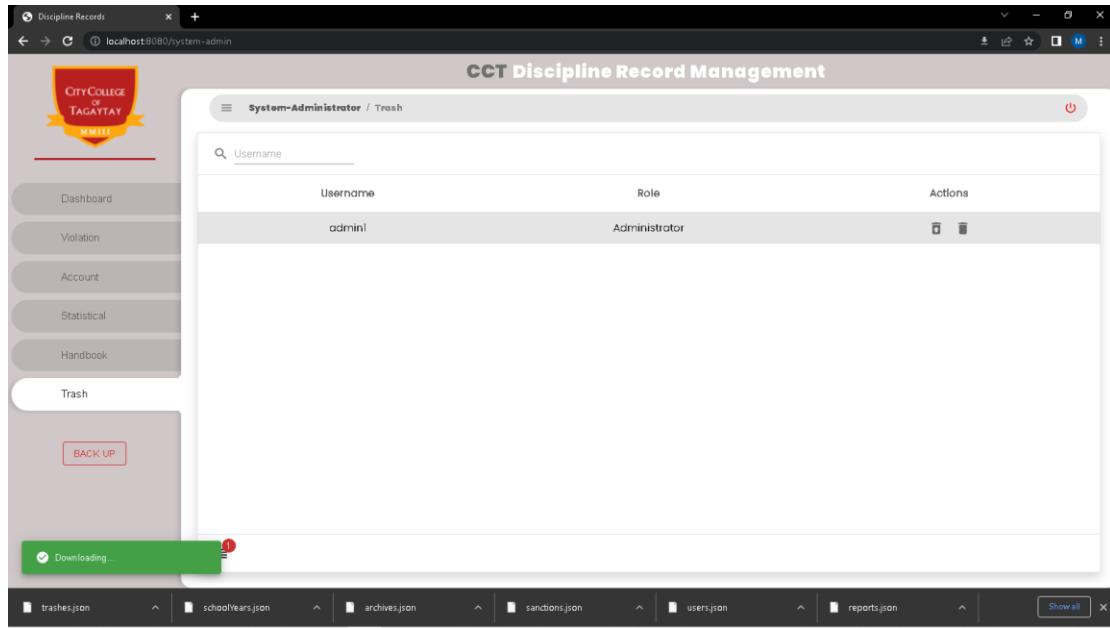


Figure 57. Backup Database

Figure 57 shows the page where the System Administrator can back-up all data from the database.

Project Evaluation

The researchers conducted an evaluation for the developed system. It consists of six (6) categories, namely: **functionality**, that examines how the system functions in relation to its requirements; **reliability** which assesses the developed system's consistency; **usability** which a developed system can be used by a specific client to achieve a quantifiable goal with effectiveness, efficiency, and satisfaction; **Efficiency** which prevents wasting time, energy, and effort in carrying out the developed system; **Maintainability** where the developed system can quickly identify the source of the failure and how it changes the system; **Portability**

which refers to how the system adapts to new specifications and the effort required to install the software.

The target respondent for the developed system was two hundred twenty-two (222) respondents which is composed of ten (10) IT Professional, fourteen (14) Instructors/Clients and one hundred ninety-eight (198) Students from City College of Tagaytay.

Table 2 shows the data of the breakdown of respondents who evaluate the system. There are 222 respondents who evaluated the system: (a) eight (8) IT Professional: (b) sixteen (16) Instructors/Clients and (c) one hundred ninety-eight (198) Students from City College of Tagaytay.

Table 2. Breakdown of Respondent

CLASSIFICATION	NUMBER	PERCENTAGE (%)
Students	198	89.19%
IT Professional	8	3.60%
Instructor/ Client	16	7.21%
TOTAL	222	100%

Respondents' Assessment of the Functionality

Table 3 shows the respondents assessment of the functionality of the system. The system was evaluated and obtained a mean average of 4.47 which is interpreted as "Excellent". This shows that the system fully meets and far exceed most expectations.

Table 3. Respondent's Assessment of the Functionality

INDICATORS	MEAN	INTERPRETATION
Suitability	4.54	Excellent
Accuracy	4.48	Excellent
Interoperability	4.48	Excellent
Compliance	4.44	Excellent
Security	4.39	Excellent
MEAN AVERAGE	4.47	Excellent

Scale:

- 5.00 - 4.21 Excellent
- 4.21 - 3.41 Very Good
- 3.41 - 2.61 Good
- 2.61 - 1.81 Fair
- 1.81 - 1.00 Poor

Respondents' Assessment of the Reliability

Table 4 shows the respondents assessment of the reliability of the system. The system was evaluated and obtained a mean of 4.35 which was interpreted as "Excellent". This shows that the system fully meets all and exceeds several expectations.

Table 4. Respondents' Assessment of the Reliability

INDICATORS	MEAN	INTERPRETATION
Maturity	4.34	Excellent
Fault Tolerance	4.31	Excellent
Recoverability	4.39	Excellent
MEAN AVERAGE	4.35	Excellent

Scale:

- 5.00 - 4.21 Excellent
- 4.21 - 3.41 Very Good
- 3.41 - 2.61 Good
- 2.61 - 1.81 Fair
- 1.81 - 1.00 Poor

Respondents' Assessment of the Usability

Table 5 shows the respondents assessment of the usability of the system. The system was evaluated and obtained the mean of 4.28 which was interpreted as "Excellent". This shows that the system fully meets and far exceeds the most expectations. This also demonstrates that the appropriateness of the function where satisfied, that there is correctness, it can interact with other components, is compliant, capable and relates unauthorized access to the system.

Table 5. Respondents' Assessment of the Usability

INDICATORS	MEAN	INTERPRETATION
Understandability	4.61	Excellent
Learnability	4.61	Excellent
Operability	4.57	Excellent
Attractiveness	4.34	Excellent
MEAN AVERAGE	4.54	Excellent

Scale:

- 5.00 - 4.21 Excellent
- 4.21 - 3.41 Very Good
- 3.41 - 2.61 Good
- 2.61 - 1.81 Fair
- 1.81 - 1.00 Poor

Respondents' Assessment of the Efficiency

Table 6 shows the respondents assessment of the efficiency of the system. The system was evaluated and obtained the mean of 4.50 which was interpreted as "Excellent". This shows that the system fully meets and far exceeds the most expectations. This also demonstrates that the appropriateness of the function where satisfied, that there is correctness, it can interact with other components, is compliant, capable and relates unauthorized access to the system.

Table 6. Respondents' Assessment of the Efficiency

INDICATORS	MEAN	INTERPRETATION
Time Behavior	4.52	Excellent
Resource Behavior	4.48	Excellent
MEAN AVERAGE	4.50	Excellent

Scale:

- 5.00 - 4.21 Excellent
- 4.21 - 3.41 Very Good
- 3.41 - 2.61 Good
- 2.61 - 1.81 Fair
- 1.81 - 1.00 Poor

Respondents' Assessment of the Maintainability

Table 7 shows the respondents assessment of the maintainability of the system. The system was evaluated and obtained the mean of 4.43 which was interpreted as "Excellent". This shows that the system fully meets and far exceeds the most expectations. This also demonstrates that the appropriateness of the function where satisfied, that there is correctness, it can interact with other components, is compliant, capable and relates unauthorized access to the system.

Table 7. Respondents' Assessment of the Maintainability

INDICATORS	MEAN	INTERPRETATION
Analyzability	4.45	Excellent
Changeability	4.43	Excellent
Stability	4.43	Excellent
Testability	4.39	Excellent
MEAN AVERAGE	4.43	Excellent

Scale:

- 5.00 - 4.21 Excellent
- 4.21 - 3.41 Very Good
- 3.41 - 2.61 Good
- 2.61 - 1.81 Fair
- 1.81 - 1.00 Poor

Respondents' Assessment of the Portability

Table 8 shows the respondents assessment of the portability of the system. The system was evaluated and obtained the mean of 4.49 which was interpreted as "Excellent". This shows that the system fully meets and far exceeds the most expectations. This also demonstrates that the appropriateness of the function where satisfied, that there is correctness, it can interact with other components, is compliant, capable and relates unauthorized access to the system.

Table 8. Respondents' Assessment of the Portability

INDICATORS	MEAN	INTERPRETATION
Adaptability	4.51	Excellent
Instability	4.50	Excellent
Conformity	4.49	Excellent
Replicability	4.48	Excellent
MEAN AVERAGE	4.49	Excellent

Scale:

- 5.00 - 4.21 Excellent
- 4.21 - 3.41 Very Good
- 3.41 - 2.61 Good
- 2.61 - 1.81 Fair
- 1.81 - 1.00 Poor

Respondents Overall Assessment

Table 9 summarizes the result of the software evaluation. The evaluators rated the system with the average of 4.46 which was interpreted as "Excellent" and concluded that the system capability is understandable, learnable, usable, and appealing to the user and can perform tasks without wasting time or materials.

Table 9. Summary of Evaluation

INDICATORS	MEAN	INTERPRETATION
Functionality	4.47	Excellent
Reliability	4.35	Excellent
Usability	4.54	Excellent
Efficiency	4.50	Excellent
Maintainability	4.43	Excellent
Portability	4.49	Excellent
MEAN AVERAGE	4.46	Excellent

Scale:

- 5.00 - 4.21 Excellent
- 4.21 - 3.41 Very Good
- 3.41 - 2.61 Good
- 2.61 - 1.81 Fair
- 1.81 - 1.00 Poor

Chapter V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter summarizes the findings, draws conclusions, and makes recommendations based on the test and evaluation results.

Summary of Findings

The proponents designed and developed a “Web Based Student Discipline Record Management System of City College of Tagaytay” using JavaScript as its primary programming language. Wherein, the system is accessible through a local area network. The purpose of the system is to give a modern approach to record management through the use of technology, resulting in enhanced accuracy and efficiency in the disciplinary office.

The Development of Web Based Student Discipline Record Management System for City College of Tagaytay enables to manage of the record of the students who violate the rules and regulations of the school policy. To access the system there are four levels of users who can access the system. Each user's account has limited access based on their user requirement and every user account has roles and responsibilities to maintain and organize the system. System Administrator, the person who is in charge of setting up administrator's account; will be authorized for system maintenance; database backup and

update on the system; Administrator, is responsible for setting up administrative staff's account; the person who is in charge of adding, deleting and updating the violations, consequences and the offenses in the system; Administrative staff, will be able to make a student incident report and fill up other report form requirements needed; who is in charge in add, update and archived the student's account; can view and monitor the student's information and the total number of violations; and Students, of City College of Tagaytay preferably used their student numbers and password for entering the system.

The proponents used survey questionnaires as the key instrument in collecting data and the level of the system performance. The study was composed of 222 respondents: (a) 16 IT Professionals; (b) 8 Instructors/Clients; and (c) 198 respondents were Students from School of Computer Studies of City College of Tagaytay. The questionnaire contains the following categories and the results of each category: (a) Functionality which has a mean average of 4.47 and a descriptive scale rating of "Excellent" which means that the system suites the functional requirement; (b) Reliability which has a mean average of 4.35 and descriptive scale rating of "Excellent" this means that the system fully meets all and exceeds several expectations. (c) Usability which has a mean average of 4.54 and a descriptive scale "Excellent" this means that the system meets the objectives with effectiveness, efficiency, and satisfaction of the users; (d) Efficiency which has a mean average of 4.50 and a descriptive scale rating of "Excellent" means that the system can perform the task without waste in time and materials; (e) Maintainability which has a mean average of 4.43 and descriptive scale rating of

“Excellent” means that the system demonstrates that the appropriateness of the function where satisfied, that there is correctness, it can interact with other components, is compliant, capable and relates unauthorized access to the system; and (f) Portability which has to mean average of 4.49 and descriptive scale rating of “Excellent” which means that the system is portable in a way that it can be used in the same software with a different environment.

The overall rating for the system obtained the total mean average of 4.46 with a descriptive scale rating of “Excellent” which means that the system fully meets all needs and excels several expectations.

Conclusions

The Development of Web Based Student Discipline Record Management System of City College of Tagaytay was designed such that;

- a. It tracks students’ discipline records.
- b. It provides different user accounts and passwords that will be used to log in to the system.
- c. It provides information regarding the violations and violators of the City College of Tagaytay.
- d. It provides forms to the administrative staff to fill out the following information needed to make a report.

Recommendation

Based on the findings of the study, the following are recommended for the future enhancement of the Development of Web Based Student Discipline Record Management System of City College of Tagaytay.

1. Include features such as video as evidence.
2. Make the system available online.
3. UI enhancement

REFERENCES:

Appendices

Appendix A. Summary of Evaluation

Indicators	IT Professionals	Student	Mean Average	Descriptive Rating
FUNCTIONALITY				
Suitability	4.50	4.58	4.54	Excellent
Accuracy	4.43	4.52	4.48	Excellent
Interoperability	4.43	4.54	4.48	Excellent
Compliance	4.37	4.52	4.44	Excellent
Security	4.27	4.51	4.39	Excellent
Average:			4.47	
RELIABILITY				
Maturity	4.17	4.51	4.34	Excellent
Fault Tolerance	4.17	4.46	4.31	Very Good
Recoverability	4.27	4.52	4.39	Very Good
Average:			4.35	
USABILITY				
Understandability	4.63	4.60	4.61	Excellent
Learnability	4.67	4.56	4.61	Excellent
Operability	4.60	4.55	4.57	Excellent
Attractiveness	4.20	4.48	4.34	Excellent
Average:			4.54	
EFFICIENCY				
Time Behavior	4.50	4.54	4.52	Excellent
Resource Behavior	4.43	4.53	4.48	Excellent
Average:			4.50	
MAINTAINABILITY				
Analyzability	4.37	4.54	4.45	Excellent
Changeability	4.33	4.53	4.43	Excellent
Stability	4.37	4.49	4.43	Excellent
Testability	4.23	4.55	4.39	Excellent
Average:			4.43	
PORTABILITY				
Adaptability	4.47	4.55	4.51	Excellent
Instability	4.50	4.49	4.50	Excellent
Conformity	4.47	4.52	4.49	Excellent
Replaceability	4.43	4.52	4.48	Excellent
Average:			4.49	

OVERALL MEAN AVERAGE	4.40	4.53	4.46	Excellent
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Appendix B: Sample Evaluation Sheet

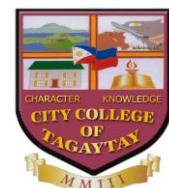
Republic of the Philippines

City of Tagaytay



Akle St., Kaybagal South, Tagaytay City 4120

Tel. Nos. (046) 483-0470 / (046) 483 -0672



SCHOOL OF COMPUTER STUDIES

**Title: Student Discipline Record Management System For City College Of
Tagaytay**

**Proponents: Estella Mae Evale, Jeniemae Pacio, Michaela Piran Pioquinto,
and Chris Ceejay Sena**

Evaluator Name:

Type of Evaluator:

IT Professional

Client/Instructor

Student

Instruction: Please kindly evaluate the software material by using the given scale and placing a checkmark (✓) under the corresponding numerical rating.

NUMERICAL RATING	INTERPRETATION	DEFINITION
5	Excellent	The system fully meets and far exceeds the most expectations.
4	Very Good	The system fully meets all and exceeds several expectations.
3	Good	The system fully meets all expectations.
2	Fair	The system does not fully meet all expectations.
1	Poor	The system fails to meet expectation to a significant degree in several areas.

INDICATORS	5	4	3	2	1
A. FUNCTIONALITY (capability of the software product to provide functions which meet stated and implied needs).					

