RMIT Classification: Trusted

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RMIT International University Vietnam

Assignment Cover Page

Subject Code:	ISYS3414
Subject Name:	Practical Database Concepts
Location & Campus (SGS or HN) where you study:	HN
Title of Assignment:	Assessment 2: Group Project
Teachers Name:	Ushik Shrestha Khwakhali
Group Name:	Group 6
Group Members (names and id numbers):	Duc Nguyen: s3929899 Phung Dung: s3978141 Quynh Chi: s3978316 Tung Le: s3979121 Thang Dang: s3977877
Assignment due date:	05/05/2023
Date of Submission:	05/05/2023
Declaration of Authorship	We declare that in submitting all work for this assessment, we have read, understood and agreed to the content and expectations of Assessment Declaration as specified in https://www.rmit.edu.vn/students/my-studies/assessment-and-exams/assessment
Consent to Use:	We give RMIT University permission to use our work as an exemplar and for showcase/exhibition display.

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Project Background

Topic

[1] believes that libraries are one of the most essential aspects of our society because they provide access to books, magazines, and the internet to people from all walks of life and income brackets. According to [2], the Vietnamese library system frequently fails to recruit new users. The Vietnam National Library had a sizable budget, but almost all of it went toward employee salaries, which was unfortunate. This is problematic because there is not much money left to purchase new publications. I believe it's crucial that we construct an LMS using Oracle Apex so that we don't have to pay as much to maintain it. Regarding our motivation, it would be remiss of us not to mention that we are fortunate to be students at RMIT University Vietnam, which has the most advanced library system of any university in the country. We have numerous opportunities to enhance our education and academic abilities, as the school has granted us permission to use the school library, which is stocked with excellent learning materials, and we also have the ability to access a large number of excellent books through the RMIT online library. Because of this, we are interested in the inner workings of the library management system and desperate to find out how to develop one of them.

People

Than Phung Dung

Sid: s3978141

Email address: s3978141@rmit.edu.vn

Interest in the topic: For university students like me, the library is where I spend the most time for self-study and personal development. Therefore, with the topic of library management, it is an exciting opportunity for me to work on something that is familiar to me.

Role description: My role in this project is a developer for ERD, SQL schema, and creating an application on Oracle Apex. Besides, I am responsible for allocating tasks to each group member and synthesizing them into a large group assignment.

Bui Hoang Quynh Chi

Sid: s3978316

Email address: s3978316@rmit.edu.vn

Interest in the topic: With a library offers a variety of books, knowledge acquaintances, and data collection from the library are the major benefits of an RMIT student, including me. Receiving the topic, I was eager to work with databases as well as develop an application to the last detail that stimulated the actual library format I have always been accustomed to.

Role description: In this project, I contributed as a logical schema designer, a data creator, and a data visualizer for the application. Moreover, I also presented my ideas for the group's decision and supported other team members with their tasks through clear communication.

Dang Quoc Thang

Sid: s3977877

Email address: s3977877@rmit.edu.vn

Interest in the topic: I have a strong interest in the invention and AI field, and for this assignment, it's a new experience to do the thing with Oracle Apex and MySQL. I'm glad to work with apps and understand more about how to build an app.

Role description: In this project, I am in charge of coding app and drawing the ERD. My role requires a lot of knowledge of MySQL language as well as understanding how we want to have the library to draw the ERD. I also help other teammates in fixing code bugs and do the Oracle Apex.

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Le Hoang Tung:

Sid: s3979121

Email address: s3979121@rmit.edu.vn

Interest in the topic:

Knowing how to create a database and understand how data is managed in a system is all I am fascinated with in this project. Since I am into building a website, this is a great opportunity to get familiar with a website back-end.

Role description:

I am responsible for creating the library database structure including tables, and specific constraints to ensure data integrity. I also work with other members to design the ERD and also write queries to export valuable information.

Nguyen The Duc

Sid: s3929899

Email address: s3929899@rmit.edu.vn

Interest in the topic: Since I became a student at RMIT University Vietnam, I have always enjoyed the school library. Not only does it provide me with a peaceful location to study, but it also inspires me to do better each time, as I am surrounded by other eager students. Participating in a library management system initiative is therefore very interesting to me, as it teaches me about management systems and SQL as a query language.

Role description: I have been tasked with assisting with ER diagrams, researching and documenting them as well as delivering presentations. Consequently, it is my responsibility to complete both the reports and the slides for our group's presentation. I am additionally accountable for assisting other team members when they get stuck on their tasks.

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Scope

For this section, we did some research on well-known library website including:

RMIT Vietnam Library: https://www.rmit.edu.vn/libraryvn

National Library of Vietnam: https://nlv.gov.vn/

Nha Sach Mien Phi: https://nhasachmienphi.com/

The table below depicts the scope of our endeavor. Here is a list of all the features and functions we discussed during our first week as a team, complete with explanations. Due to our lack of experience, we were unable to implement all of these features in our program. Nevertheless, we have created a status and priority column to ensure that we have completed the most essential features and are prepared to continue working on the project if the need arises. In addition, if all the below-mentioned features were developed and incorporated into our system, we might attempt to conduct real-world experiments using MongoDB as the hosting server.

Status	Priority	Functions / Features	Description
	Features for administrator		
In project	**High**	Home	• This is the interface of our application, which means it will display all of the sections included in this project (which may include a dashboard, section for managing books, staff, students, and professors, as well as donation and fee

			information and a system for renting books).
		Dashboard	• Display vital charts of the system and their value.
		Book Management	• Display every book along with their status in the database. • Can add, edit and delete books. • Can quickly search books by its name.
		Book Search	• Search books in the database by looking for its name, author, category and number of copies
		Donation	• Display books that are donated along with its donator information (ID, name, date, mobile number, etc.)
		Staff Management	• Show all the name and ID of current staffs as well as their work's information (position, day, shift, etc.)
		Staff Working Calendar	• Show the shift of each staff alongside with their name under the concepts of a calendar (may view in month, week, day or shift list)
		Professor Management	• Display all the information of professor/ teacher that have registered as the renter of the system (including their name, ID, Major, Maximum books and days issued, etc.)
		IT Professor	• Display all the information of renter who are teacher/professor, filtered by their major.
		Design Professor	
		Business Professor	
		Profcom Professor	

		Professor Major	• Display the charts of professor major, notice that this chart will also appear on the dashboard section.
		Renting Book System	• Show the information of rented books and their renters (both books and renters will have IDs and their names, each log will have the issue ID, issue date and the time their read a book which called duration. • Search renter by their name, their job (student or teacher/professor), their duration, etc.
		Fee	• Display the books and their renters that are late in returning their books according to the issue date. • Able to search renters that have heavy late fee (for example, we could count someone as a heavy fee renter by filter their late fee more than or equal 40)
		Renter	• Display only the renters information along with their ID, name, maximum books and days they can issued, etc.
		Student Management	• Display all the information of students that have registered as the renter of the system like their name, ID, Major, Maximum books and days issued, etc.
		IT Student Business Student Design Student Profcom Student	• Show the information of renters that are students, filtered by their major (their major could be the same as their teacher/professor that we have aforementioned above)

		Student Major	• Display student major in the circle-form chart which also appeared on the dashboard.
Not in project	**Features for users**		
	Low	Login as student/teacher	• This will allow student and teacher search and rent books
	Dead-end (skill issues)	Payment and banking	• This will allow renters to pay the fee in case of borrowing books or late in returning them.
		Delivering	• After users provide vital information to confirm that they want the rented book to be shipped to them, this function will create a shipping log which including user's information and books delivering status in the database of administrators.
		Real-time chat assistant	• This feature will assign an assistant to help users achieve what they want in case they are phased into any struggle situation.
		Feedback from renters	• This feature allows renters to evaluate each book they have rented and also give feedback of their experience with our service.
		Recommendation	• Make new or high rating books that are relevant in topic with those which rented by the users.
		Client's Errors Recovering	• This function will help users acknowledge and recover from problems occurred by them in login phase or renting phase.

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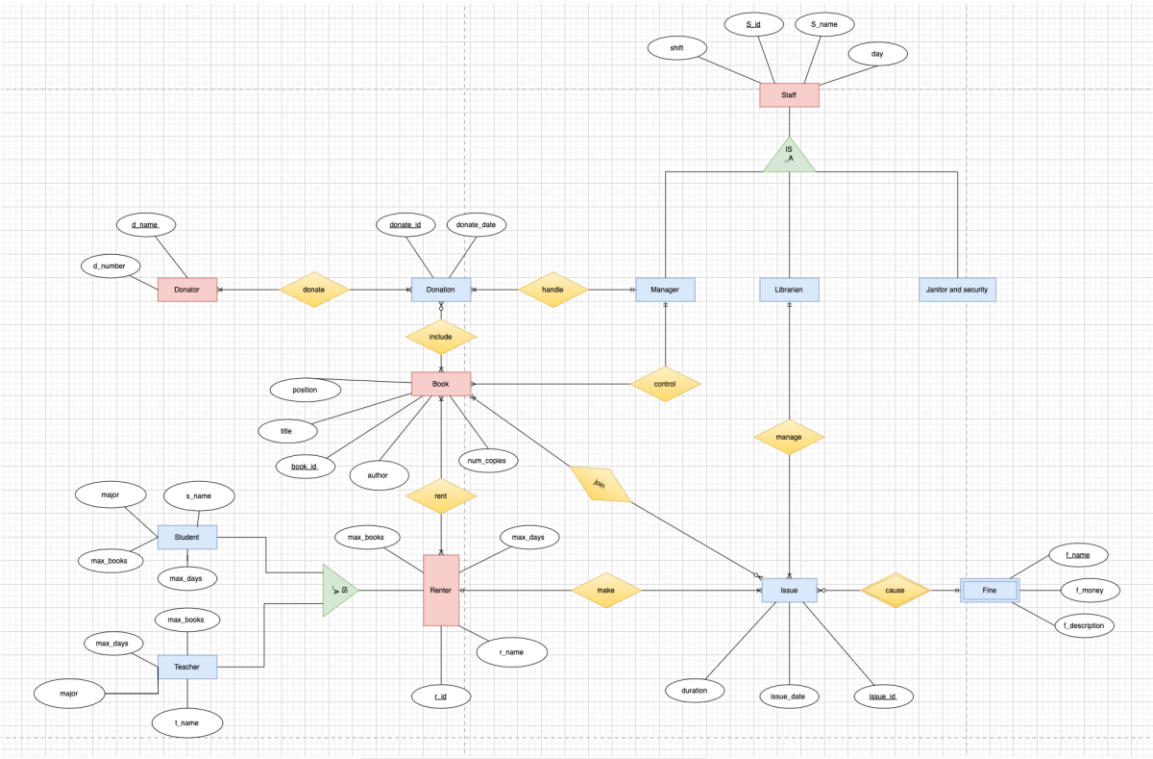
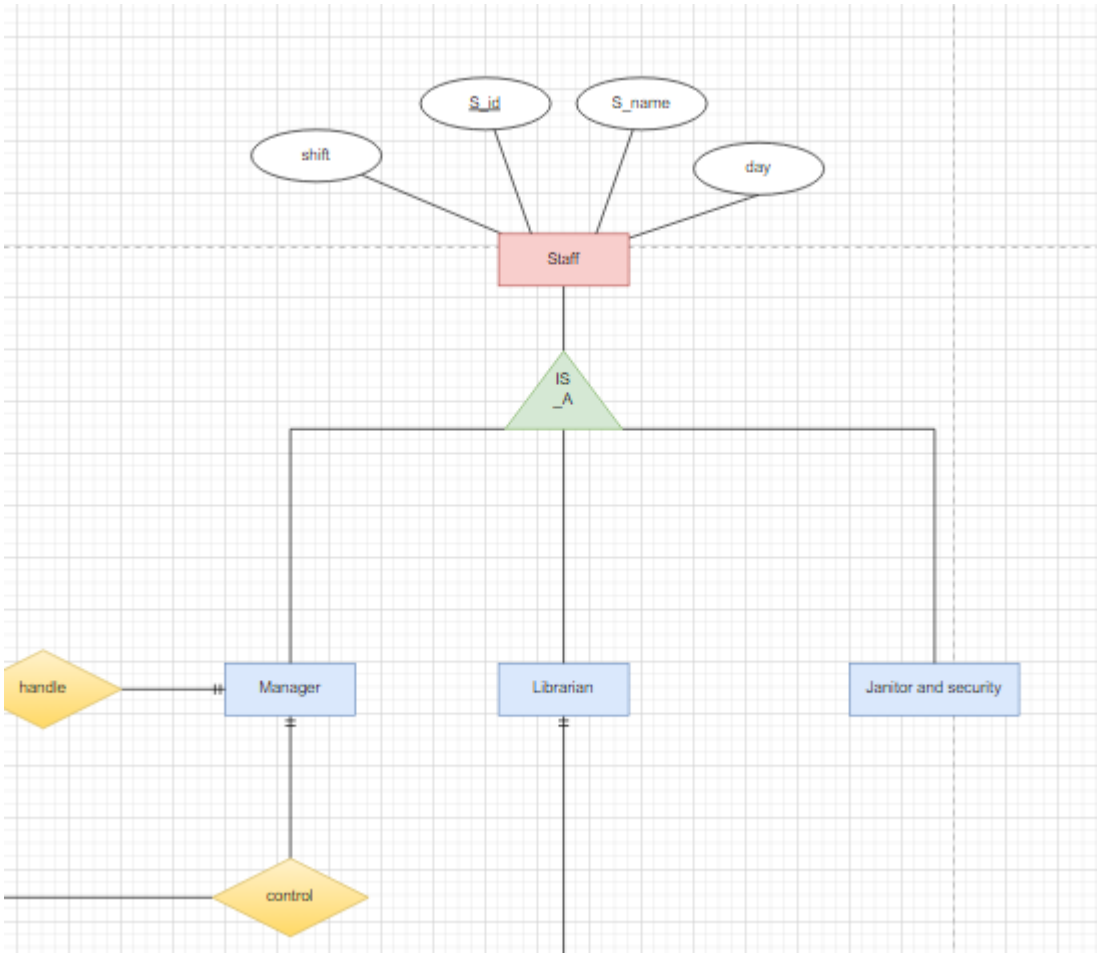
Application Design and Implementation