1. Suitability (appropriateness to specifications of the function of the software).					
2. Accuracy (correctness of the functions).					
3. Interoperability (ability of the software to interact with other components or system).					
4. Compliance (compliant capability of software in terms of laws and guidelines).					
5. Security (this relates to unauthorized access to the software).					

6. Security (this relates to unauthorized access to the software).					
B. RELIABILITY (capability of the software product to maintain a specified level of performance).					
1. Maturity (this concern with the frequency of failure of the system).					
2. Fault-tolerance (ability of the software to withstand and recovery from component or environmental failure).					
3. Recoverability (ability to bring back the failed system to full operation including data needed).					
C. USABILITY (capability of the software product to be understood, learned, used and attractive to the user).					

1. Understandability (determines the ease of which the system functions can be understood).					
2. Learnability (learning effort for different users).					
3. Operability (ability of the software to be easily operated by a given users in a given environment).					
4. Attractiveness (attribute of software that has the capability of the software product to be attractive to the user).					
D. EFFICIENCY (capability of the software product to provide appropriate performance, relative to the amount of resources used).					
1. Time behavior (characterized response times for a given throughput).					
2. Resource behavior (characterizes resources used).					
E. MAINTABILITY (capability of the software product to be modified. Modifications may include corrections, improvements or adaptation of the software to changes in environment, and in requirements and functional specifications)					
1. Analyzability (ability to identify the root cause of a failure within the software).					
2. Changeability (amount of effort to change a system).					
3. Stability (sensitivity to change of a given system).					
4. Testability (effort needed to verify/test a system change).					
F. PORTABILITY					
1. Adaptability (ability of the system to change new specification or operating environments).					

2. Instability (the effort required to install the software).					
3. Conformity (relates to portability of database used).					
4. Replaceability (plug and play aspects of software components).					

Based on ISO 9126

Findings:

1. _____

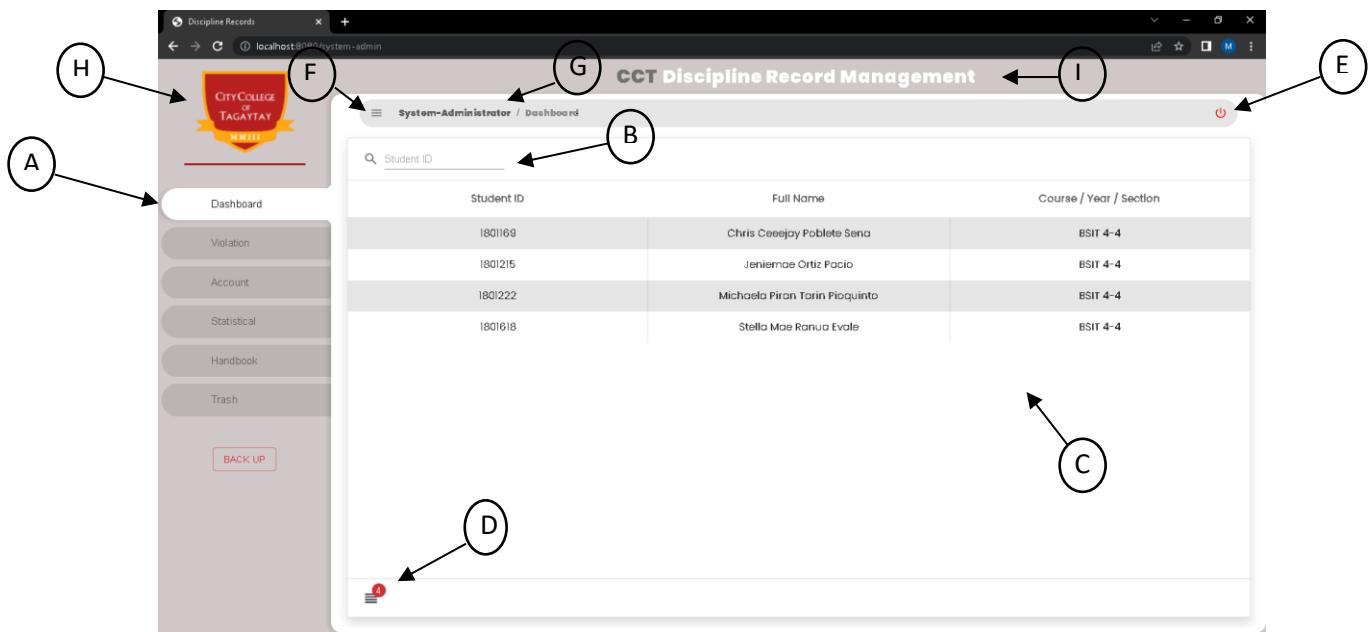
Recommendations:

1. _____

Signature

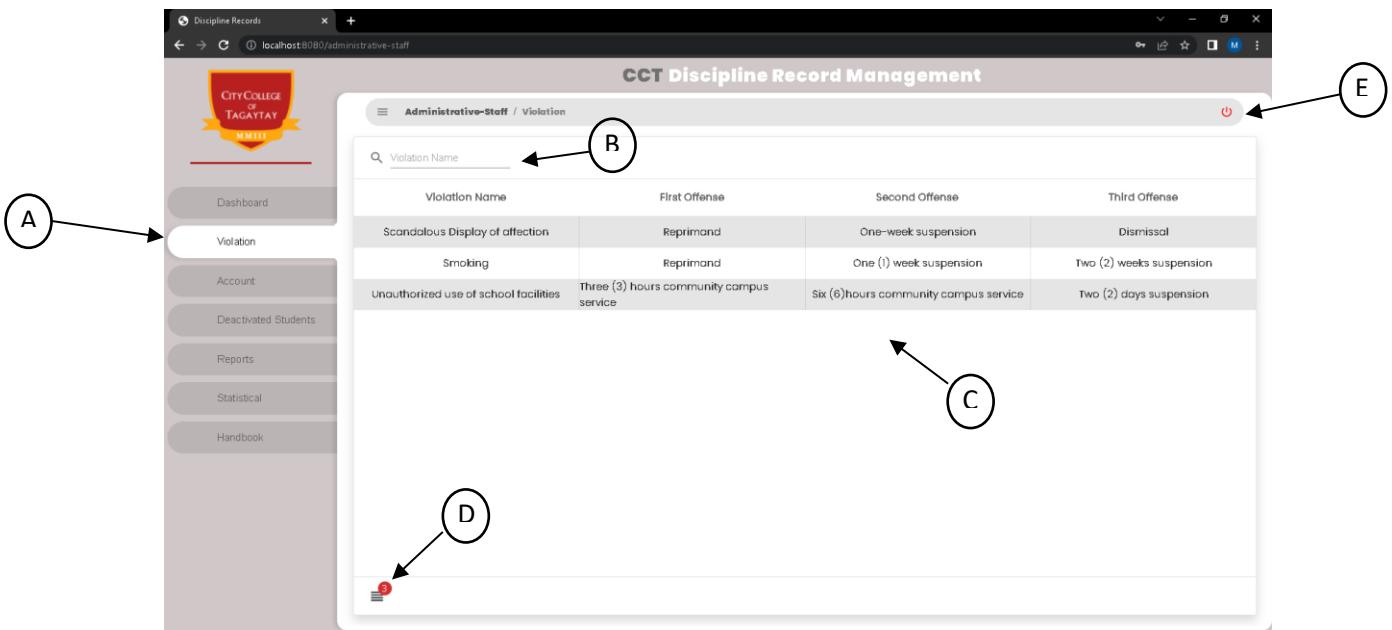
Appendix C: Operations Manual / User's Guide

(For The System Administrator)



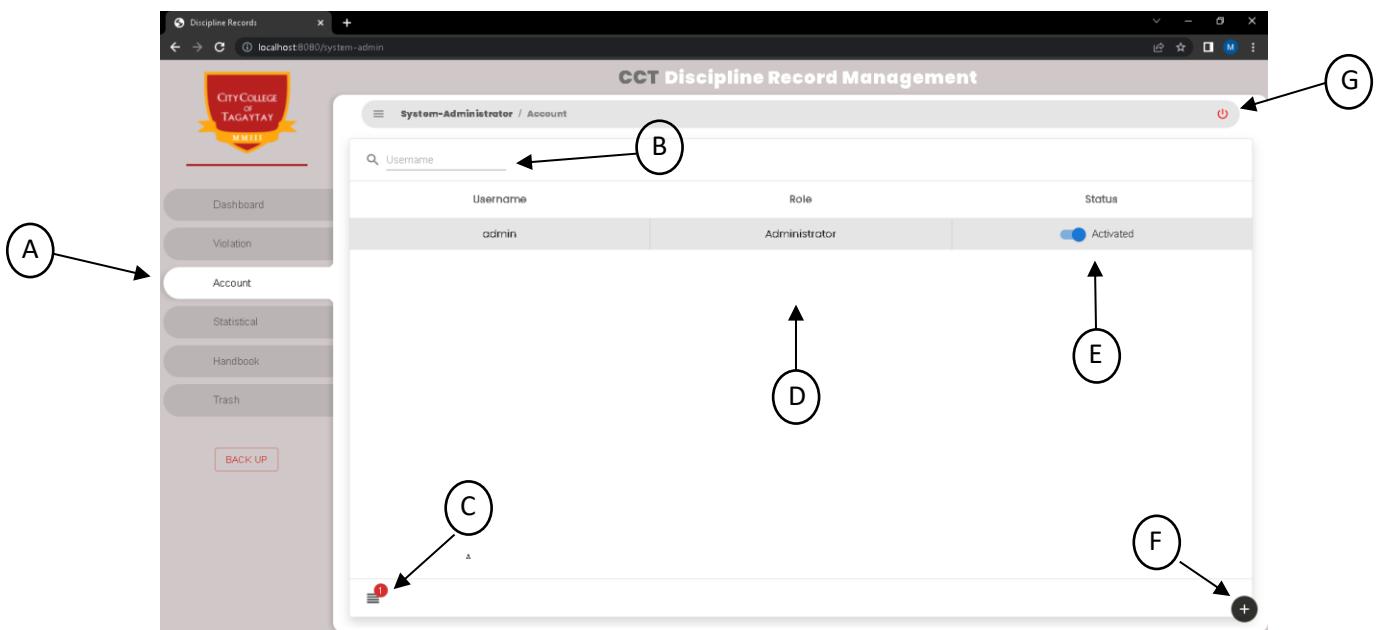
System Administrator Dashboard

- A. Sidebar Dashboard – to view the student list.
- B. Search Bar – search students using their student ID.
- C. Table – student list.
- D. Icon – show how many students in the list.
- E. Logout- allows the system administrator to log out of the system.
- F. Burger Menu – allows the system administrator to show and hide the sidebar menu.
- G. Title Bar – allows the system administrator to show the location in the system if the sidebar is closed.
- H. Logo – City College of Tagaytay logo.
- I. System Title – show the title of the system.



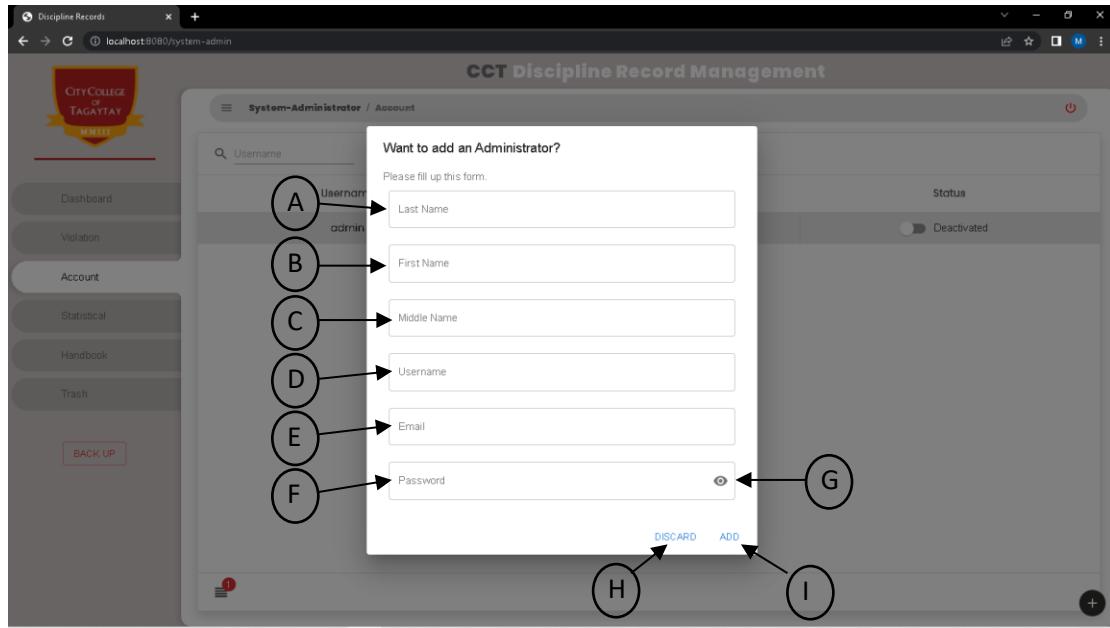
System Administrator Violation & Sanction

- Violation and Sanction Bar – allows the system administrator to view the violation and sanction list.
- Search Bar – allows the system administrator to search violations and sanctions using their violation name.
- Violation and Sanction Table – allows the system administrator to see the violations and sanction list.
- Burger Icon – allows the system administrator to see the number of items in the table.
- Logout – allows the system administrator to log out from the system.



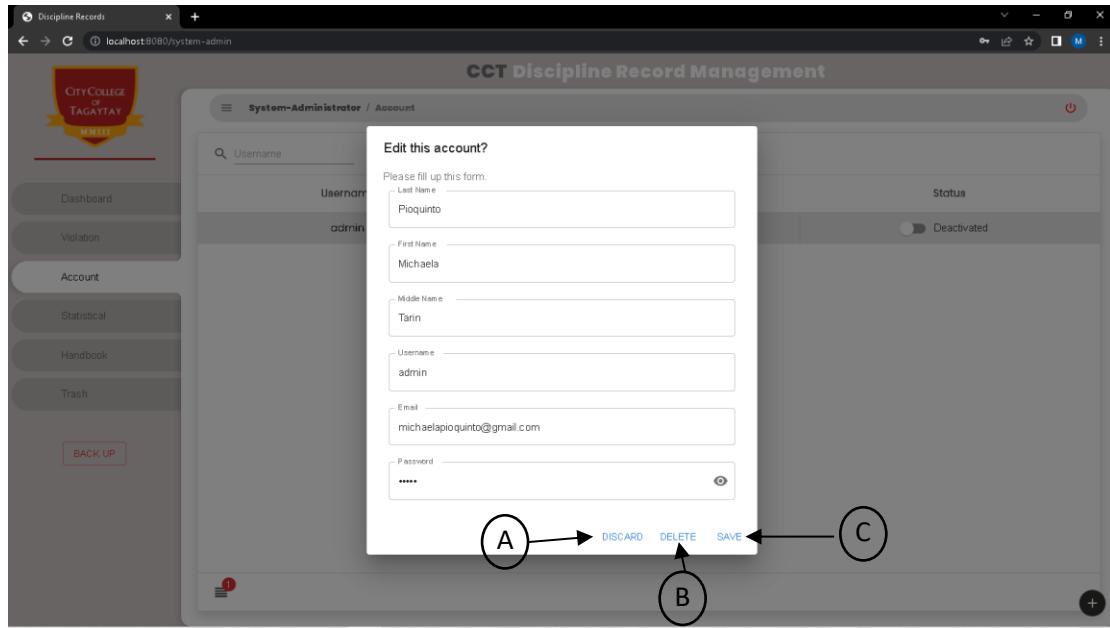
Administrator Account Management

- A. Account Tab – allows the system administrator to view the administrator accounts.
- B. Search Bar – allow the system administrator to search administrator accounts using their username.
- C. Burger Icon – allows the system administrator to see the number of administrators in the table.
- D. List – list of the administrator in the table.
- E. Activate and Deactivate – allows the system administrator to activate or deactivate the administrator account.
- F. Add Button – allows the system administrator to add an administrator account.



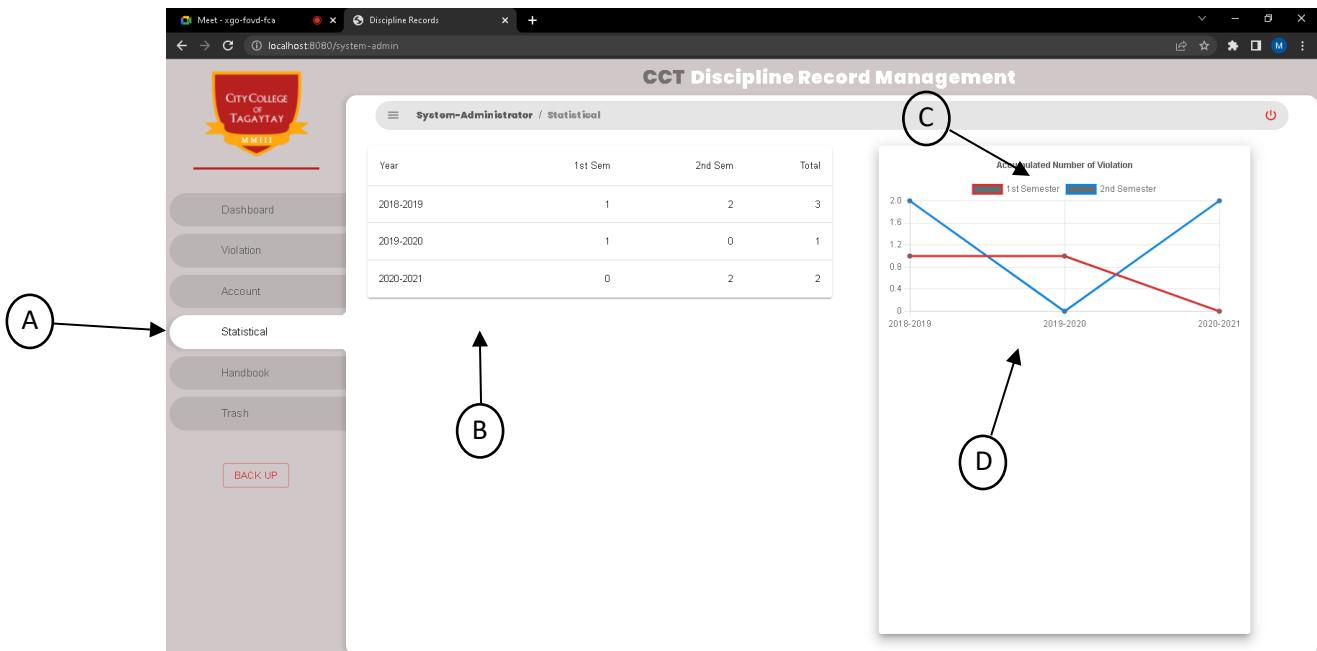
Administrator Account Management

- A. Last Name – the system administrator will input the administrator's last name.
- B. First Name – the system administrator will input the administrator's first name
- C. Middle Name – the system administrator will input the administrator's middle name.
- D. Username – the system administrator will input the username of the administrator that will use to enter the system.
- E. Email – the system administrator will input the administrator's email address.
- F. Password – the system administrator will input the administrator's password.
- G. Show/Hide Icon – the system administrator can show or hide the administrator's password.
- H. Disregard Button – the system administrator can disregard all inputs.
- I. Add Button - system administrator will add the administrator.



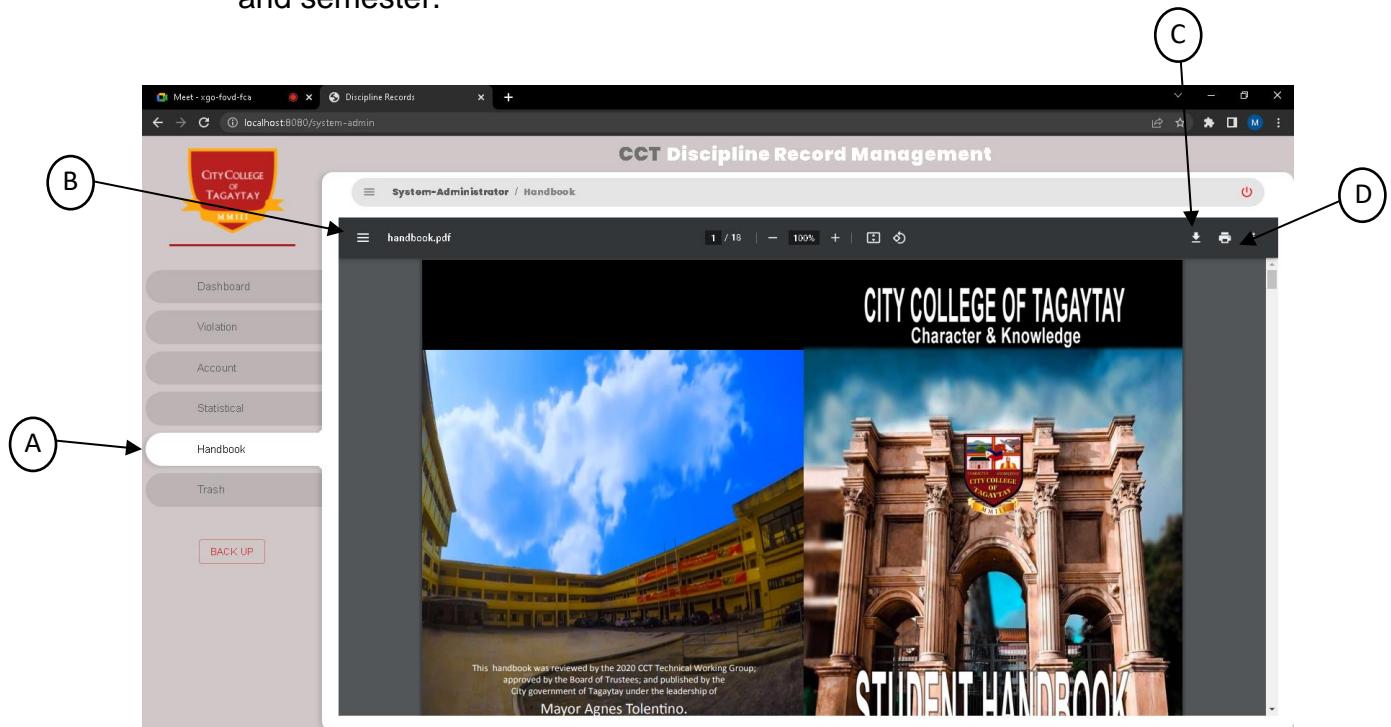
Administrator Account Management (once an administrator account is clicked)

- Discard Button – allows the system administrator to disregard the changes to the account.
- Delete Button – allows the system administrator to delete the account.
- Save Button – allows the system administrator to save the changes to the account.



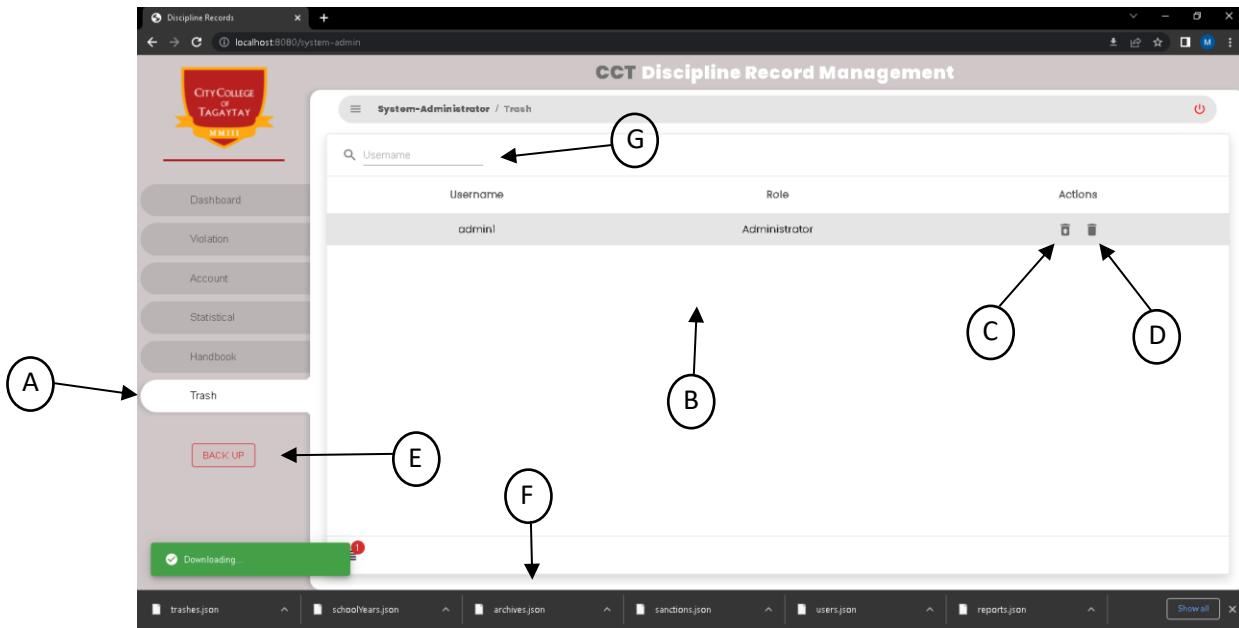
System Administrator Statistical Measurement

- A. Statical Measurement – allows the system administrator to view the statistical measurement.
- B. List – list of the violation that committed every school year and semester.
- C. Filter – filter the violation committed every semester.
- D. Statistical Graph – graph of the violations committed every school year and semester.



System Administrator Handbook

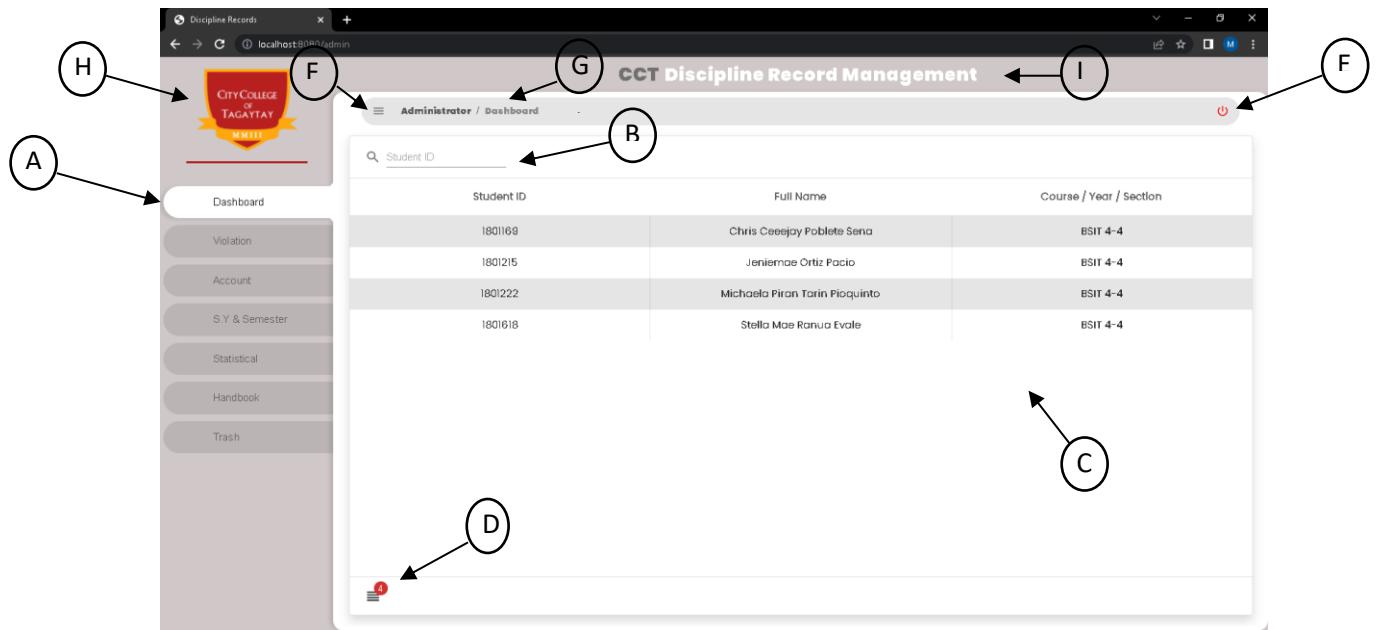
- A. Handbook – allow the system administrator to view the student handbook.
- B. Burger Menu – allows the system administrator to view the pages of the student handbook.
- C. Download Button – allows the system administrator to download the handbook.
- D. Print Button – allows the system administrator to print the student handbook.



System Administrator Trash

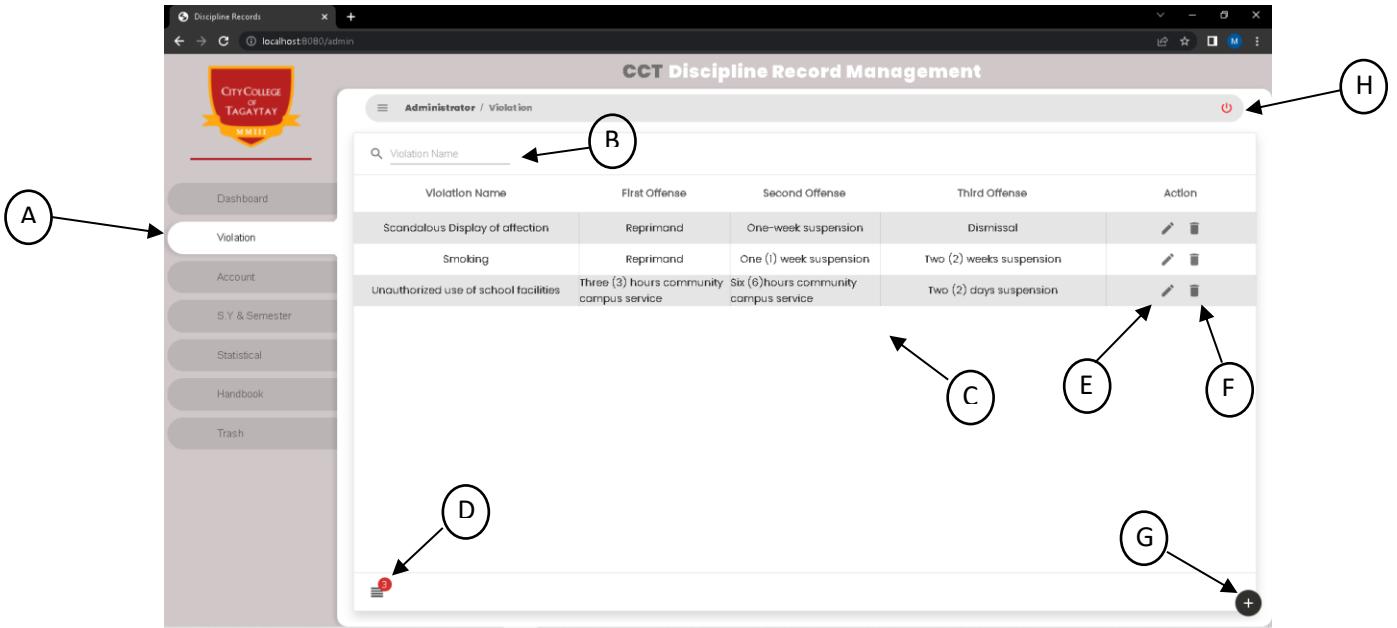
- A. Trash Tab – allows the system administrator to view the deleted administrator account.
- B. List – list of the deleted administrator account
- C. Restore Button – can restore the deleted administrator account.
- D. Delete Permanently Button – can delete the administrator account permanently.
- E. Backup Button – allows the system administrator to back up the data in the system.
- F. Downloaded Data – the data that have been downloaded when the user clicks the backup button.