ERD



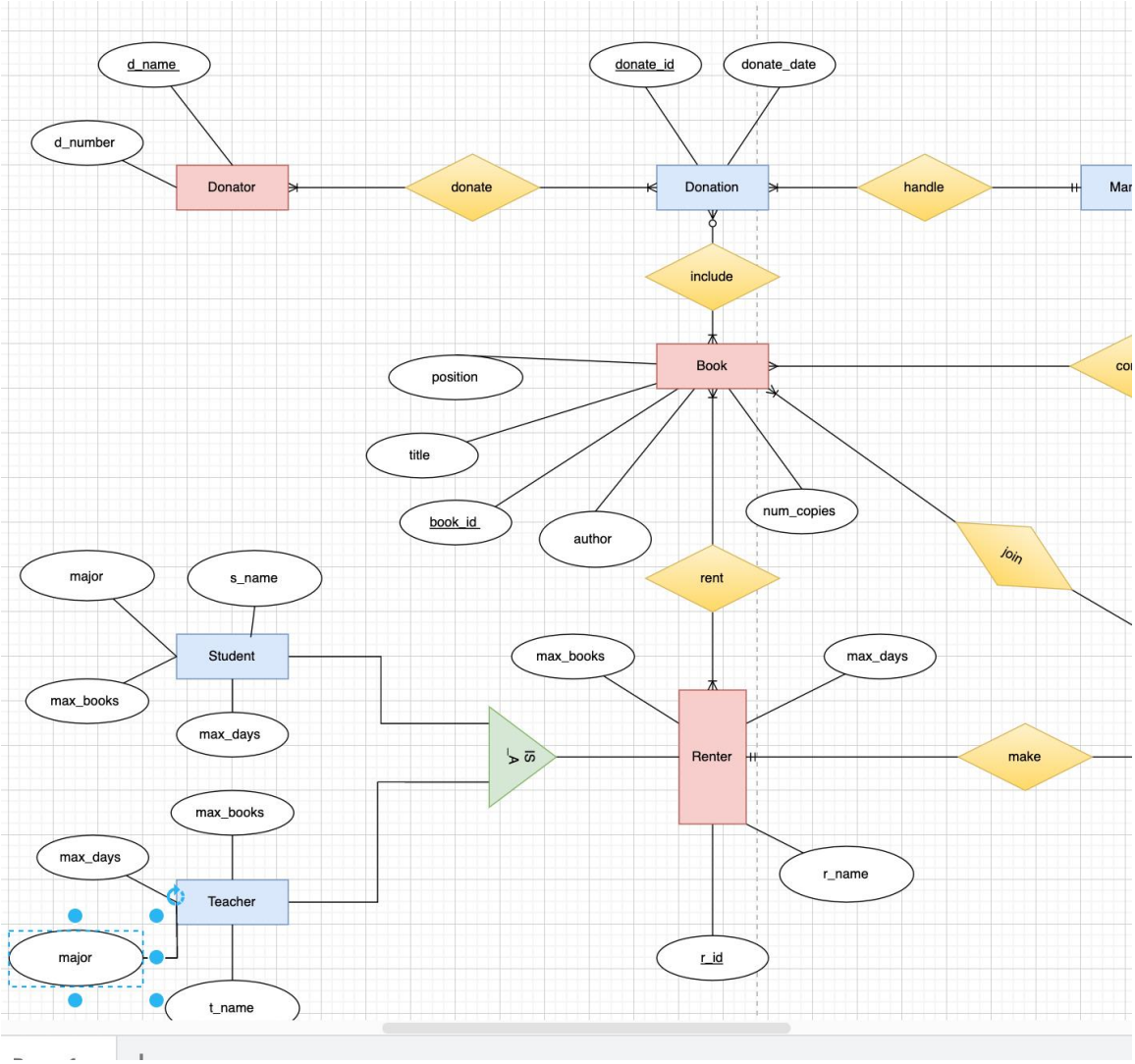
Overall diagram

This is the overall diagram for our library system project. It contains 10 main entities with many additional attributes. From left to right, the app starts with a donator, donation, staff which contains manager, librarian, janitor and security, then we have Book, renter which contains teacher and student, we have issue which has a weak entity named fine.



Staff entity

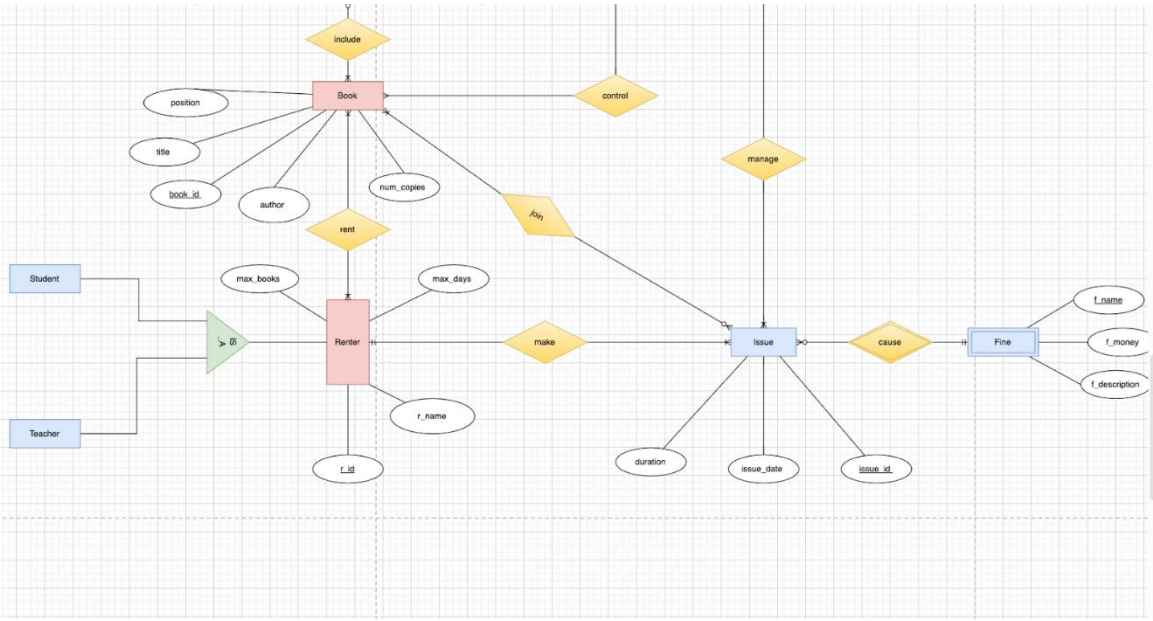
In staff entity, we make a hierarchy system for it, every staff member has their ID and name, but for each position has their own duty and relationship. There are 3 children for staff namely Manager, Librarian and Janitor & Security. Manager oversees Books, so they have a strong relationship with the book's work. The Donator donate books for library, so the Manager will control the process between Donator and the Book, next one is the Book, it’s clearly that every book will be control by Manager so the relation here is a manger can control many books and a book will be control by only one manger. A donor can donate 1 or many books and a donation can be performed by one or many donators.



Book and it's relevant entities

In these entities, we have Book and Renter. In terms of Book, there're 5 attributes namely position, title, book_id as the primary key, author and number of copies. The Book has many relationships in our app, that's why it's placed in the center of the diagram. The first relation is with Donation, Book can have zero or many from the donation and Donation must contain at least 1 book. Next relation of Book is with Manager, as I have mentioned before, the Manager take the full control of Book, that's why we need this relation. The third relation is with Issue, every Issue needs a book and many other things. And the last relation is with Renter. Renter connects to Book and Issue, it's obvious that Renter needs to read Book and have the Issue to supervise the Book. Renter has a total of 4 attributes, the maximum

of book they can rent, the maximum of day they can have, their names and IDs. Renter is Student and Teacher



Issue and Fine entities

In this part, we included all the entities that will take part in our renting book system management. First book and issue entity connect with the many to many relationships. Because that, in the relational schema, beside book and issue entities, we also need to create a row for join relationship where take two primaries key book.id and issue.id as foreign keys. Issue_id was assigned as a primary key of the issue entity. We also defined Fine entity as a weak one because this entity depends on the issue so not all the renters will make mistakes. In this entity, f_name is the primary key which we can use to identify fine.