(For The Administrator)



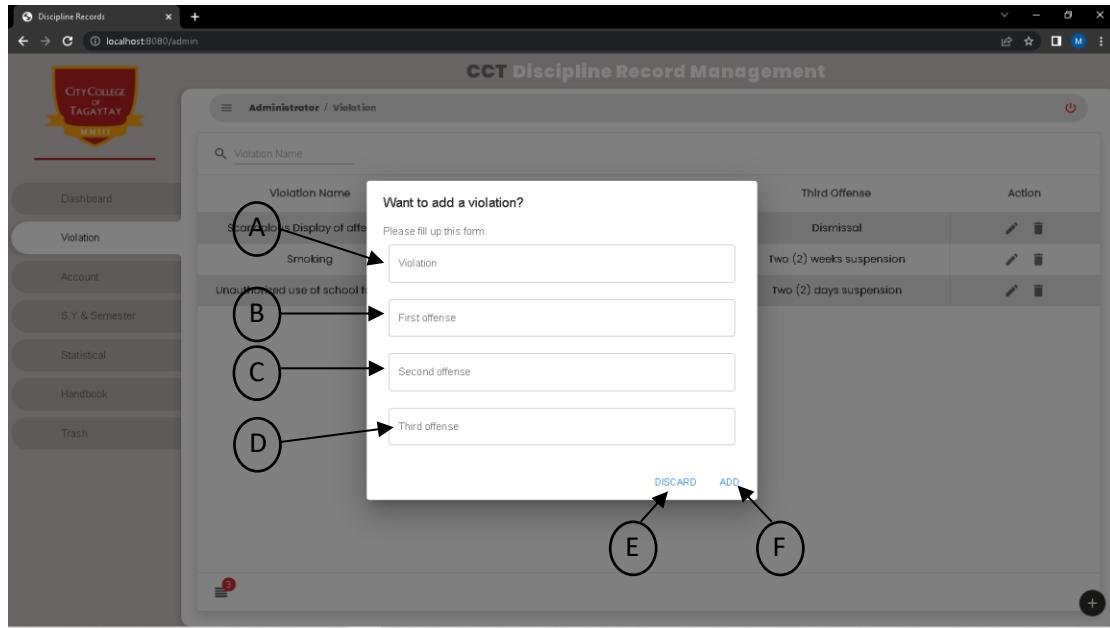
Administrator Dashboard

- Side Bar Dashboard – to view the student list.
- Search Bar – search students using their student ID.
- Table – student list.
- Icon – show how many students in the list.
- Logout - logout the administrator.
- Burger Menu – allows the user to show and hide the sidebar menu.
- Title Bar – allows the administrator to show the location in the system if the sidebar is closed.
- Logo – City College of Tagaytay logo.
- System Title – show the title of the system.



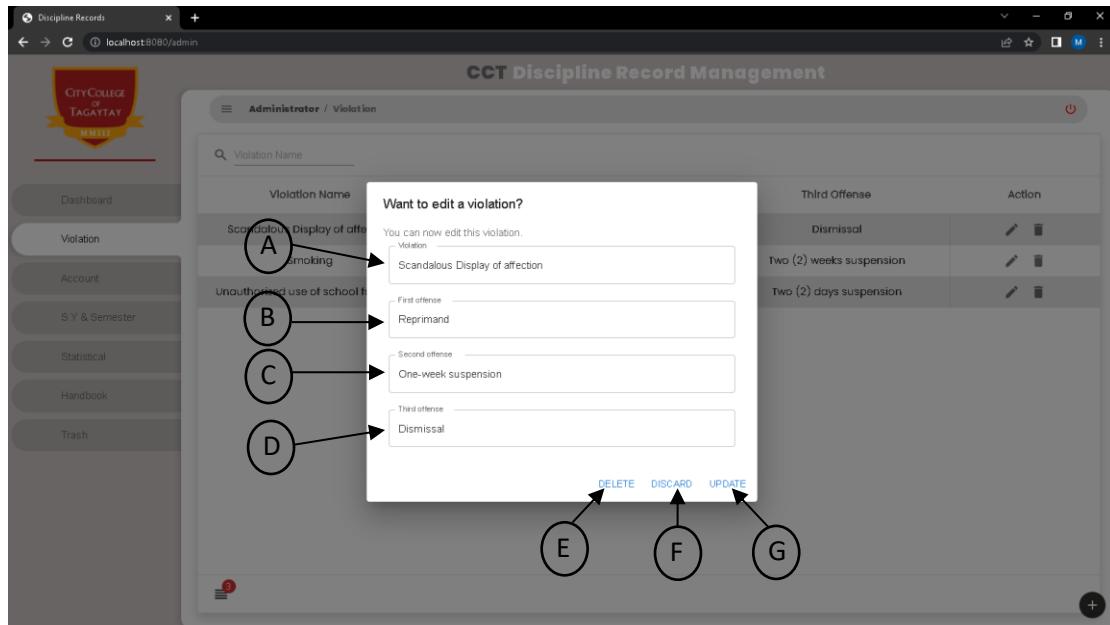
Administrator Violation & Sanction

- Violation and Sanction Bar – allows the administrator to view the violation and sanction list
- Search Bar – allows the administrator to search the violation and sanction using the violation name
- Violation and Sanction Table – allows the administrator to see the violation and sanction list
- Burger Icon – allows the administrator to see the number of items on the table.
- Edit Button – allows the administrator to edit the violation and sanction.
- Delete Button – allows the administrator to delete the violation and sanction.
- Add Button – allows the administrator to add the violation and sanction.
- Logout – allows the administrator to log out from the system.



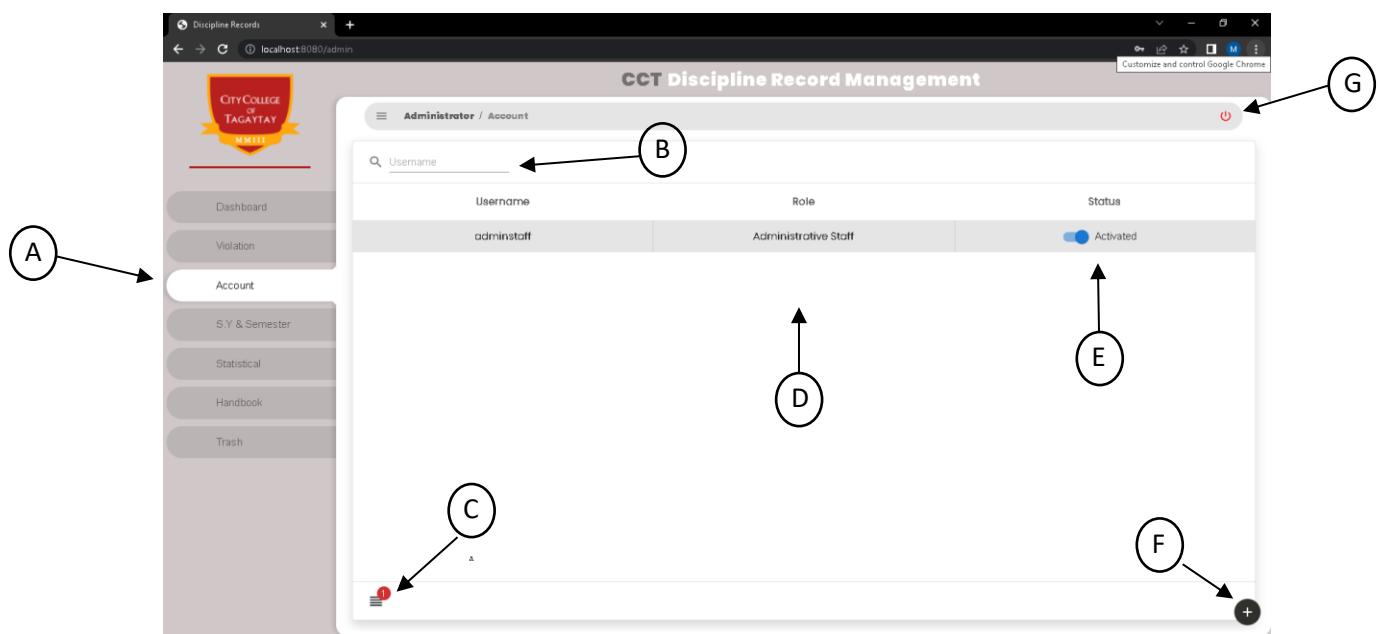
Administrator Violation & Sanction (Adding Violation and Sanction)

- Violation – violation name.
- First Offense – sanction of the first offense.
- Second Offense – sanction of the second offense.
- Third Offense – sanction of the third offense.
- Discard Button – discard all inputs.
- Add Button – to add the input violation and sanction.



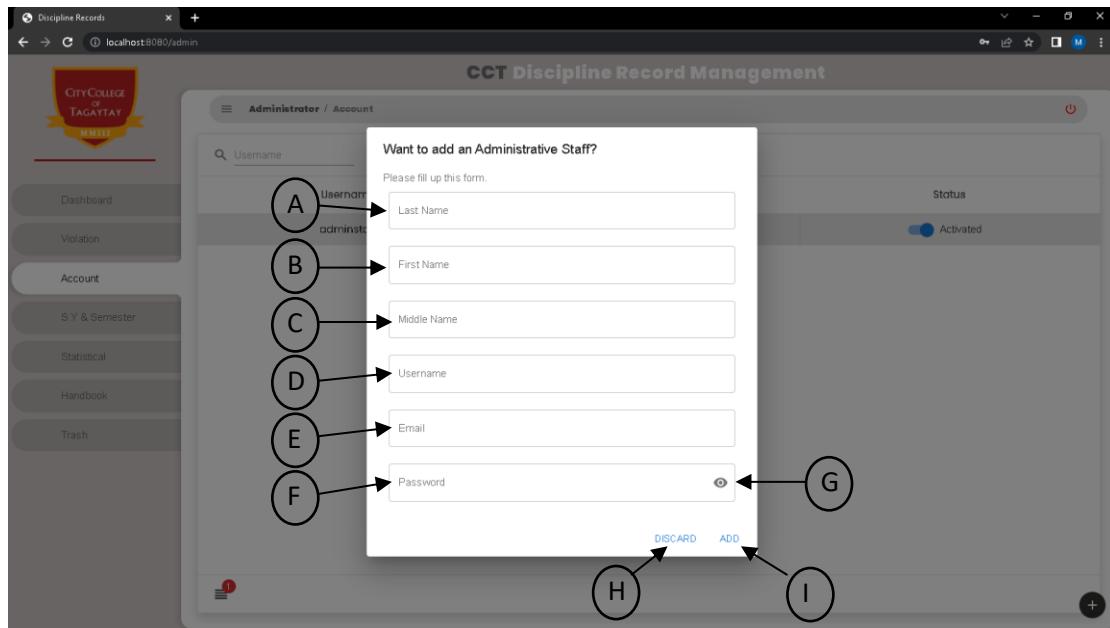
Administrator Violation & Sanction (editing violation and sanction)

- A. Violation – violation name.
- B. First Offense – sanction of the first offense.
- C. Second Offense – sanction of the second offense.
- D. Third Offense – sanction of the third offense.
- E. Delete Button – to delete the selected violation and sanction.
- F. Discard Button – discard all the changes.
- G. Update Button – to update the changes in selected violations and sanctions.



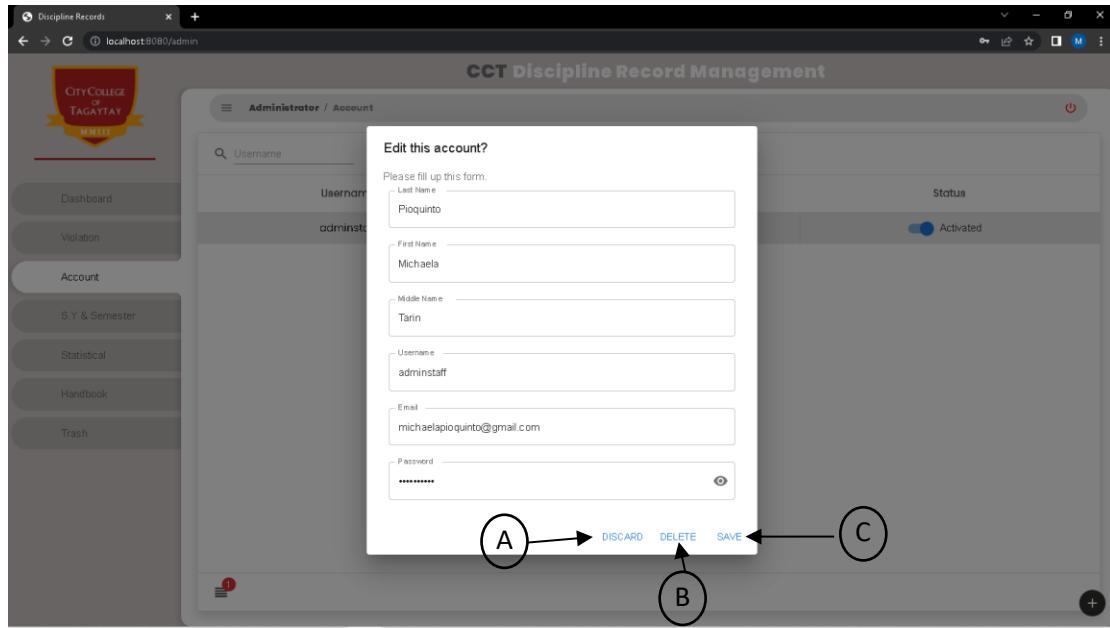
Administrative Staff Account Management

- A. Account Tab – allows the administrator to view the administrative staff accounts.
- B. Search bar – allows the administrative staff to search administrative staff accounts using their username.
- C. Burger Icon – allows the user to see the number of administrative staff on the table.
- D. List – list of the administrative staff in the table.
- E. Activate and Deactivate – allow the administrator to activate or deactivate the administrative staff account.
- F. Add Button – allow the administrator to add an administrative staff account.