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Relational Schemas

Staff (S_id, S_name)

Janitor and security (day, shift, Staff.S_id S_id)

Librarian (Staff.S_id S_id)

Manager (Staff.S_id S_id)

Donation (Manager.S_id S_id, donate_id, date)

Donator (d_name, d_number)

Donate (Donation.donate_id donate_id, Donator.d_name d_name)

Book (book_id, title, position, author, num_copies, Manager.S_id S_id)

Include (Book.book_id book_id, Donation.donate_id donate_id)

Renter (r_id, max_books, max_days, r_name)

Student (Renter.r_id stu_id)

Teacher (Renter.r_id t_id)

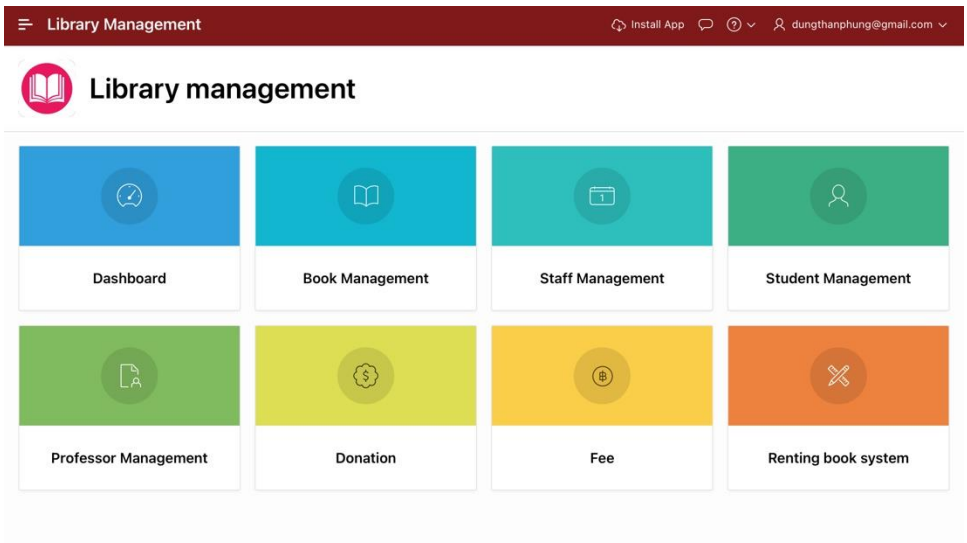
Rent (Renter.r_id r_id, Book.book_id book_id)

Fee (f_name, f_money, f_description)

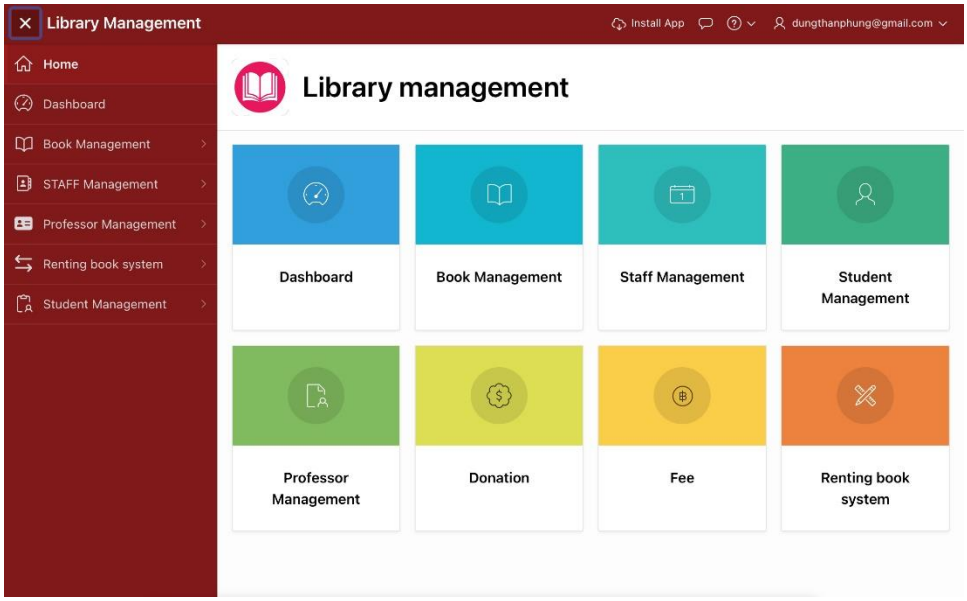
Issue (issue_id, issue _date, due_date, Librarian.S_id S_id, Fee.f_name f_name, Renter.r_id r_id)

Join (Book.book_id book_id, Issue.issue_id issue_id)

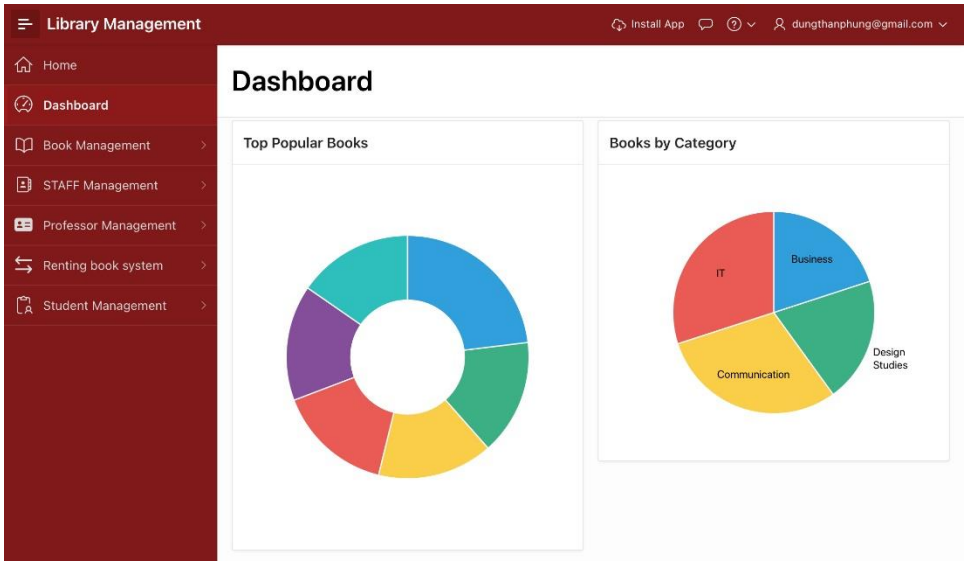
Application features:



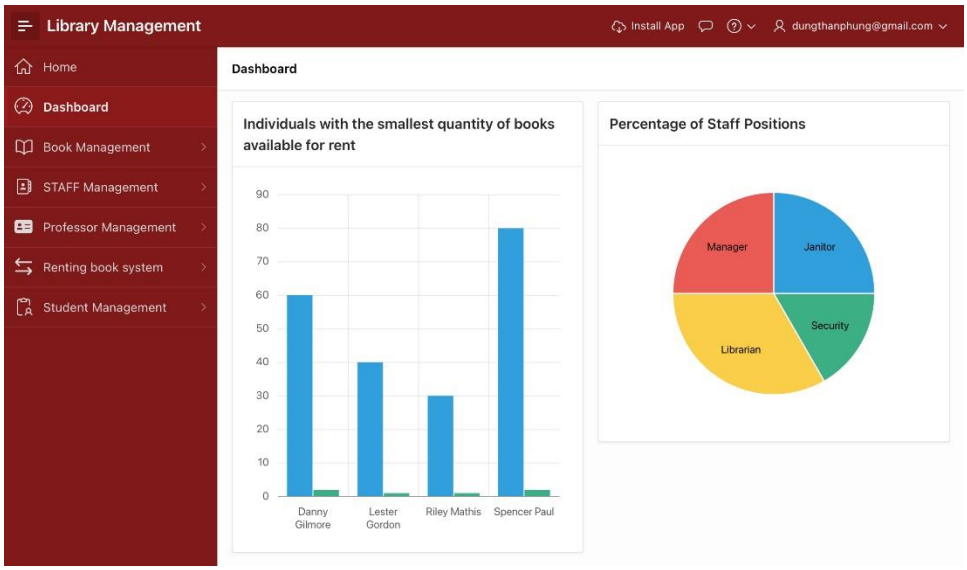
The homepage would be the first user interface to see after the successful login.



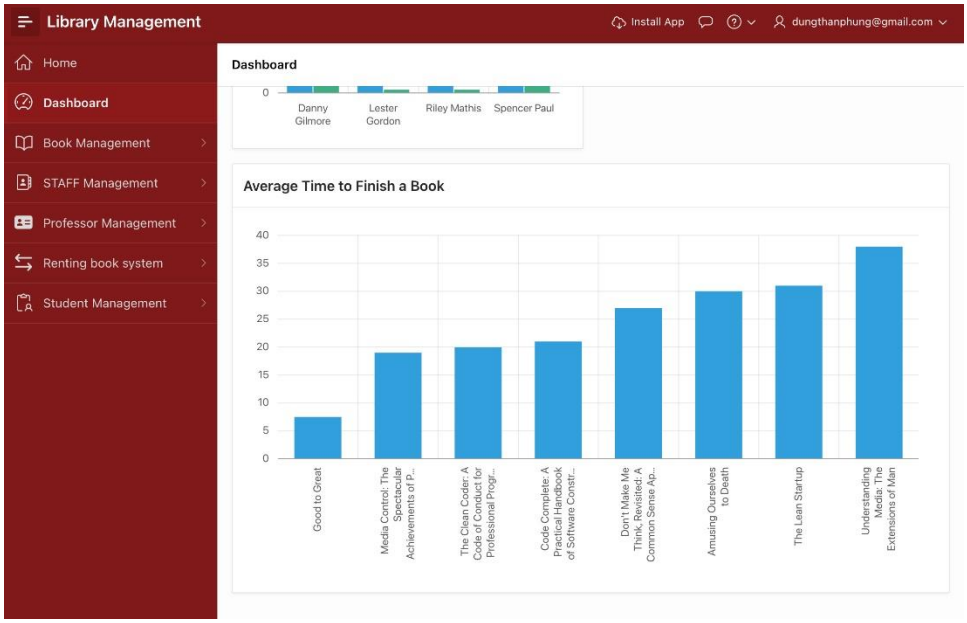
However, in order to keep things clear and concise for users, only some essential features are present in the primary interface. For easier management, the navigation menu allows users to switch between tables in each management section.



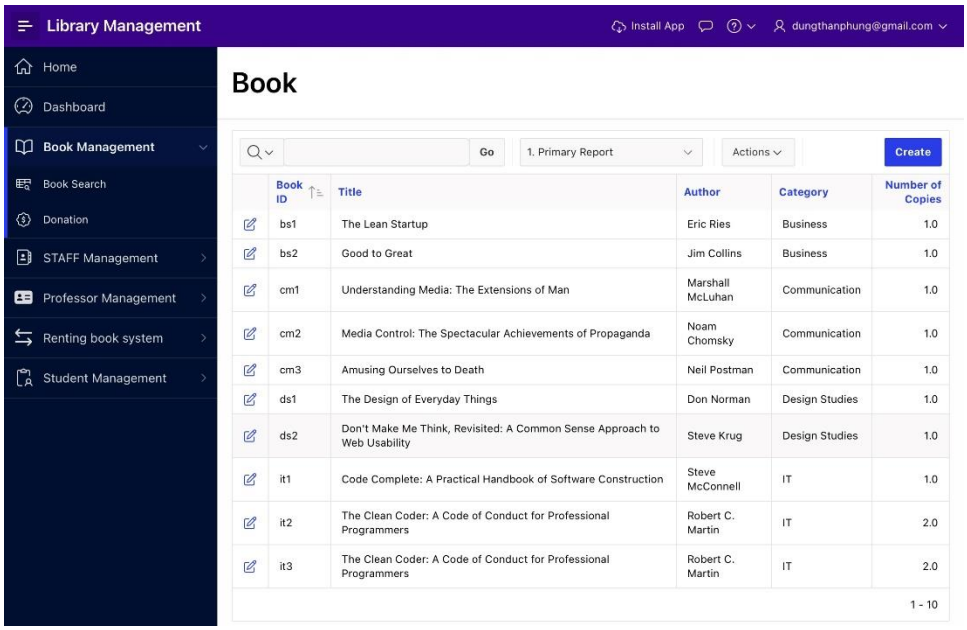
In addition, the app also contains a dashboard to show note worthy data on various types of charts to help customers gain a thorough understanding of our library. The donut chart represents the most well-liked books of all that are highly sought after by readers. The Books by Category chart to make a comparison between the total amount of books from different categories.