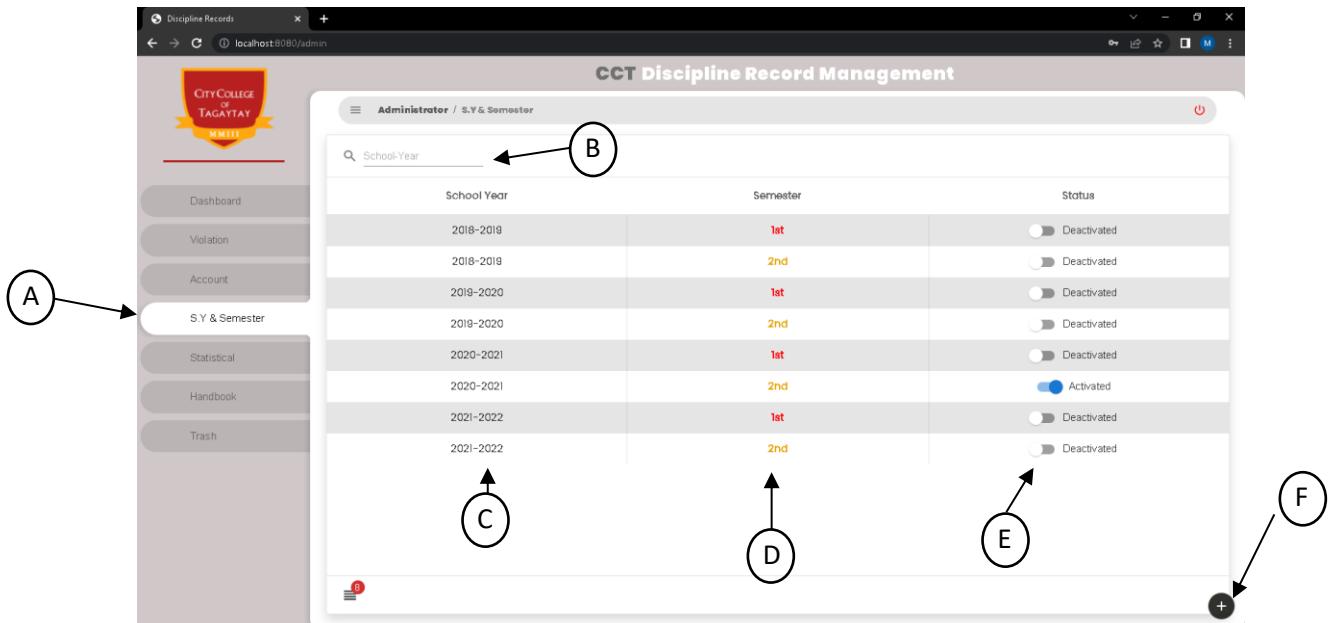
Administrator Account Management

- A. Lastname – the administrator will input the administrative staff's last name.
- B. Firstname – the administrator will input the administrative staff's first name.
- C. Middle name – the administrator will input the administrative staff's middle name.
- D. Username – the administrator will input the username of the administrative staff that will use to enter the system.
- E. Email – the administrator will input the administrative staff's email address.
- F. Password – the administrator will input the administrative staff's password.
- G. Show/Hide Icon - administrator can show or hide the administrative staff's password.
- H. Disregard Button - administrator can disregard all inputs.
- I. Add Button – the administrator will add the administrative staff.



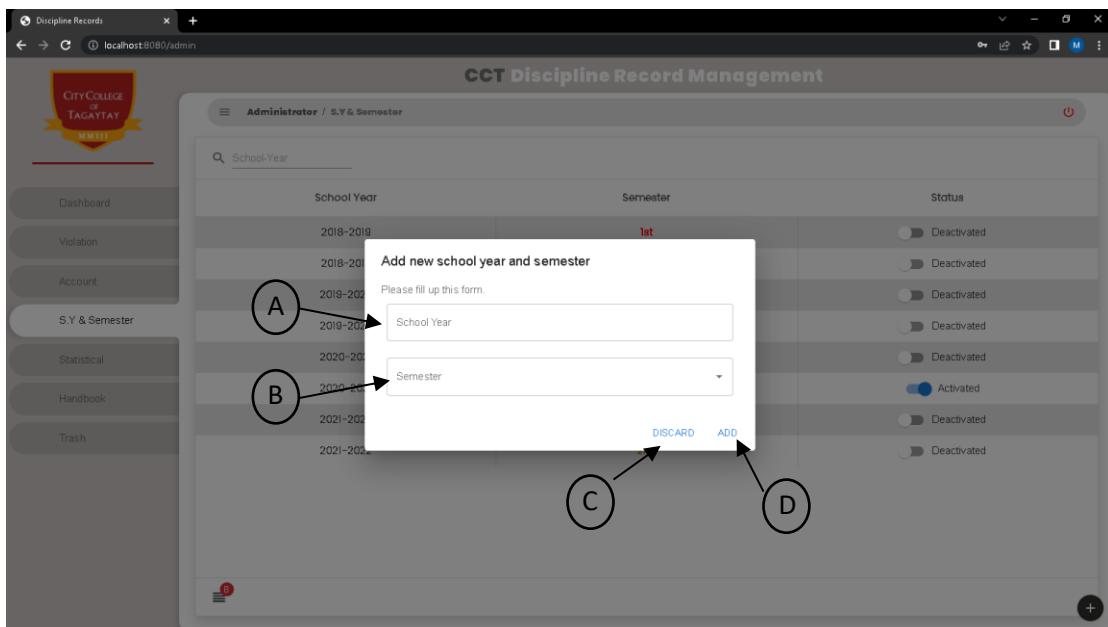
Administrative Staff Account Management (once an administrative staff account is clicked)

- Discard Button – allows the administrator to disregard the changes to the account.
- Delete Button – allows the administrator to delete the account.
- Save Button – allows the administrator to save the changes to the account.



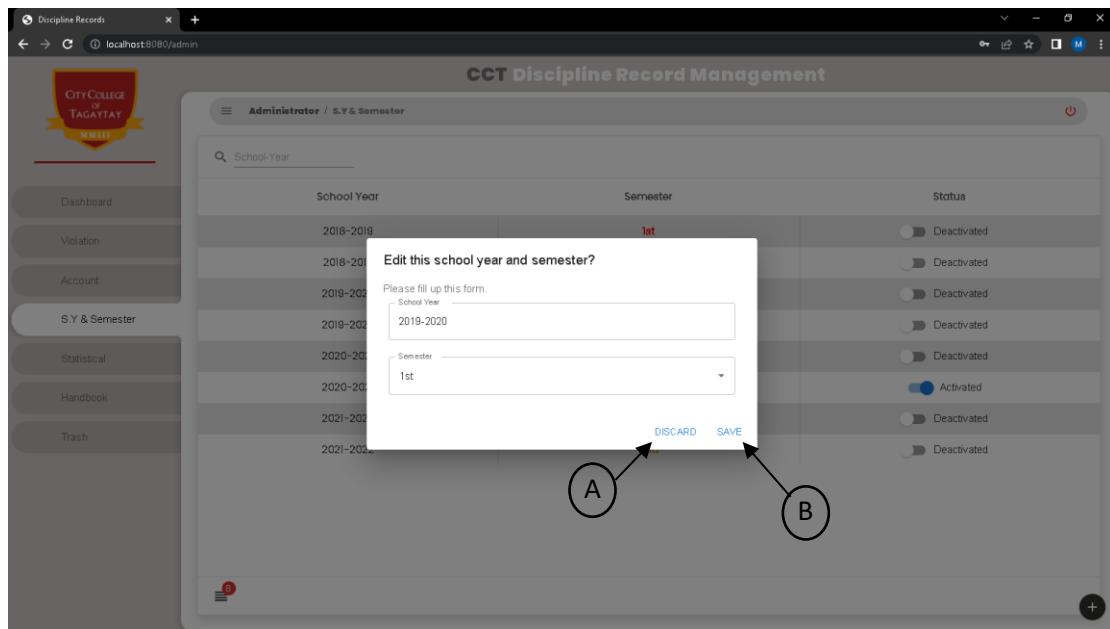
Administrator School Year and Semester

- A. School Year and Semester Tab – allow the user to view the school year and semester.
- B. Search Bar – allow the user to search school year using school year.
- C. School Year – list of the school year.
- D. Semester – list of the semester.
- E. Activate and Deactivate – allow the user to activate or deactivate the school year and semester.
- F. Add Button – allow the administrator to add a school year and semester.



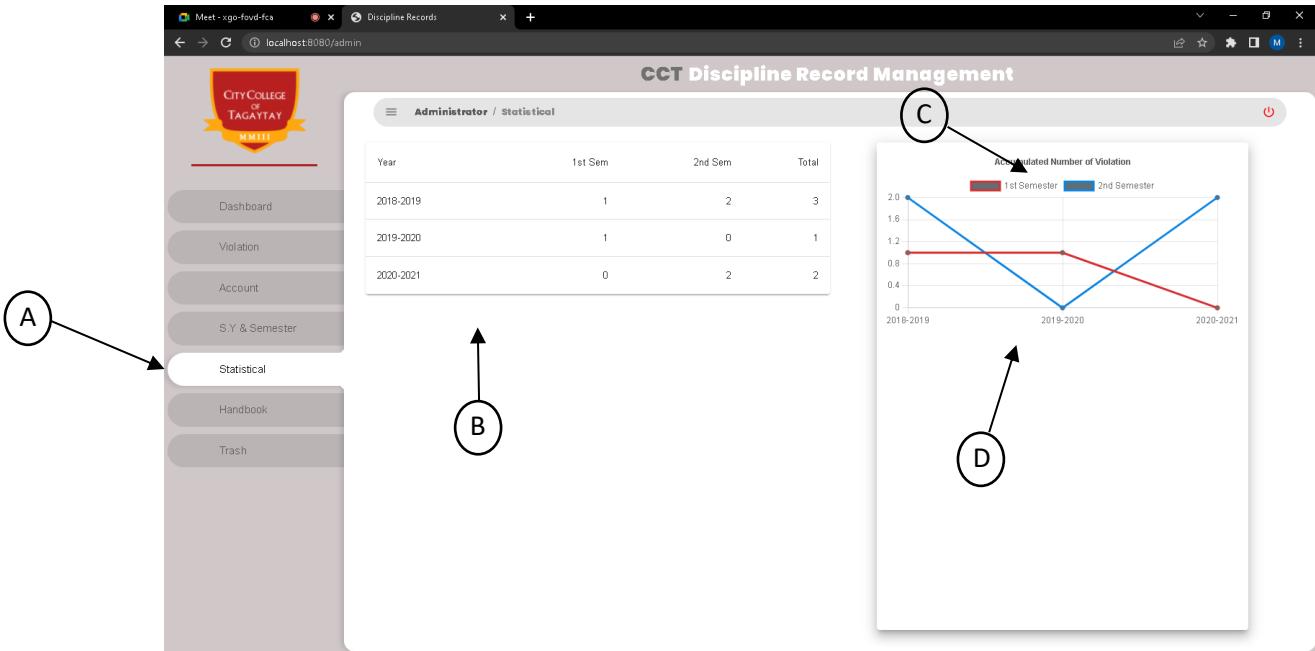
Administrator School Year and Semester (Adding School year & Semester)

- A. School Year – the administrator will input the school year.
- B. Semester – the administrator will input the school semester.
- C. Discard Button – the system will discard all administrator's input.
- D. Add Button – the administrator will add the given school year and semester.



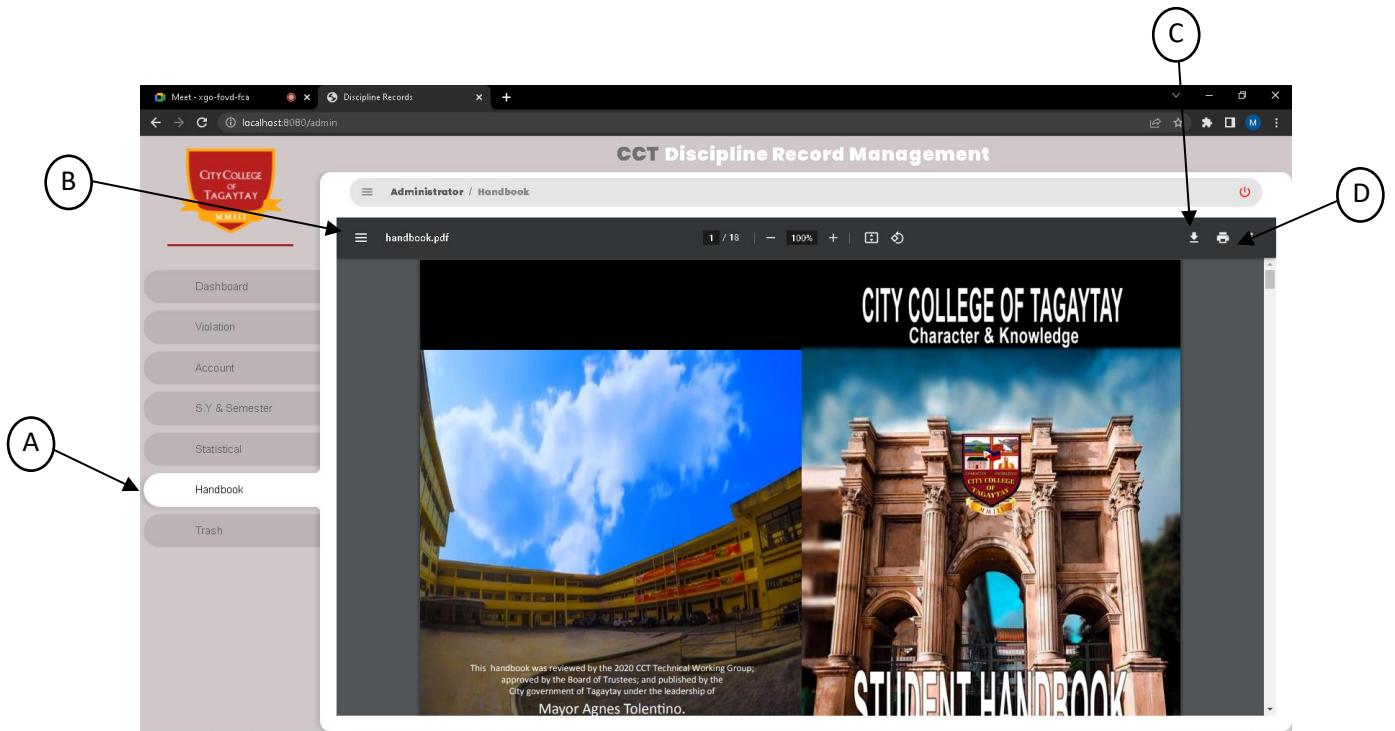
Administrator School Year and Semester (Editing)

- A. Discard Button – discard all changes of the administrator.
- B. Save Button – save all changes of the administrator.