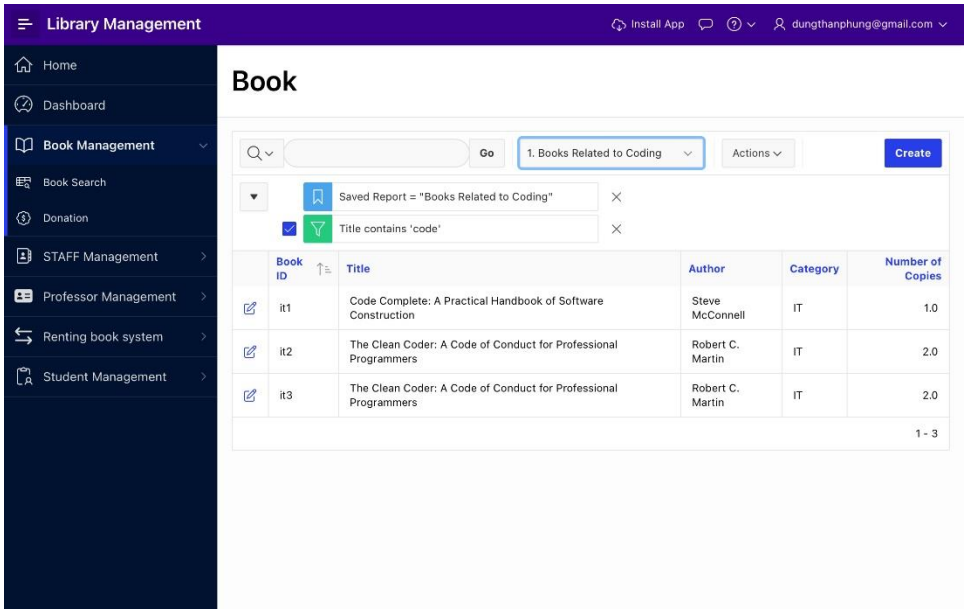
There is a double-bar graph to announce which individuals have just a few days left to borrow books before the expiration. This is created based on the renters with the smallest max days and max books allowed to borrow. On the left is the pie chart that demonstrates the percentage of staff positions.



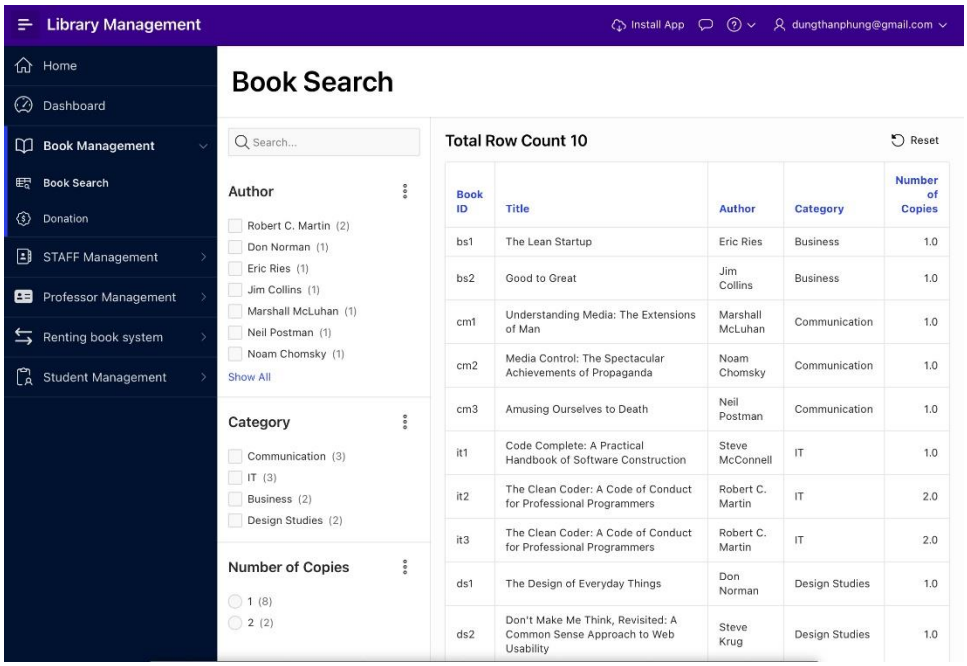
The largest bar chart indicates the average time to finish each book in the library which can be understood as the average day renters have issued each book.



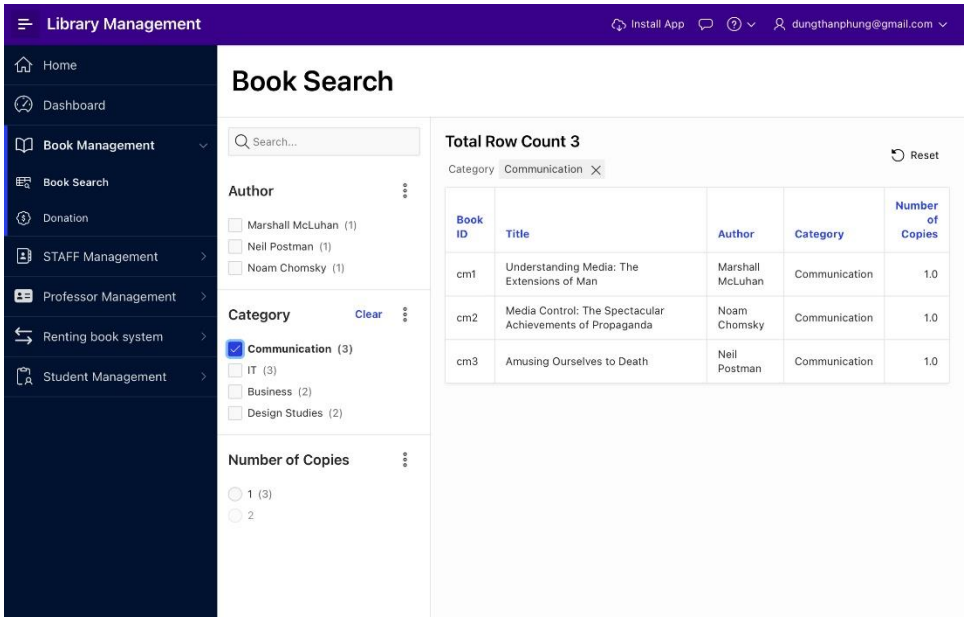
The table book above represents all of the library's book data and also allows users to add, edit or delete a book. The book search will then automatically update with the new data.



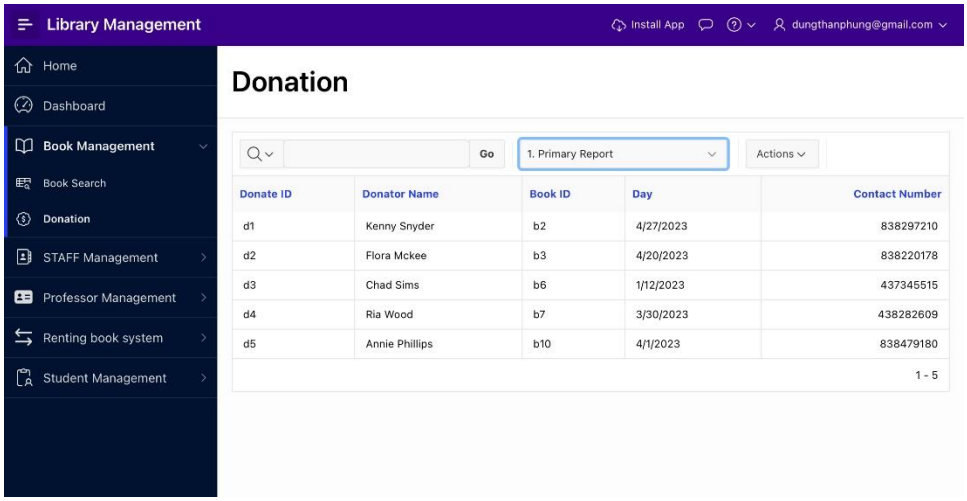
This is a sample report of programming books that people pursuing IT major may find useful.



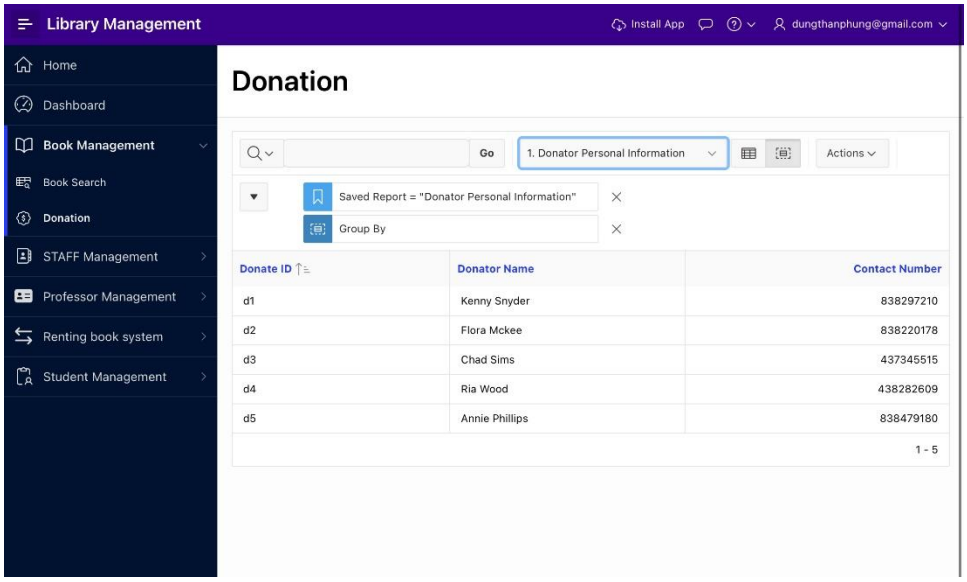
By using filters for author names, categories, or the number of copies, the book search simply just assists the users in quickly finding the book they have been looking for.