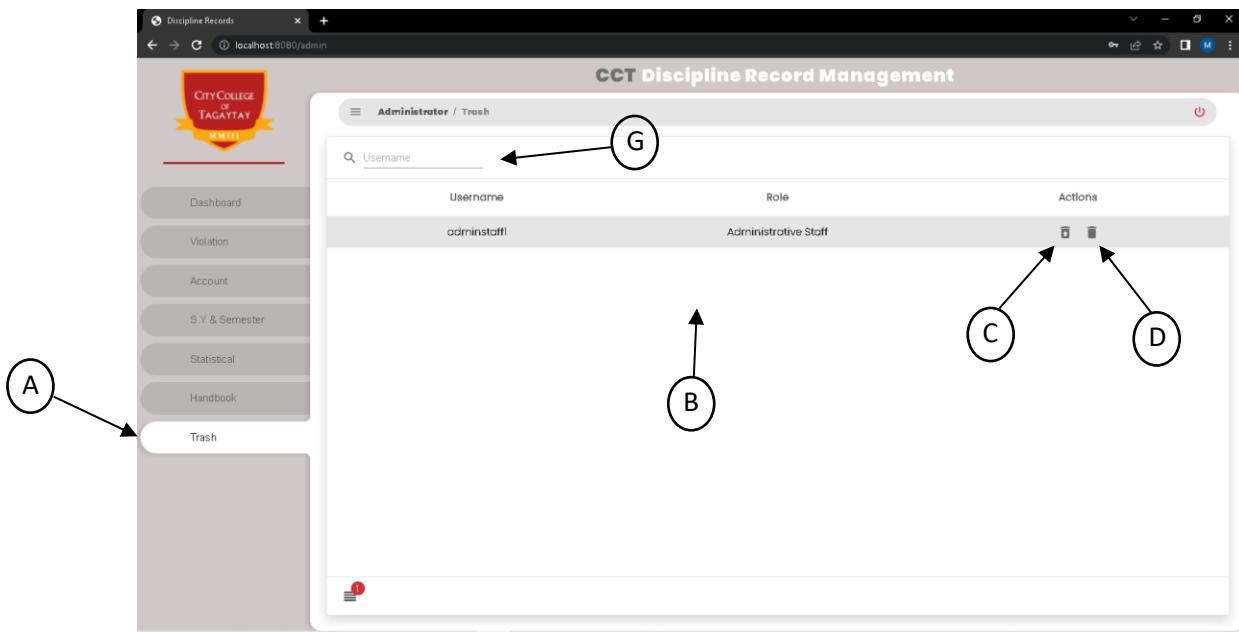
Administrator Statistical Measurement

- Statical Measurement – allow the administrator to view the statistical measurement.
- List – list of the violation committed every school year and semester.
- Filter – filter the violation committed every semester.
- Statistical Graph – graph of the violations committed every school year and semester.



Administrator Handbook

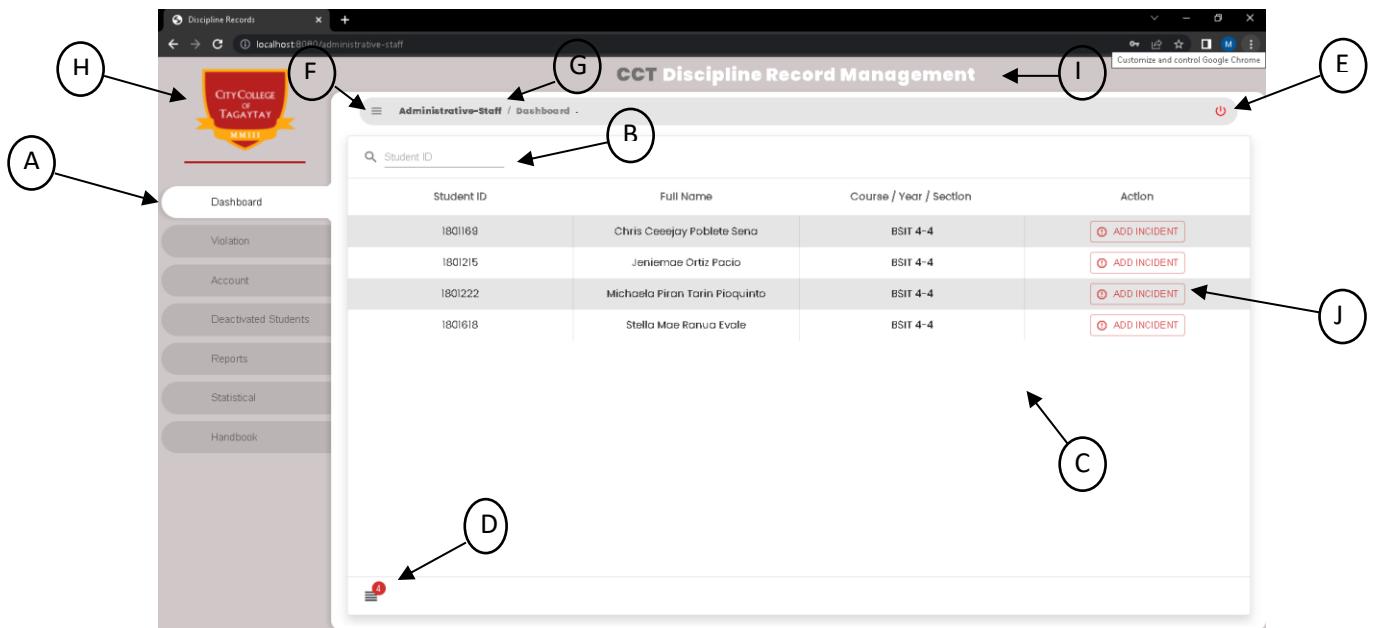
- A. Handbook Tab – allows the administrator to view the student handbook.
- B. Burger Menu – allows the administrator to view the pages of the student handbook.
- C. Download Button – allows the administrator to download the handbook.
- D. Print Button – allows the administrator to print the handbook.



Administrator Trash

- A. Trash Tab – allows the administrator to view the deleted administrative staff account.
- B. List – list of the deleted administrative staff account
- C. Restore Button – allows the administrator to restore the deleted administrative staff account.
- D. Delete Permanently Button – allows the administrator to delete the administrative staff account permanently.

(For The Administrative Staff)



Administrative Staff Dashboard

- Side Bar Dashboard – to view the student list.
- Search Bar – search students using their student ID.
- Table – student list.
- Icon – show how many students in the list.
- Logout - logout the user.
- Burger menu – allow the user to show and hide the sidebar menu.
- Title bar – allow the user to show the location in the system if the sidebar is closed.
- Logo – City College of Tagaytay logo.
- System Title – show the title of the system.
- Add Incident Button – allow Administrative Staff to file an incident report to the student.

REPORT SENA

CITY COLLEGE OF TAGAYTAY
STUDENT INCIDENT REPORT

STUDENT INCIDENT INFORMATION

A → Reported By *	E → 04/19/2022 Date of Report
B → Title/Role *	F → Incident no. 6
C → Student Name Chris Ceejay Poblote Sena	G → Course / Yr / Section *
D → mm/dd/yyyy Date of Incident	H → Time of Incident * 00:00 AM PM

CLOSE

Administrative Staff Dashboard (making an incident report)

- A. Reported By - the person who reports the student.
- B. Title/Role – the role of the person who reports to the student.
- C. Student name – the name of the student who has been reported.
- D. Date of Incident – date of the incident.
- E. Date of Report – date of the report.
- F. Incident No. – number of the current incident report.
- G. Course / Yr / Section – of the student who has been reported.
- H. Time of Incident – time of the incident.
- I. Report – the name of the student who has been reported.

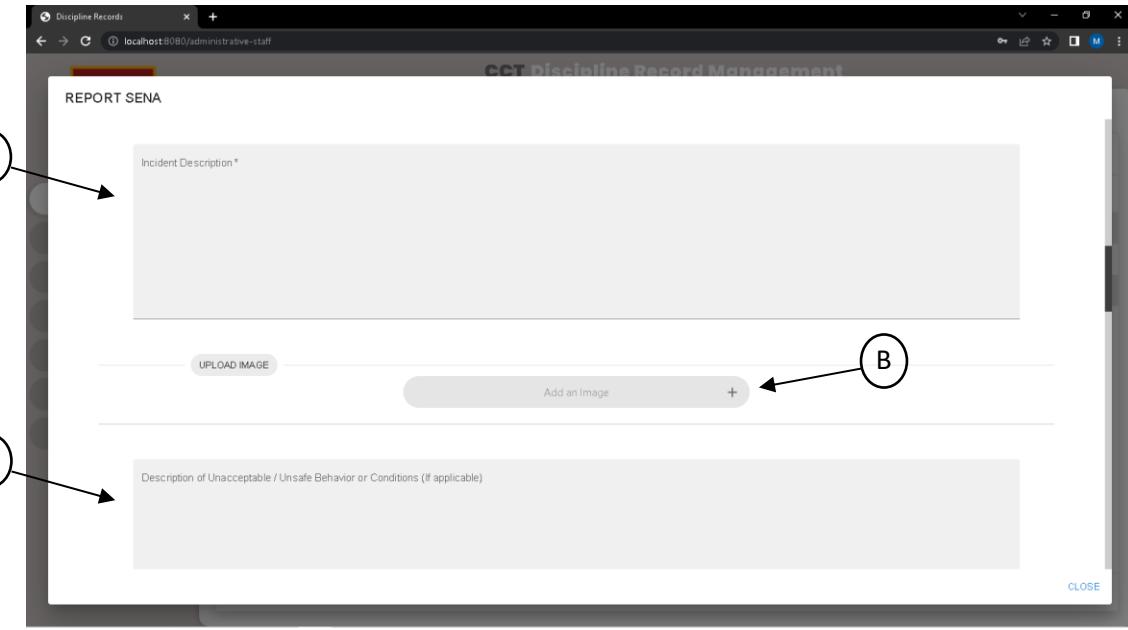
The screenshot shows a web-based application titled "CCT Discipline Record Management". A modal window is open with the title "REPORT SENA". Inside the modal, there are several input fields:

- Student ID *: 1001169
- Semester *: 2nd semester
- Duty *
- Duty Time *: Format: 00 hrs/mns
- Location *
- Specific Area of Location *
- Additional Person(s) Involved
- Witnesses

Arrows labeled A through H point to each of these fields respectively.

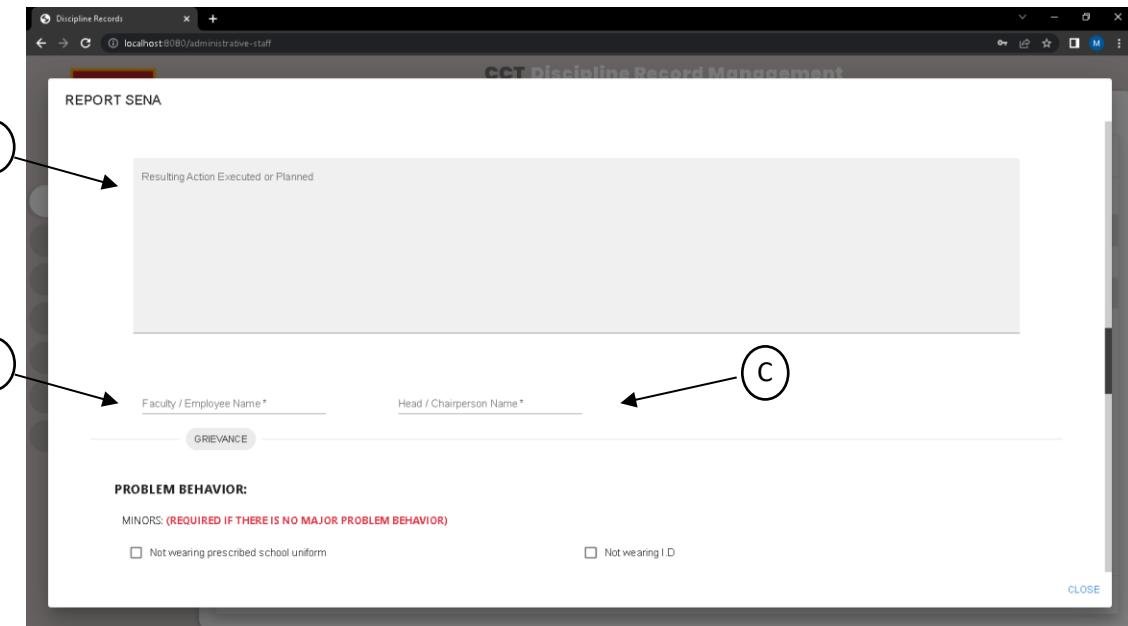
Administrative Staff Dashboard (making an incident report)

- Student ID – id of the student who has been reported.
- Semester – the current active semester.
- Duty – the duty that students will do.
- Duty Time – the time that the student will render.
- Location – the location of the indecent.
- Specific Area of location – the specific area of the incident.
- Additional Person(s) involved – the additional person that was involved in the incident.
- Witnesses – the witness of the incident.



Administrative Staff Dashboard (making an incident report)

- A. Incident Description – the description of the incident.
- B. Upload Image – upload photo/s of the incident.
- C. Description of Unacceptable/Unsafe Behavior or Conditions – the description of unacceptable/unsafe behavior or conditions of the student.



Administrative Staff Dashboard (making an incident report)

- A. Resulting Action Executed or Planned – the result of action executed or planned.
- B. Faculty/Employee Name – the name of the faculty or employee of the discipline office.
- C. Head/Chairperson Name – the name of the head or chairperson of the discipline office.

REPORT SENA

GRIEVANCE

PROBLEM BEHAVIOR:

MINORS: (REQUIRED IF THERE IS NO MAJOR PROBLEM BEHAVIOR)

- Not wearing prescribed school uniform
- Dress Code
- Loitering
- Careless / unauthorized use of school property
- Other _____
- Not wearing I.D
- Using vulgar words and rough behavior
- Littering
- Unauthorized posting of announcements, posters and notices

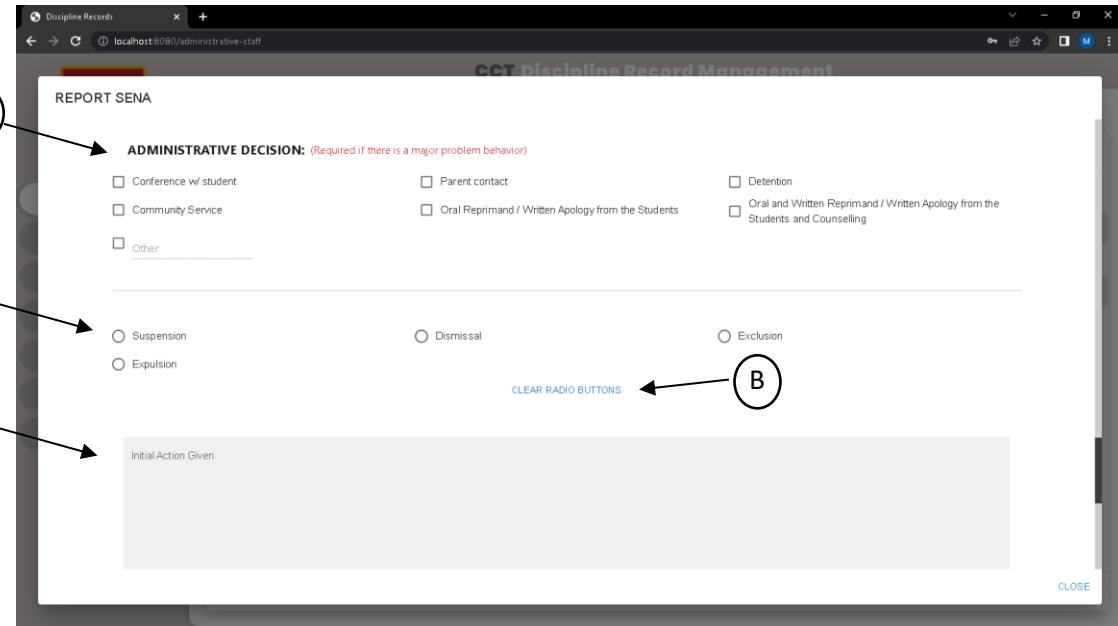
MAJORS: (AUTOMATIC OFFICE REFERRAL)