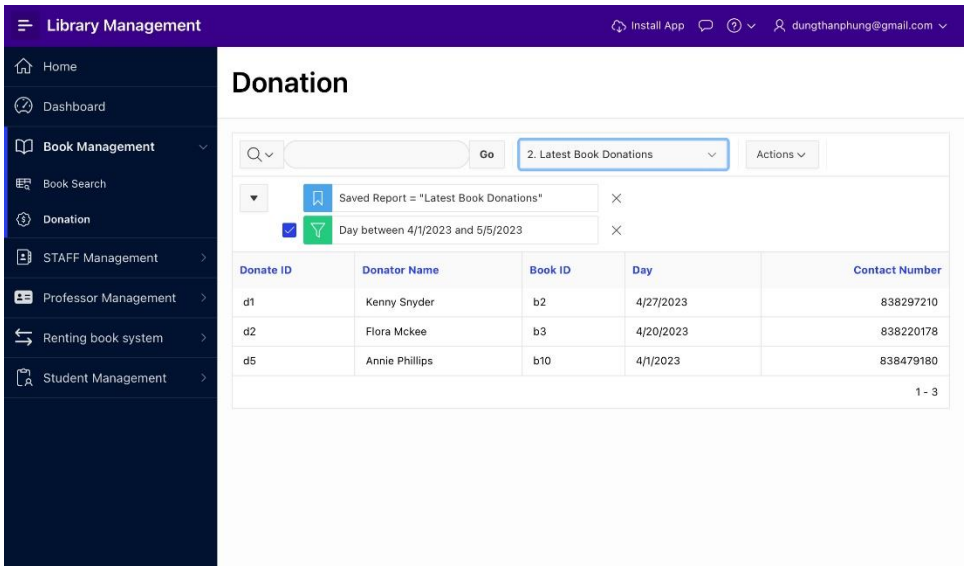
Here is an illustration of searching for communication books.



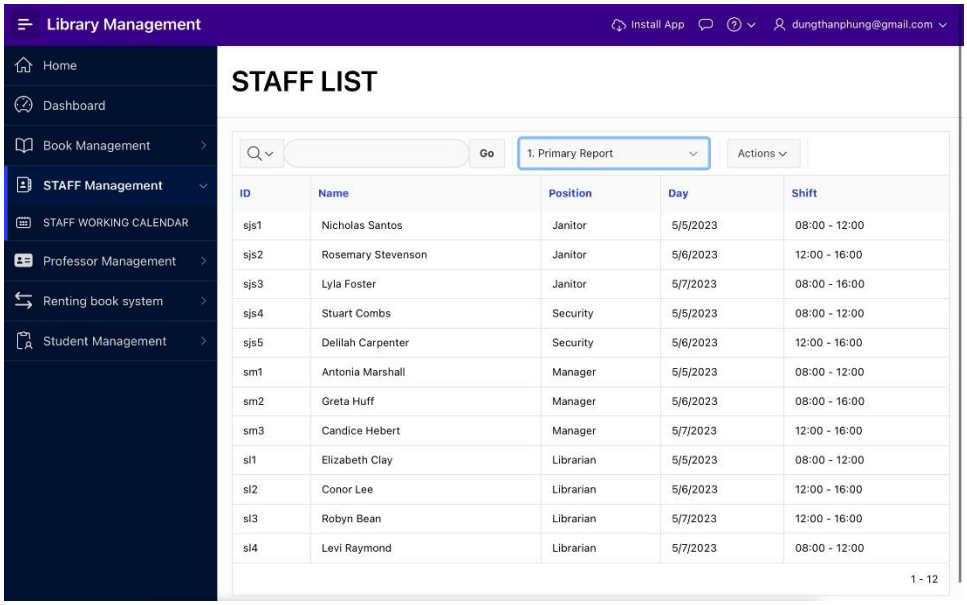
Here we have donation list because donating is one of the way the library can increase the number of book. The donation table keeps a record of all book donations in the past.



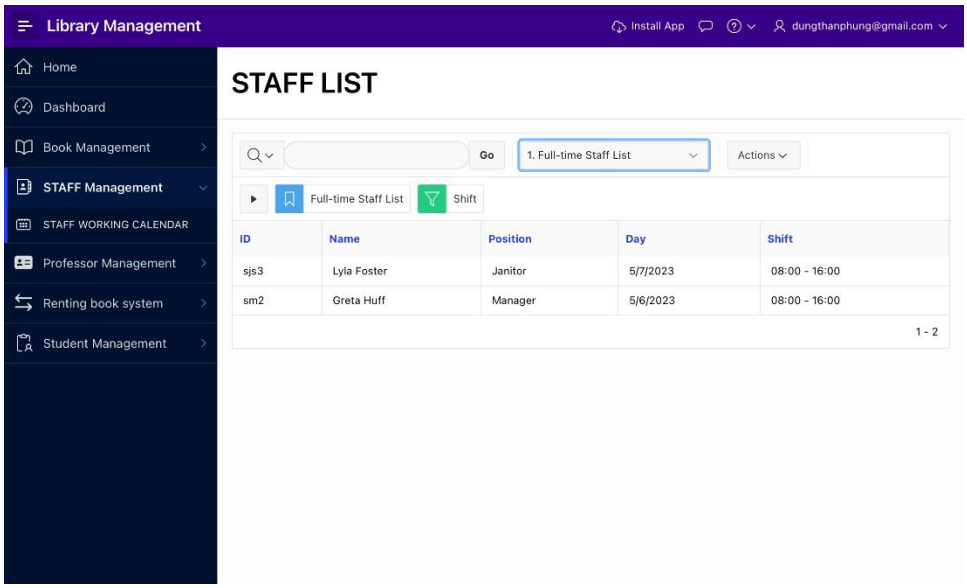
We also created some sorted report for user so they can keep track with their donation easier. Here is the report about the donators' information.



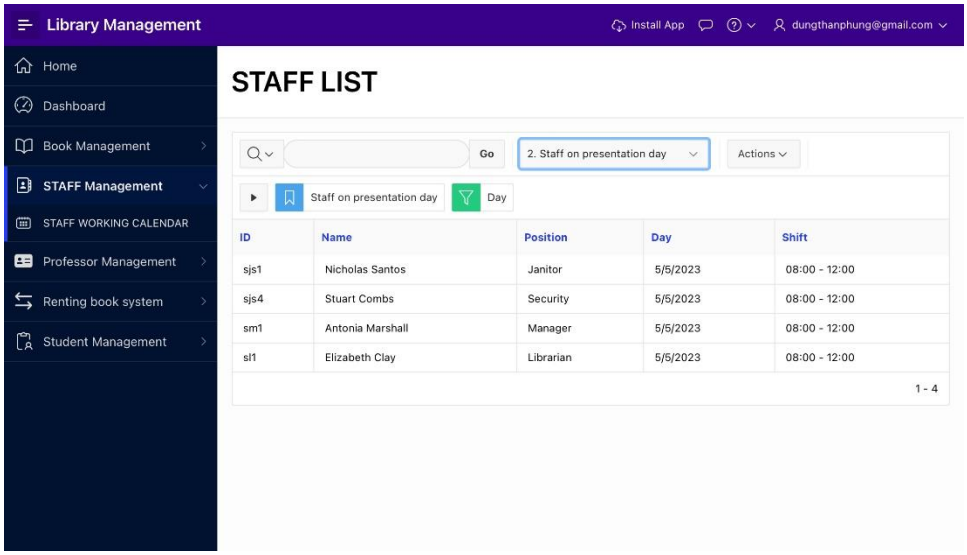
The data of books donated in the previous month is also stored in a separate report.



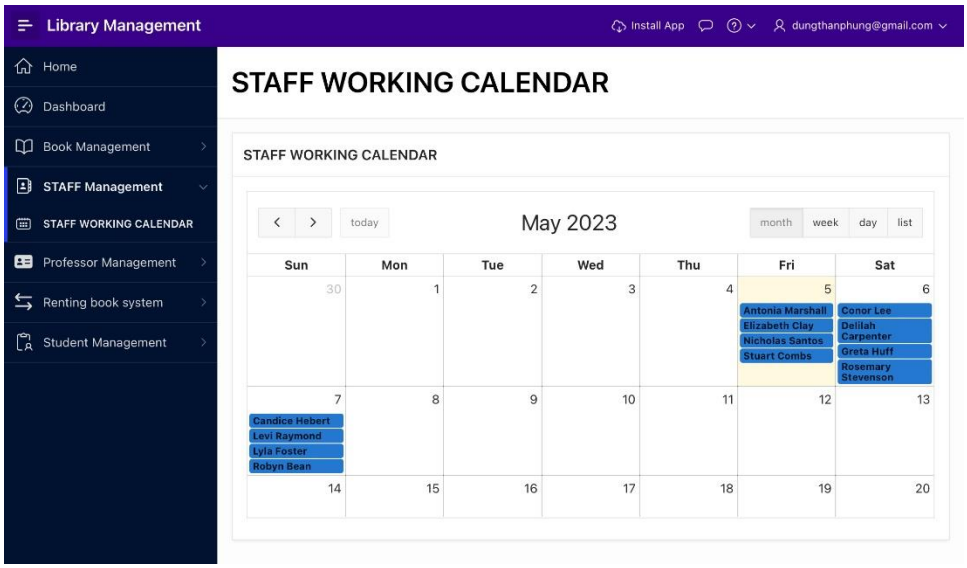
Our application has staff management with four different positions: Janitor, Security, Manager and Librarian with their working day and shift so user can check it out easily



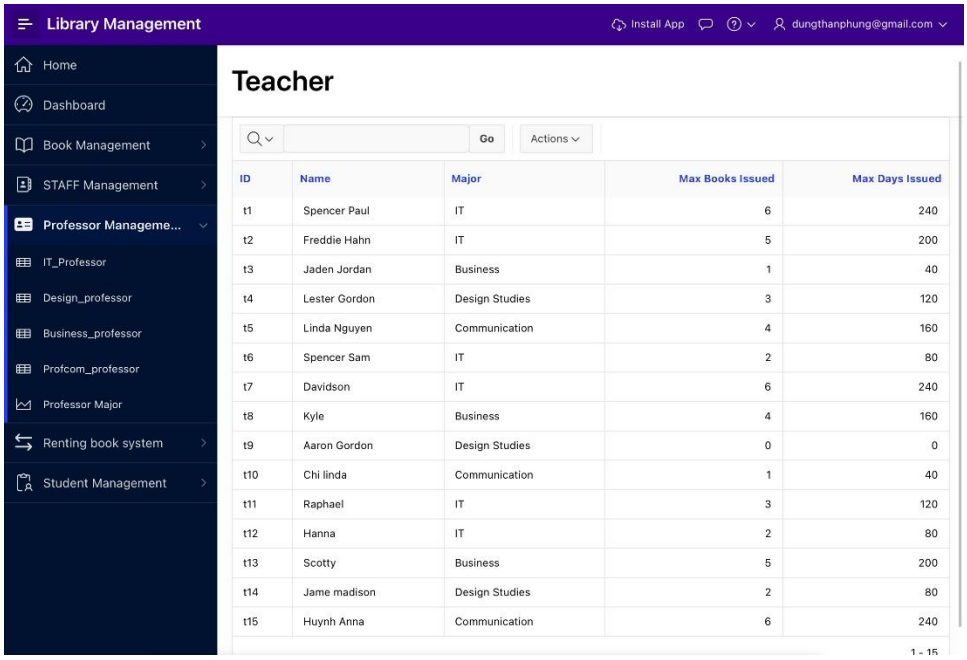
This is a sorted staff list only shows who is a full-time staff. We sorted this by select the shift column and check if the value is equal from 8 to 16 or not.