- Using another persons, ID/COR, lending of ID/COR
- Unauthorized possession of examination materials, and other documents
- Cheating during examination
- Grave act of disrespect
- Bullying in any form
- Forging, Falsifying or Tampering of any Academic , Official Records of Documents
- Having somebody else take an examination for another
- Plagiarism
- Involvement in any form of attack to other person
- Other _____

CLOSE

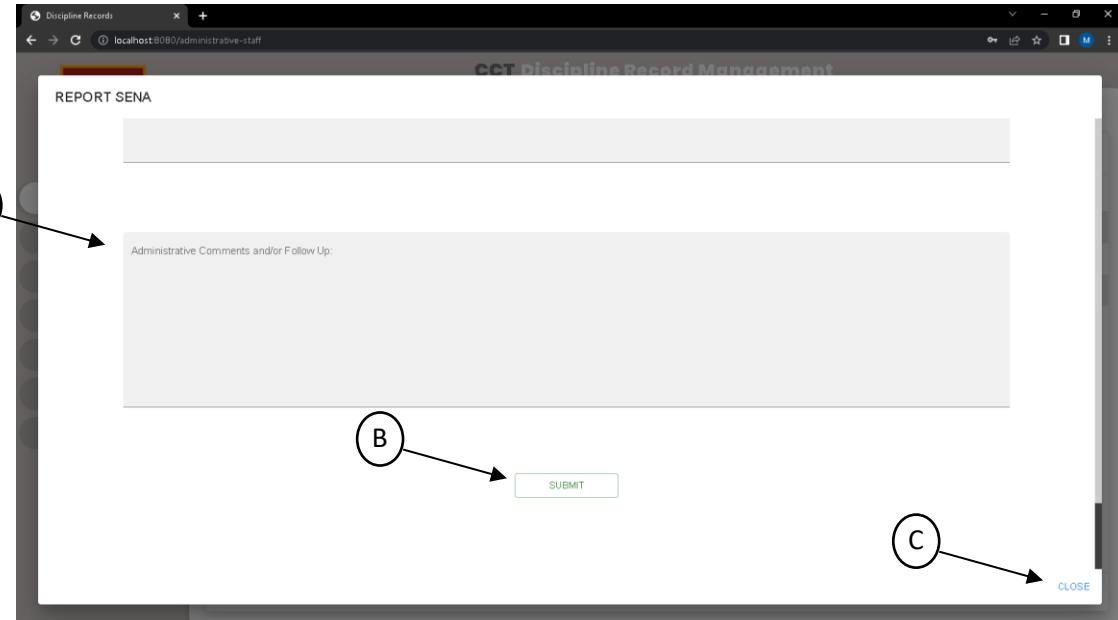
Administrative Staff Dashboard (making an incident report)

- A. Minor Problem Behavior – list of minor violations.
- B. Major Problem Behavior – list of major violations.



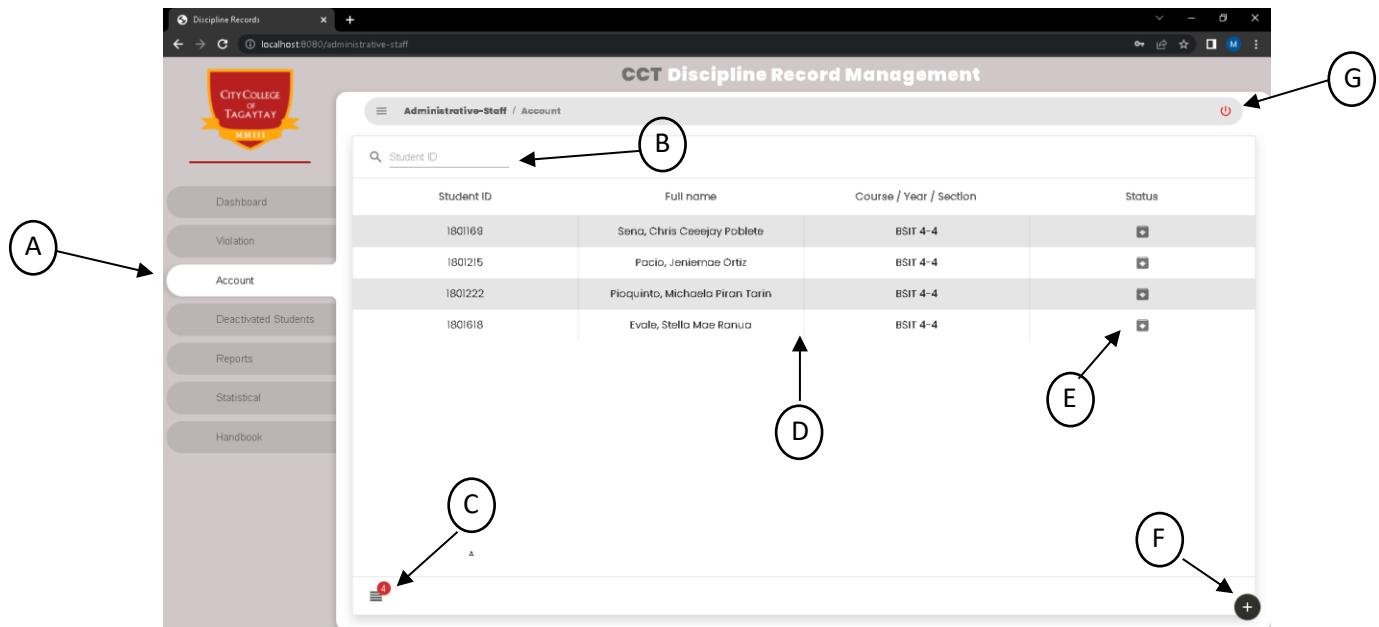
Administrative Staff Dashboard (making an incident report)

- Administrative Decision – final decision of the administrative staff for the student.
- Clear Radio Button – to clear the selected Radio button.
- Initial Action Given – initial action given by the administrative staff.



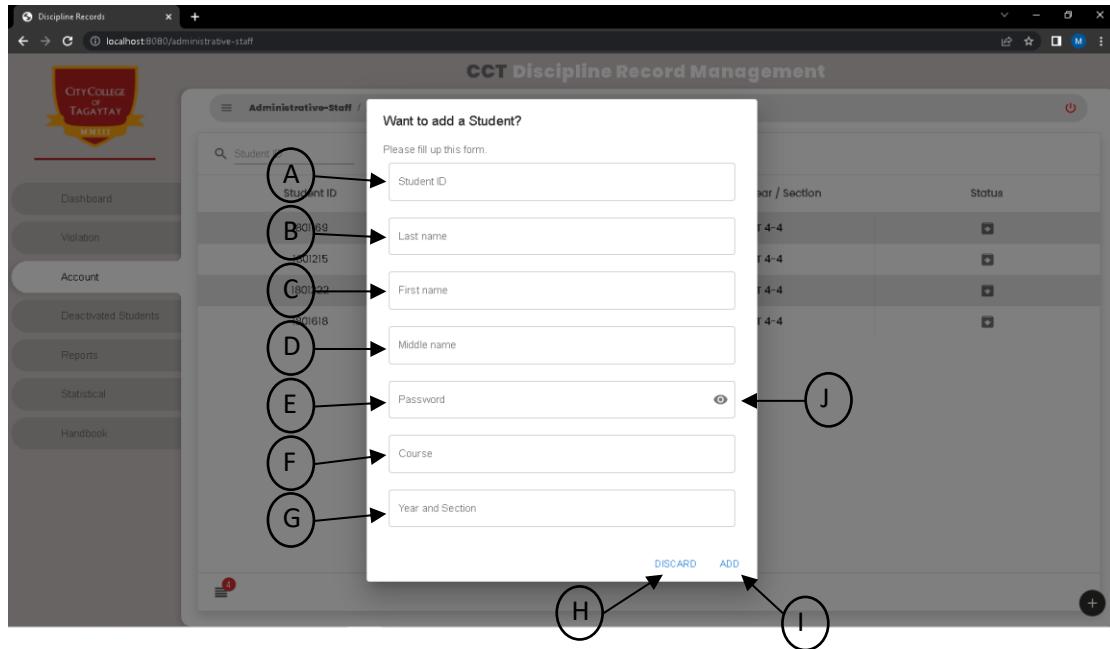
Administrative Staff Dashboard (making an incident report)

- A. Administrative Comments and/or Follow Up – administrative staff comment and/or follow up on the incident report.
- B. Submit Button – submit the report given to the student.
- C. Close Button - close the incident form.



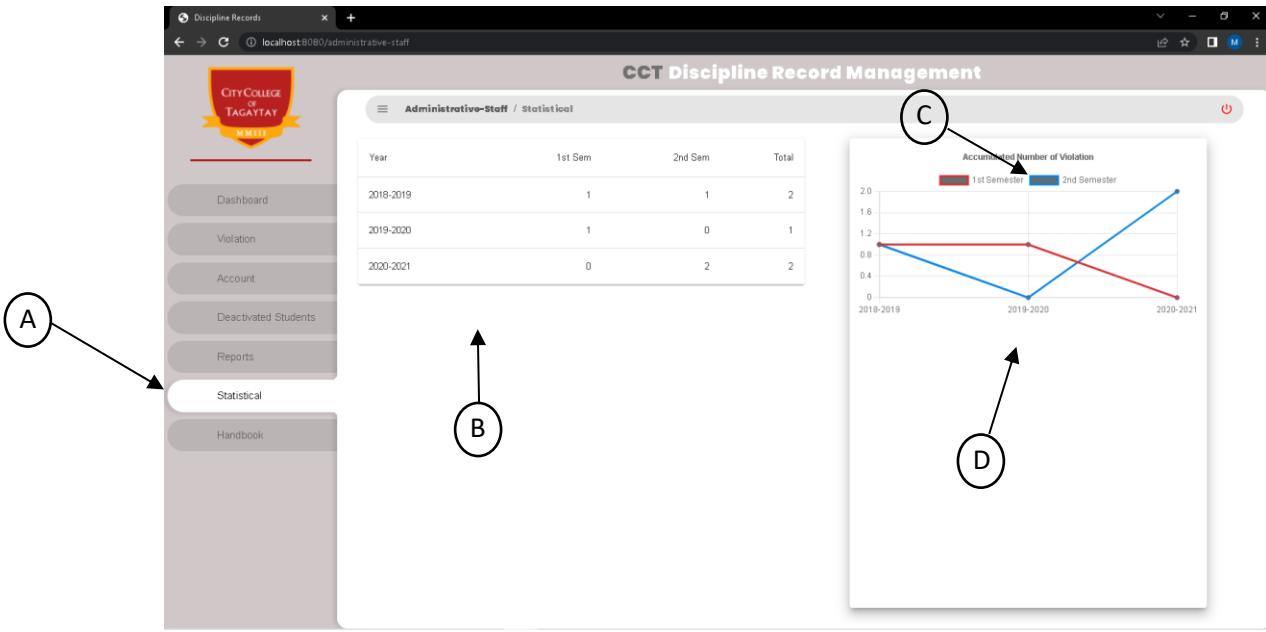
Student Account Management

- A. Account Tab – allows the administrative staff to view the student accounts.
- B. Search Bar – allow the administrative staff to search student accounts using their student ID.
- C. Burger Icon – allows the administrative staff to see the number of students at the table.
- D. List – list of the student in the table.
- E. Activate and Deactivate – allows the administrative staff to activate or deactivate the student account.
- F. Add Button – allow the administrative staff to add a student account.



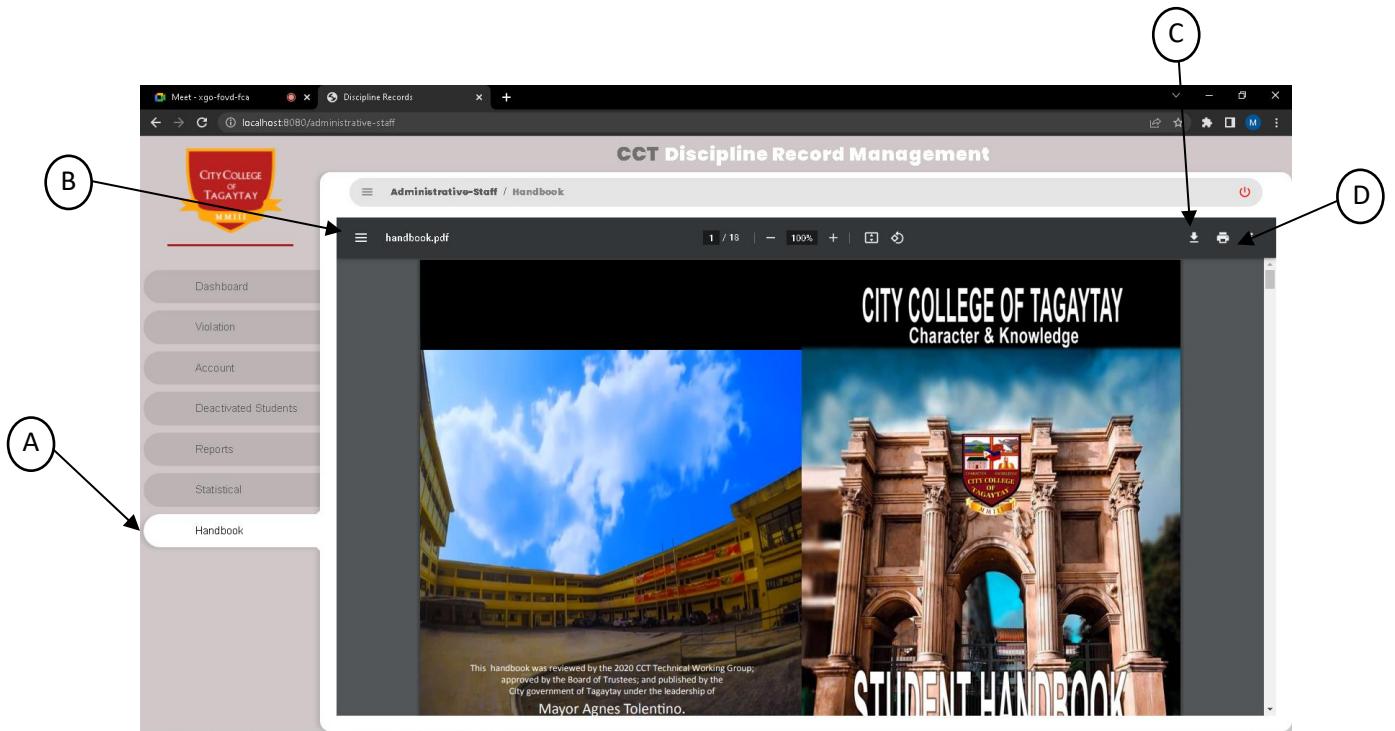
Student Account Management

- Student ID – administrative staff will input the student ID.
- Last name – administrative staff will input the student's last name
- First name – administrative staff will input the student's first name.
- Middle name – administrative staff will input the student's middle name.
- Password – administrative staff will input the student password.
- Course – administrative staff will input the student course.
- Year and Section – administrative staff will input the year and section of the student.
- Discard Button – administrative staff can disregard all inputs.
- Add Button – administrative staff will add the student.
- Show/Hide Icon – administrative staff can show or hide the student password.