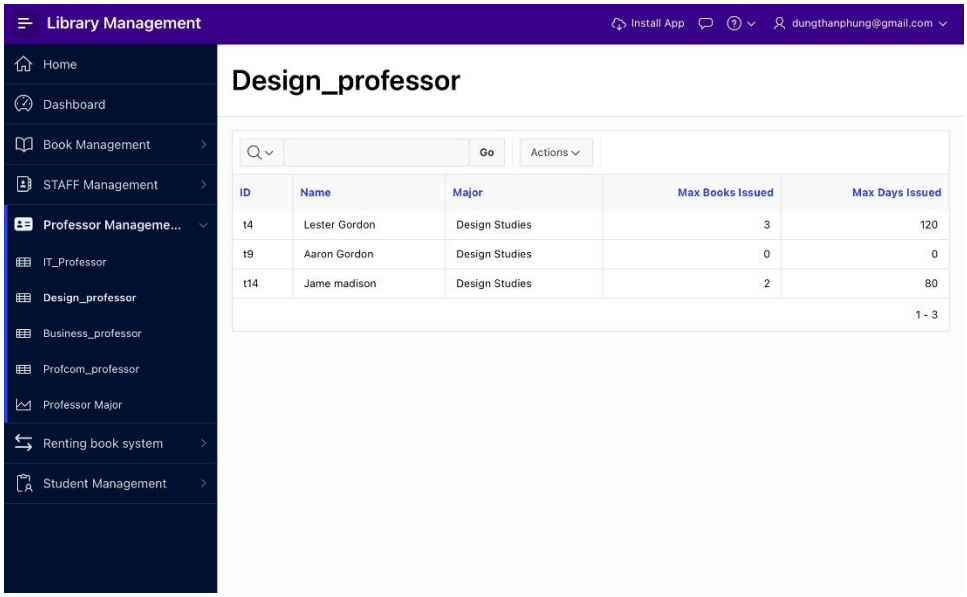
This report to be honest does not help the user a lot but this like a special day for us because this day is the day we meet our deadline.



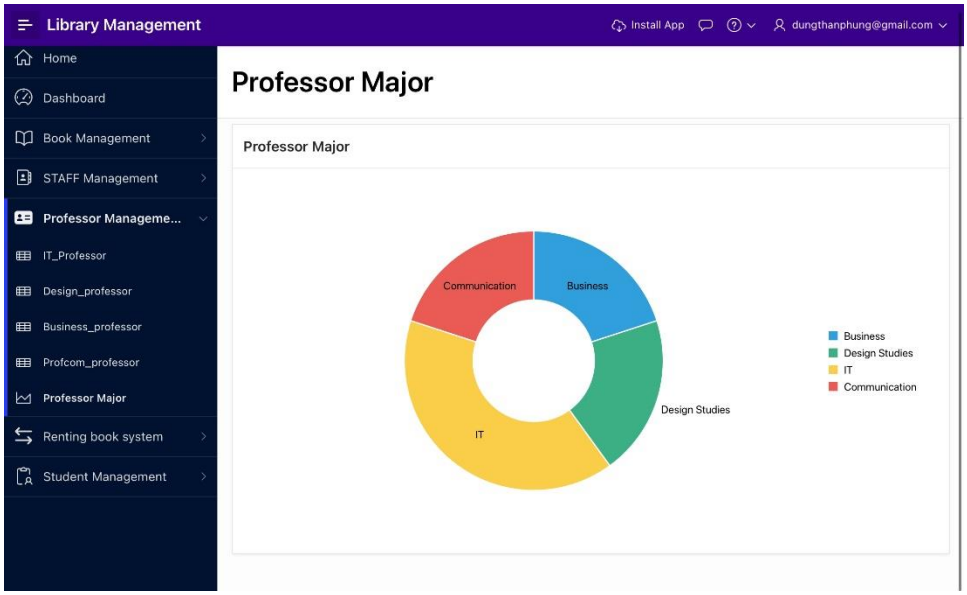
We also present the working schedule of our staff in the calendar format which is very user-friendly. As you can see each day the library will have enough staff for each position to guarantee the quality of our library.



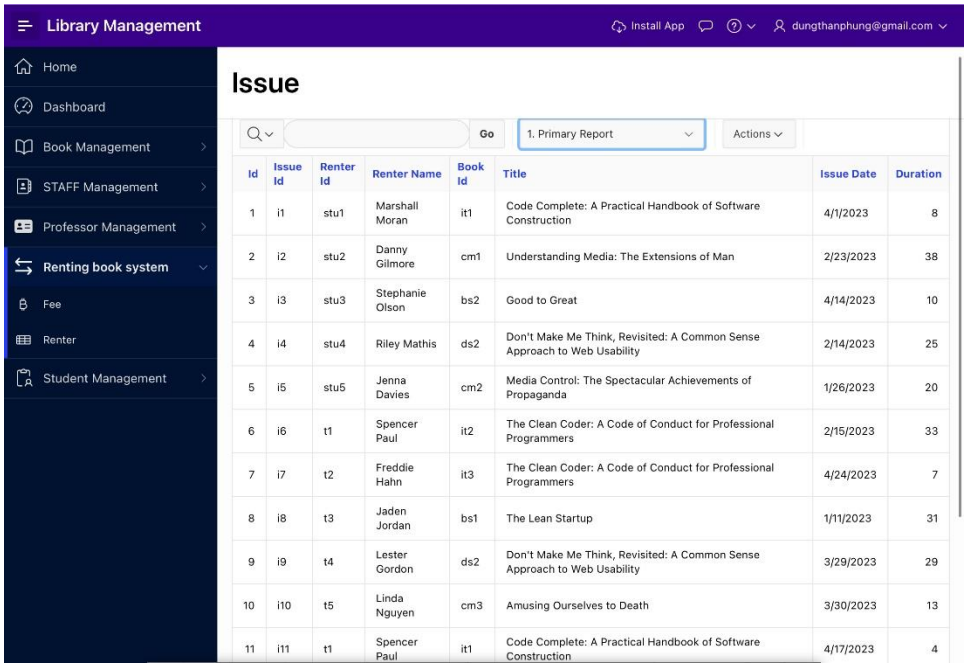
Our library management also has the professor list with four different majors: IT, business, design studies and communication.



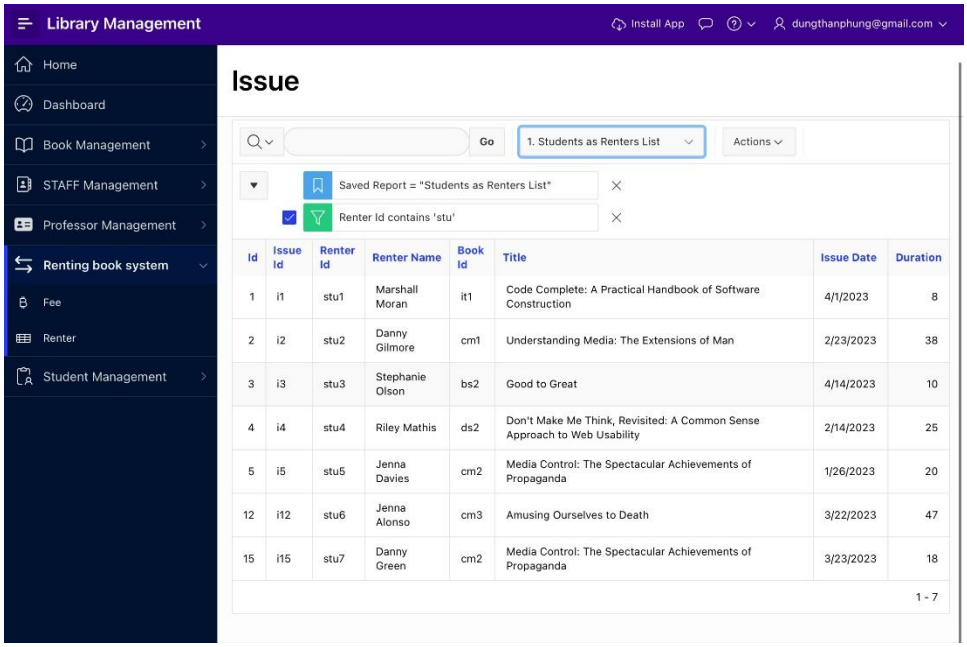
We sorted the professor list to their major so user or student can easily check out the list with the major that they want. For instance here we have a design -professor list.



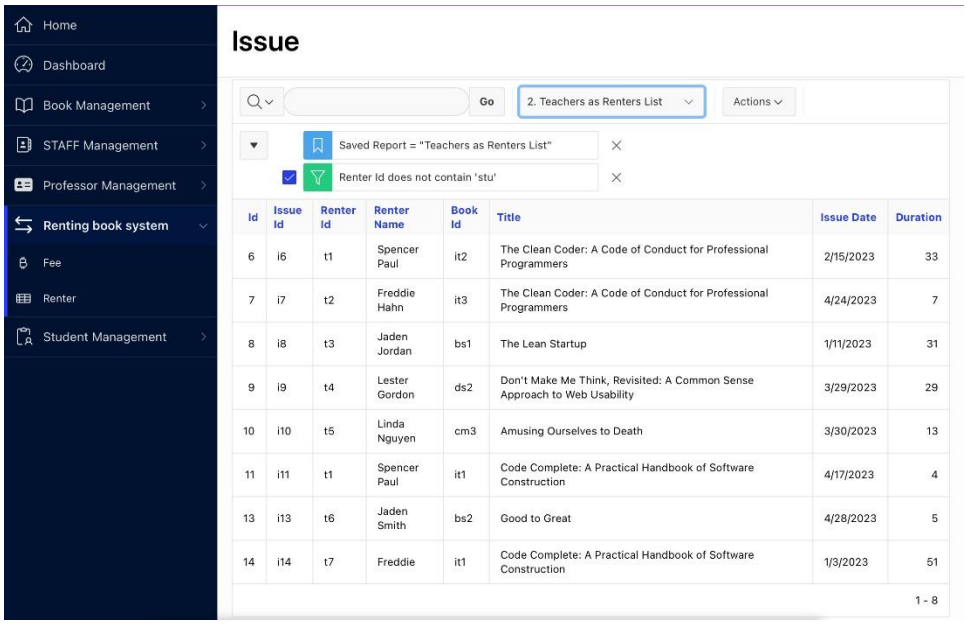
Our application also has the chart which shows the number of professor for each major



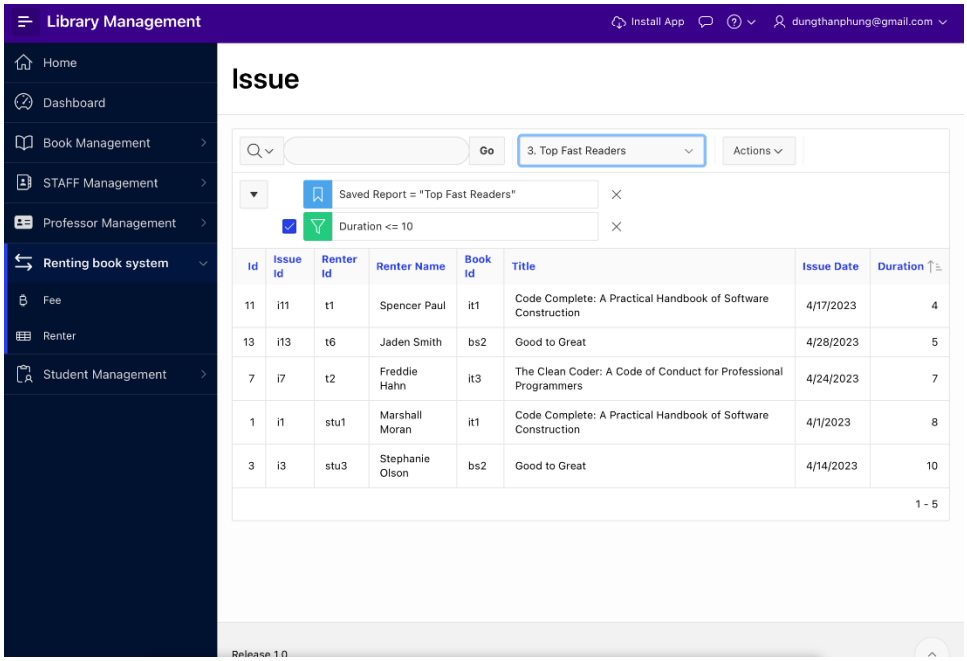
As a library management system, renting book is the crucial activities which requires to included contribute from many different groups. That is why we also create a daily-update issue list so manager or renter can check the information about renting system.



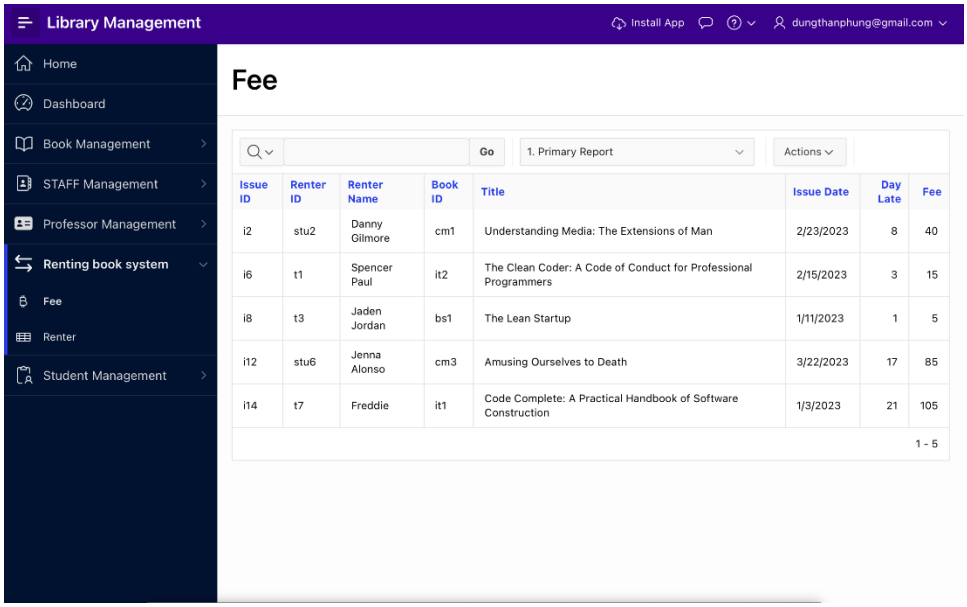
Here are some sorted reports, we provide for user. First is student as renter list by using renter id which contain stu.



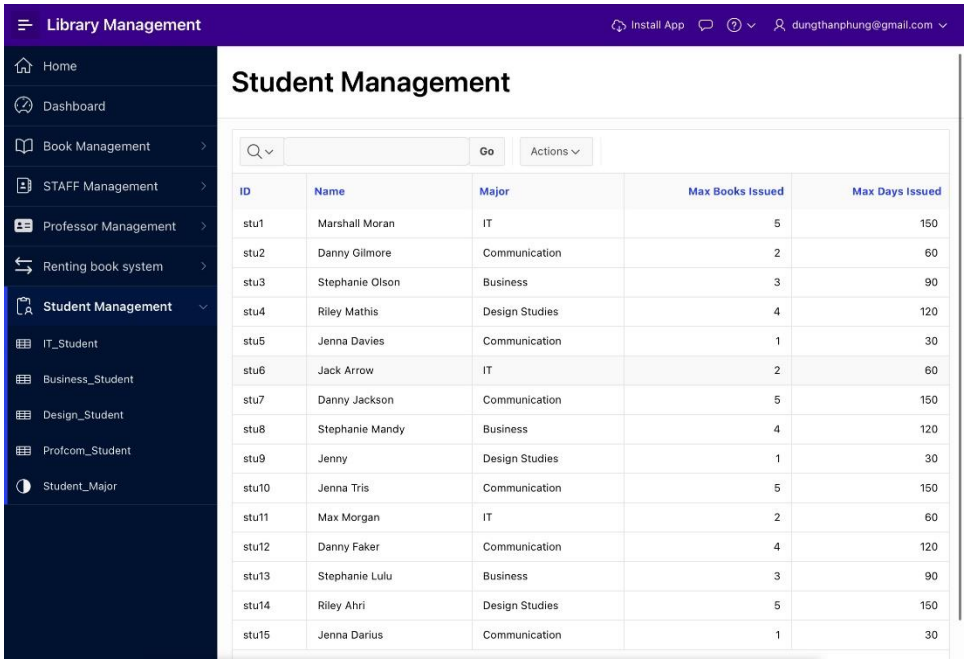
The next one is teacher who is renting the book with the same way of sorting like student list



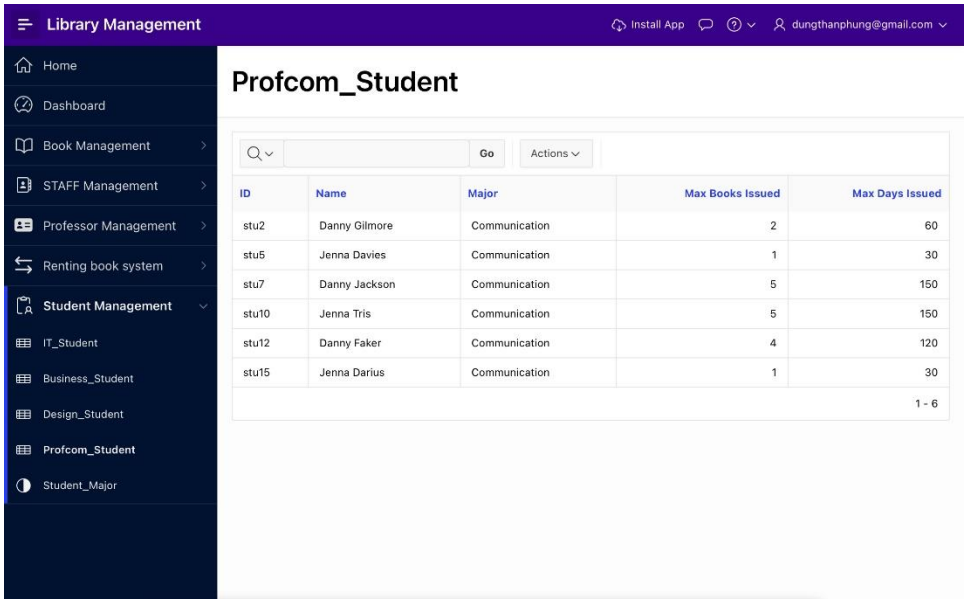
Finally, we has the top fast readers. We sort it by duration with value smaller or equal than 10.



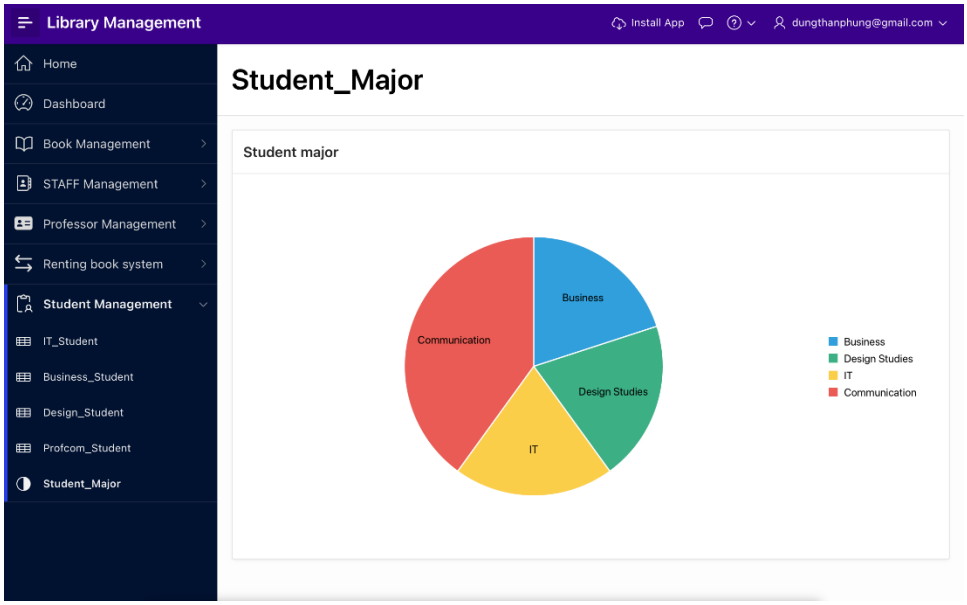
In the case renter is late for the deadline of returning book, fine punishment will be apply and our application also has a report for it.



Our library also has the student management aspect with the list of all student then we sorted it out for each major.



For example, here is the communication student list



We also add the chart which shows the numbers of student with each major by using the same method as professor's chart

Application link

Link: https://apex.oracle.com/pls/apex/r/hn6/book/home?session=104432113469439

Username: dungthanphung@gmail.com

Password: tpd170304

Final reflection

Group reflection

This group assignment focuses on the topic of library management systems, which is a familiar topic to the group members as most of their university time is spent studying in the library. Therefore, the group decided to create a library management system model similar to RMIT's with the same features and functionality.

The first task was to complete the ERD and relational schema, as they are the foundation for all subsequent steps of this assignment. These two parts were completed by Dung and Chi and then brought to the group for discussion and modification to achieve the best results. Thang and Tung were responsible for creating the database and querying data, while Chi and Dung showed the results on the Oracle Apex application. Meanwhile, Duc was responsible for writing the background project for the group, including the topic, scope, and slide.

Through this project, the entire group gained various experiences and lessons. Firstly, their knowledge of databases was significantly improved for each member. Applying what they learned in the course to a practical application was clarified and further explored. Additionally, their logical thinking and ability to connect entities in the ERD and relational schema were also improved.

In addition to professional knowledge, soft skills such as teamwork, task allocation, and communication with team members were also significantly improved. The group often organized standup meetings online via Google Meeting, where each member updated their progress and difficulties so the group could suggest solutions. Furthermore, the group actively met in person at the university and worked for 6 to 7 hours. This significantly improved the productivity of all members and the progress of the project.

However, the group also encountered difficulties and challenges during the project. Firstly, converting code from SQL to Apex encountered many bugs, and fixing these bugs also took a lot of time and effort from the group, especially Tung and Thang. Additionally, the data did not match between the tables, so the group had to make many updates and modifications to the code and application to be more suitable for the data.

Than Phung Dung

As the person responsible for assigning tasks to every member of the team, my first task is to thoroughly understand the current assignment and the topic of library management to comprehensively cover all the project tasks and select the appropriate members for this task. Additionally, I am also a developer who develops ERD, SQL schema, and applications on Oracle Apex. With ERD and SQL being the foundation for the entire project, I have tried to complete these two tasks as soon as possible to ensure the progress of the entire project. After completing these two tasks, my main task is to develop the application on Oracle Apex.

In this project, our team has gained many valuable lessons and experiences. First of all, when it comes to the positive aspects of this group assignment, the first advantage is that our ability to use Oracle Apex has improved significantly. From an application that was first introduced in the Practical Database Concept course, researching and implementing this assignment has helped the entire team improve our skills in using this platform. In addition, this assignment has also helped us better understand how to create and work with data in an application.