Administrative Staff Statistical Measurement

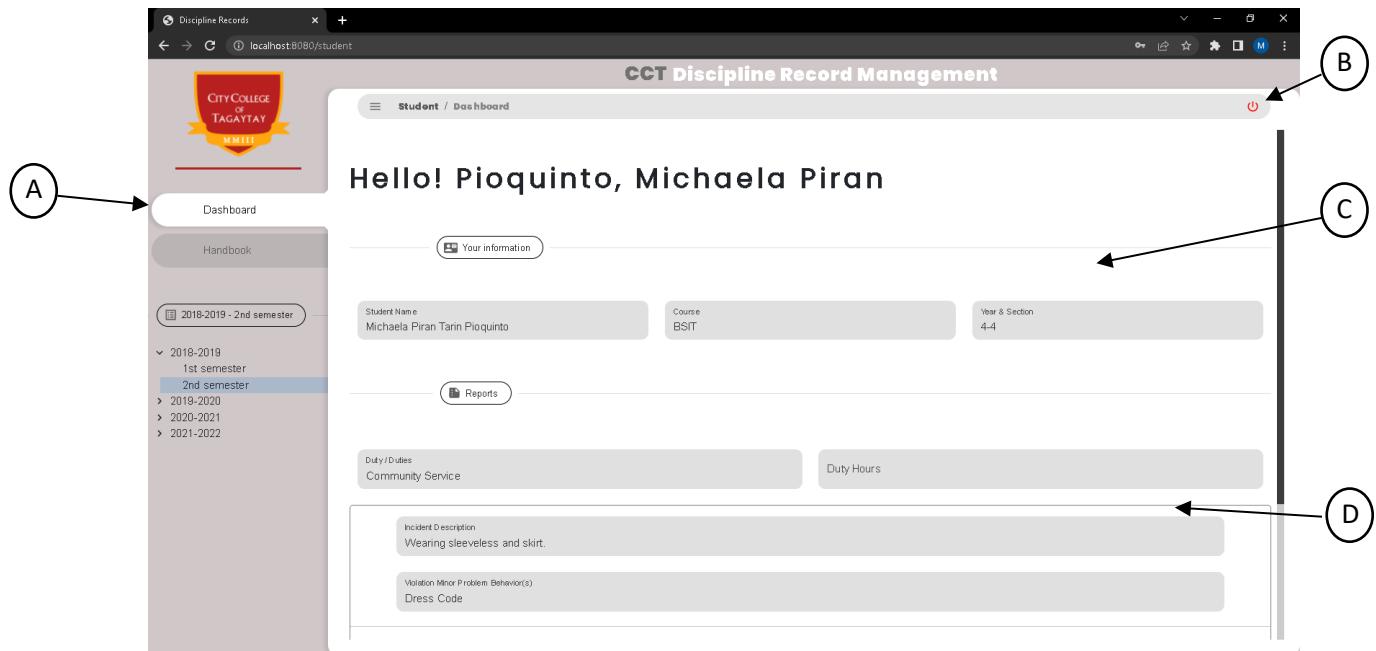
- Statical Measurement – allow the administrative staff to view the statistical measurement.
- List – list of the violation that is committed every school year and semester.
- Filter – filter the violation committed every semester.
- Statistical Graph – graph of the violations committed every school year and semester.



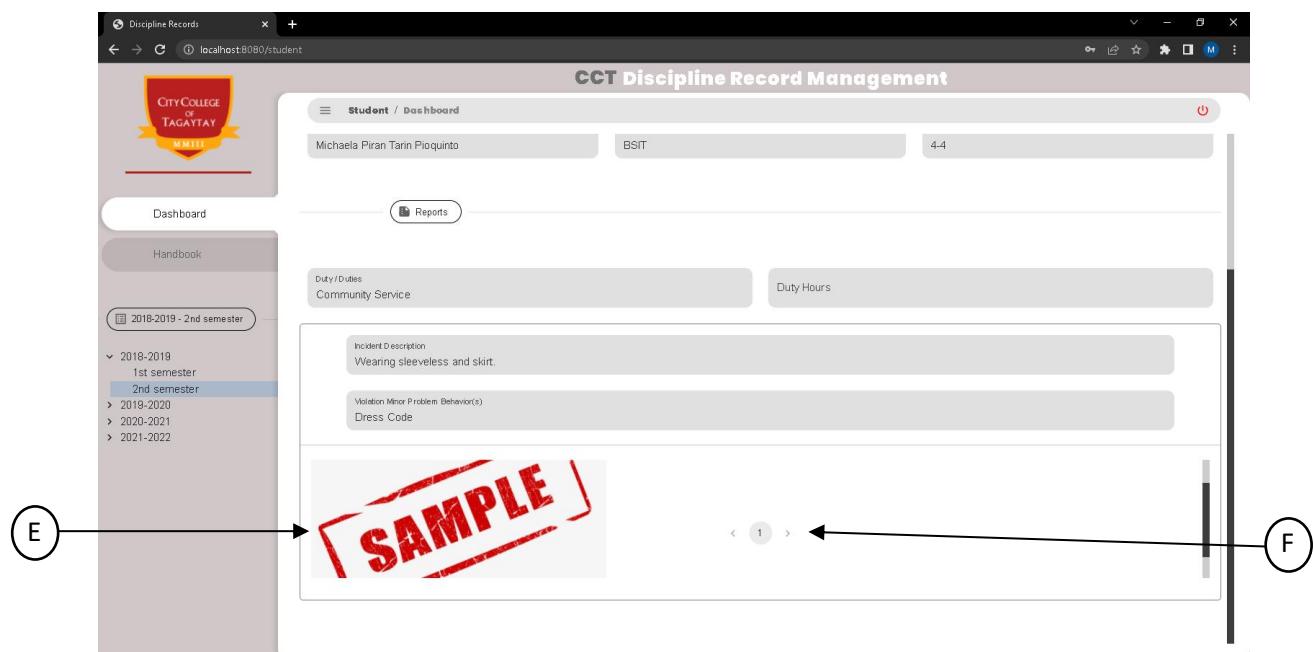
Administrative Staff Handbook

- A. Handbook – allows the administrative staff to view the student handbook.
- B. Burger Menu – allows the administrative staff to view the pages of the student handbook.
- C. Download Button – allows the administrative staff to download the handbook.
- D. Print Button – allows the administrative staff to print the handbook.

(For The Student)



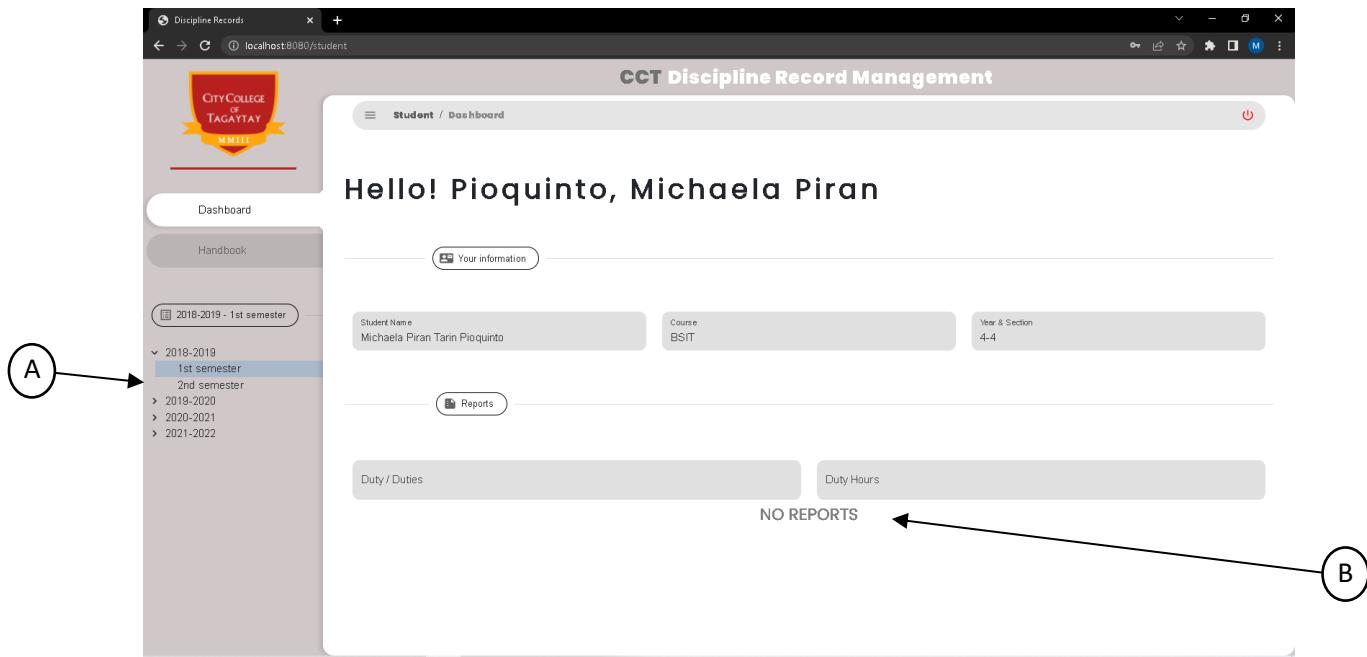
Student Dashboard



Student Dashboard

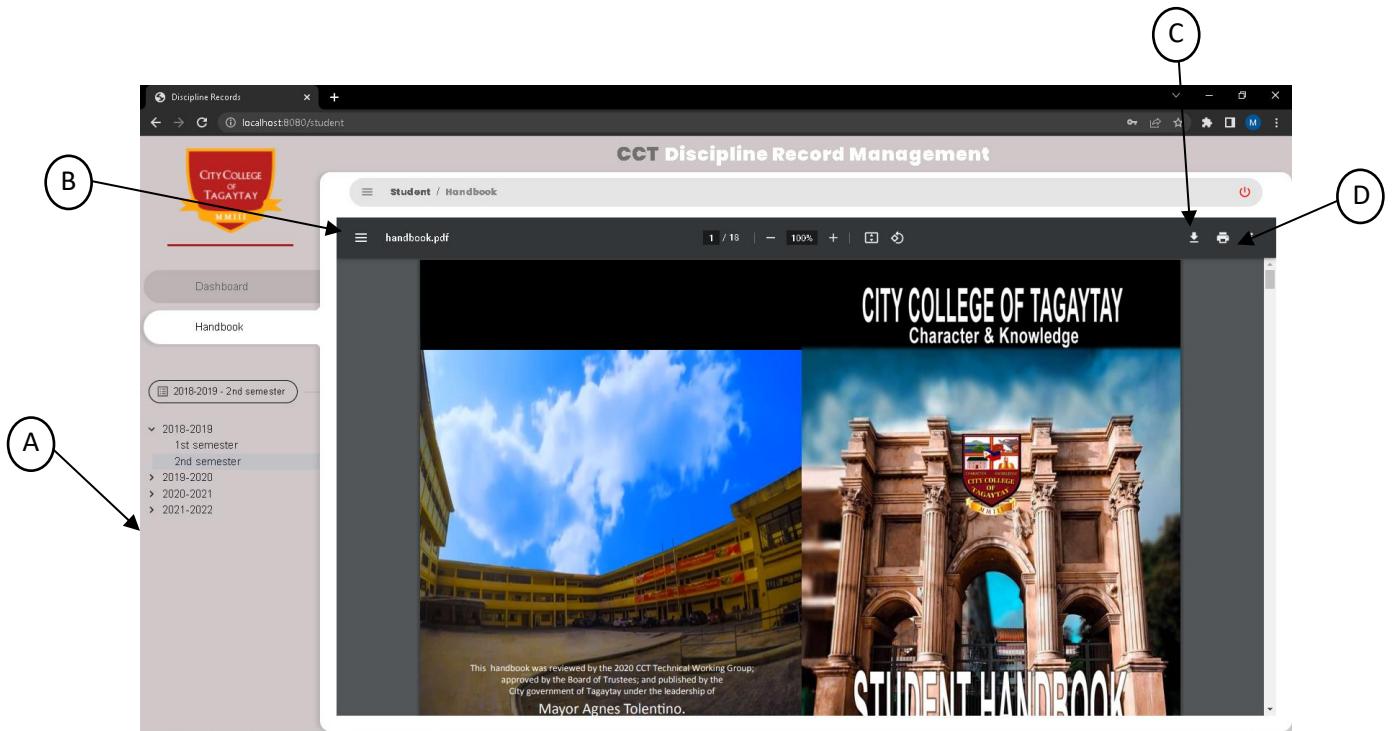
- A. Dashboard – to view the student's basic information and reports.
- B. Logout Button – to log out the user.
- C. Your Information – basic information about the students.

- D. Reports – reported incident of the student.
- E. Photo Evidence – uploaded photo evidence.
- F. Next Page – allow the student to view the other incident report with the same school year and semester.



Student Dashboard

- A. School Year & Semester Sidebar – allow the student to view their present and previous incident report.
- B. No Reports – it is visible if the student does not have an incident report on the specific school year and semester.



Student Handbook

- A. Handbook Tab – allow the student to view the student handbook.
- B. Burger Menu – allows the student to view the pages of the student handbook.
- C. Download Button – allows the student to download the handbook.
- D. Print Button – allows the student to print the handbook.

Appendix C. Test Results

Unit Testing

Browser	Findings	Date
Google Chrome	The system works very smoothly.	April 24, 2022
Internet Explorer	The system doesn't work.	April 24, 2022
Microsoft Edge	The system works very smoothly.	April 24, 2022
Mozilla Firefox	The system works very smoothly.	April 24, 2022
Opera Mini	The system works very smoothly.	April 24, 2022
Safari	The system doesn't work.	April 24, 2022

Routing Slip



Republic of the Philippines

City of Tagaytay



CITY COLLEGE OF TAGAYTAY

Akle St., Kaybagal South, Tagaytay City 4120

Tel. Nos. (046) 483-0470 / (046) 483 -0672

SCHOOL OF COMPUTER STUDIES

ROUTING SLIP FOR THESIS / CAPSTONE PROJECT

Name : Evale, Stella Mae

Pacio, Jeniemae

Pioquinto, Michaela Piran

Sena, Chris Ceejay

Title of Study: Student Discipline Record Management System For City College Of
Tagaytay

Please Check:

Outline

Final Manuscript

Designation: Concerned	Date		Remarks
	Received	Released	
Adviser: Angelito M. Caraan			
	1		
	2		
	3		
Unit Research Coordinator:			
	1		
	2		
	3		
IT Coordinator:			
	1		
	2		
	3		
English Critic:			
	1		
	2		
	3		
Dean: Michael Jeffrey Añonuevo			
	1		
	2		
	3		

ANGELITO M. CARAAN

Adviser

Date

Unit Research Coordinator Date

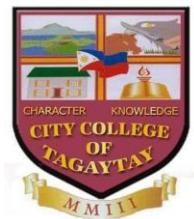
Approval Sheet



Republic of the Philippines

City of Tagaytay

CITY COLLEGE OF TAGAYTAY
SCHOOL OF COMPUTER STUDIES



Department of Information Technology

APPROVAL SHEET

Capstone Project

This capstone project proposal entitled **DEVELOPMENT OF WEB BASED STUDENT DISCIPLINE RECORD MANAGEMENT SYSTEM FOR CITY COLLEGE OF TAGAYTAY**, prepared and submitted by **STELLA MAE EVALE, JENIEMAE PACIO, MICHAELA PIRAN PIOQUINTO, AND CHRIS CEEJAY SENA** in partial fulfillment of the requirements for the degree Bachelor of Science in Information Technology, is recommended for ORAL DEFENSE.

Date of Oral Defense: May----