Next is the accomplishment that our team was able to achieve and apply to this project. Firstly, data creation stands out as the most significant achievement of this project. After creating the ERD and SQL schema, creating tables and connecting relationships between them in SQL was quite smooth. Additionally, querying data according to the report on the application only encountered minor errors that were not too significant. Furthermore, creating the ERD and schema was also quite smooth, as the relationships from the ERD were accurately and logically transferred to the schema. Finally, regarding our application on Oracle Apex, with the purpose of simulating RMIT's library management system, the team was able to simulate the most important functions of the RMIT library management system relatively accurately while presenting them consistently on Oracle Apex.

In addition to the accomplishments we have made, our team also has some ideas and features that were not feasible to implement in the actual application. Firstly, we have to mention the log-in feature. Due to the limitations in knowledge and the amount of database we had, we could not implement a control system for each student account logging into the library management system, from which to check whether the user is authorized to use the library or not. Another feature that we could not bring into reality is to allow users to customize all report sections on our library management system. Allowing users to freely modify, add or delete data can cause the connection logic between tables to become problematic in case the user enters incorrect values that the system expects, which can cause errors for the entire system.

Through this project, I have also realized my strengths and weaknesses in various aspects. Firstly, my ability to learn new things has greatly improved through the use of Oracle Apex for this assignment. This is a completely new platform that has pushed me to learn and apply new knowledge quickly to meet the project deadline. Additionally, my ability to analyze problems and break them down into smaller parts has also been honed. This allowed our team to work with each member's strengths and function efficiently as a whole.

In addition to my strengths, I also have many weaknesses that need to be improved. Firstly, my time management skills need improvement. Not effectively utilizing my time has made completing the assignment in the last few days very rushed, causing pressure on many team members. Additionally, converting code from SQL to Oracle Apex also presented many difficulties as the syntax of Oracle Apex is somewhat different from SQL files. Not fully understanding how Oracle Apex works has also caused many issues in building applications on this platform.

Communication is the most critical factor in our group's assignment process. We usually have online stand-up meetings on Google Meetings to update each member's progress and discuss any difficulties encountered during work. Additionally, we also have face-to-face meetings that usually last from 5 to 8 hours. This allows us to directly communicate with each other and create a productive working environment to accelerate the project process.

RMIT

Bui Hoang Quynh Chi

Through the process of completing this group assignment, I have gained a deeper understanding of databases and how we can apply the databases we have into a real-life application product. Each member of the team participated in almost every stage of the project, without being assigned to only one task and ignoring the rest of the others. This not only demonstrates the harmony of our teamwork but also helps me understand the essence and purpose of each part that the project requires.

My main role in the group included converting the ER diagram into a relational schema, creating and populating the database with meaningful data, and developing the application. Additionally, I participated in creating the ER diagram with the group, providing personal opinions, and assisting with any questions related to other members' tasks. After exchanging ideas and referring to ERDs from similar projects, we made decisions about the main entities and how they are related to each other. Throughout the process, the team learned how significant the role of ERD was and how it could impact the entire process. When we moved to the SQL coding and uploaded the code to Oracle Apex, there were still many changes in ERD, such as adding or removing entities, considering whether to use a hierarchy structure of join relationships between entities to make them more reasonable. Every element in the ERD needed to be decided logically, accurately, and meaningfully so that the whole team could move on to the next steps.

After that, another member and I converted the ERD into a relational schema, which we completed quickly with confidence in our understanding of the relationships in the ERD. Next, I created meaningful data for the other two members to create the database. The problem only arose when the MYSQL did not match the Oracle syntax, causing all the database code to fail when uploading the file to Oracle Apex. This issue required four of us, including me, to work together to troubleshoot and fix the error.

After getting my Oracle Apex code correctly, I was able to run the application and explore the default features. I had learned how to use Oracle Apex early on as the instructor advised but applying my knowledge to real-world scenarios proved to be more challenging than I had anticipated. Working alongside Dung, we collaborated on customizing the app according to our preferences. For the application, my primary contribution was in creating charts and reports. Given the time constraints, I could only generate basic reports for a single table using the app's UI, without the ability to display more complex and interesting data insights. To create more advanced reports that involved various functions and data joins across multiple tables, I needed to acquire additional knowledge and skills, such as using JavaScript to create new features within the Page Designer. However, both Dung

and I found the Page Designer to be quite complicated and overwhelming already, making it impractical to learn JavaScript. While the logic behind creating complex reports was not difficult for me, I felt regretful in having to abandon some of my ideas that could have presented viewers with interesting and novel data insights because of the limitations of the Oracle Apex UI. For all charts, I had to write SQL code to query into appropriate data that could be visualized in suitable chart formats. This also helped other team members who are responsible for coding SQL to reduce their workload.

Through my involvement in this group project, I have gathered a wealth of new knowledge and honed various skills. The task requirements demanded a more advanced level of logical thinking, prompting a notable improvement in my analytical abilities. For instance, thinking about the chosen topic to devise conceptual design ideas, as well as analyzing our database to visualize data in charts and reports. Moreover, through troubleshooting and querying data, my programming skills have also been developed. My communication skill has also correspondingly increased to meet the requirements of the assignment, such as explaining what we did in the technical report and representation. To achieve effective collaboration and maintain a professional work ethic, I remained dedicated to working with my team members. This not only underscored my sense of responsibility and reliability but also enhances my teamwork and communication skills

In terms of our team's communication and overall teamwork, I must say that we performed admirably. Members' questions were addressed by different teammates, ensuring that we all understood our individual and other's responsibilities. Moreover, we created a comfortable environment where everyone felt free to contribute their ideas to the project. We held weekly meetings to keep each other up-to-date on our process and discuss any issues as a group. As the

deadline drew near, we increased the frequency and duration of our meetings. Overall, I feel incredibly proud of what we achieved as a team.

Dang Quoc Thang

Working on a project with a team can be an exciting and challenging experience, particularly when building an app in Oracle Apex. In my case, I was part of a team of five, and my responsibilities included creating the MySQL code and drawing the Entity-Relationship diagram for our library system app.

I had to spend a lot of time working on the MySQL code because I was the team member in charge of making sure the database was running properly. This

required careful testing and debugging of each line of code to make sure it was operating as planned. Although it was a difficult task, it was necessary to make sure that the app functioned properly and that users could easily access the library system.

The success of the project depended equally on the creation of the ER diagram. In order for our team members to comprehend the structure of the data and how it relates to the various components of the app, it needed creating a visual representation of the database schema. The ER diagram aided in streamlining the development process and lowered the likelihood that mistakes would occur later.

Being part of a team can be both rewarding and challenging, especially when working on a project with multiple moving parts. As a team, we had to collaborate effectively, communicate clearly, and work towards a common goal. We also had to work to our individual strengths, with each person taking on a specific task or responsibility that best suited their skills and experience.

In my instance, I felt that my contributions were recognized and that the project's success depended heavily on my efforts. I was able to use my talents to contribute to the team's creation of a useful library system for schools by working on the MySQL code and creating the ER diagram. I was also able to learn from my teammates and advance my coding and database design abilities by working in a team.

Overall, the project gave me a great chance to expand on my knowledge and pick up new abilities. Additionally, it was an opportunity to collaborate with a group of people who were enthusiastic about creating an app that would help numerous students and teachers. We experienced a variety of difficulties as a team, but we overcame them by cooperating to produce a useful software that achieved our goals.

RMIT

RMIT

Le Hoang Tung

As a database programmer, it is important to have a deep understanding of database design and SQL commands. Because of that, I have the opportunity to be introduced to a new programming language and also improve my self learning skill. During the coding process, I faced various issues mostly when uploading sql code on Oracle Apex. After many unsuccessful failures, our team decided to transfer sql code to oracle code which again we had new difficulties. The syntax in Oracle is slightly different, however the way we used to run the code was not similar to mysql Workbench or PHP. It took our team days to figure out and resolve the problems, but in the end, we learnt how to use Oracle which is a powerful tool for us to use in further projects.

This project also improves my personal working skills. Firstly, creating a functional and efficient database system requires careful planning, attention to every detail on the ERD, and a thorough understanding of a library system. This is another opportunity to boost my reading and analyzing skills as understanding the requirements is crucial. Secondly, every project will face issues, even with the most successful ones. During the project, my team made a lot of mistakes including using incorrect relationships between entities in the ERD or using the wrong syntax in the code line. We even changed the whole diagram a restart or project because we found out a better way to design the database. Therefore, I understand working in a project requires people to be patient and always open to new and more efficient ideas. Finally, gaining more knowledge of a database system, particularly related to a library, is a new context being known to me which also helps in gaining general knowledge in real life.

Working as a group of 5 people with different backgrounds, skills and goals, it is important to communicate effectively with other members. So, I am responsible for actively connecting and sharing ideas with other members. It was tough to make a group meeting since every member is not in the same class. We had to be flexible and used both online and offline meetings every week. Although everyone responded when working online, the efficiency was not as expected. To

ensure the project worked out, we had to increase the number of face-to-face meetings, which forced each member to reschedule their own time table and decided to spend a decent amount of time on the project.

Overall, being a database programmer in a library database system project was a challenging but also rewarding experience. It provides an opportunity not only to gain knowledge and understand tools in the IT field but also to strengthen my personal soft skills which both prepare alot for my future career.

Nguyen The Duc

In the long run, I feel like I have a better understanding of how to set up and develop a database for a very real application that may aid in some form of organization in the real world, thanks to my improved knowledge of MySQL and a more in-depth understanding of how management systems function. Compared to the project we worked on during the previous semester, ISYS3414 was a significant stride forward for the team's overall development. We must become accustomed to working together if we are to complete this task on time.

For what lesson have I learned, what I've learned about managing massive quantities of information in the workplace has left me pondering the most

effective way to apply this information. As I quickly discovered, ER diagrams play an essential role in this field due to their adaptability in depicting the entire system in a single visual representation. This has provided me with the necessary background to pursue more advanced database topics in the future.

In addition, I now have a much greater grasp of my own capabilities and limitations. To begin with, I'd like to confess that I'm not very good at Oracle Apex coding query work; I simply don't know enough about this new programming language and don't have enough faith in myself to use it. In addition, the format of SQL files and Oracle Apex files differ, making it difficult to convert the code. Therefore, when a colleague experiences difficulties in this area, I can only hope that the numerous times we've searched for bugs have yielded fruitful results. Due to a lack of familiarity with Oracle Apex, it has proven difficult to develop applications for this platform. On the day of the presentation, I am unable to explain to my instructor why some of our diagram's elements are empty. As they all pertain to my knowledge and skills, I believe I can use these obstacles as learning and development opportunities in preparation for the final exam.

In stark contrast, I have demonstrated that my proficiency with multiple applications can contribute significantly to my team. Consequently, I was responsible for establishing a collaborative environment for our reports and peer evaluation, as well as creating and modifying slides for the team's presentation. After completing the research and documentation for the topics and scopes section, I immediately assisted my colleague in generating more suitable entities for our ER diagram.

We had a great deal of difficulty communicating at the beginning of the semester due to our diverse course schedules. As a result, I became more adept at collaborating with others and managing my time. In addition, I frequently arrive late to team meetings because I am so dependent on social networking applications for communication that I forget to check the time.

In the end, this project helped me learn a great deal about the data industry and gave me the opportunity to collaborate with some extremely intelligent,

hardworking, and dedicated individuals. I hope that the advice and assistance I received from my peers and instructors will remain with me long after this project has been completed.

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RMIT