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**CHAPTER III**

**DESIGN AND METHODOLOGY**

This chapter will present the designs and methodologies used by the proponents in developing the proposed system. Different diagrams applied in developing the proposed system are also included in this system. The chapter also explains the type of research that the study focuses on and how it is related to the development of the system.

**Data Gathering**

The proponents provided a letter of request for the approval and endorsement of the study. They initially interviewed the client at the Youth Development Office of Santo Tomas. Using gathered data, the proponents learned the issues of the existing system of the Scholarship Office about management and functionalities. As the scholarship office is collecting the requirements of the scholars and managing the system, they are encountering several problems that cause delays in tasks, unorganized processes, and other functionalities/features that the existing system does not support, such as; (1) Mobile Compatibility, (2) Notification features, (3) Portal for Administrators (4) Portal for Users (5) Portal for Applicants, (4) Password Authentication, (5) Website Navigations and buttons, (6) Create Account/ Login, (7) Grant Status, (8) Re-submission of documents the on the client side, (9) QR CODE, etc.

The applicants must submit the following General requirements; (1) Registration



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form/Proof of enrollment, (2) Birth certificate (should be PSA), (3) Certificate of Good Moral Character, (4) Grade report, 2x2 Photo, (5) Vicinity map, (6) Barangay Clearance, Parents Voter's ID/ Voter's Certification, (7) Voter's Certificate of the Applicant (for 18 years old and above), (8) Income Tax Return or Certificate of Employment and Compensation for the parents and another household who are employed, and (9) Certificate of Indigency or Certificate of Unemployment for the Parents or other Household who are not employed. The beneficiaries submit the following requirements for Assessment and evaluation of their Renewal of Scholarship; (1) Certification of Registration, (2) a Certified true copy of grades, and a scanned Identification card.

The proponents used qualitative approaches to collect the necessary data for the proposed system, the web application-based project. In the qualitative approach, the proponents conducted one-on-one interviews with the head of the Youth Development Office to determine the problems encountered in the assessment, evaluation, and management of scholarship. The proponents collected essential points or information in the interview that will be used in creating the system.

### **Project Concept**

The proponents proposed to create a web-application-based system when it discovered that the existing system for assessment, evaluation, and management of scholarship applications of the Youth Development Office of Santo Tomas needs



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significant innovation and reconstruction of the system. The idea was generated as the proponents determined the inconveniences affecting beneficiaries/applicants and the scholarship office.

The project provides convenience to the scholars/applicants and the scholarship office. The concept is to change the paper-based and re-construction of the existing system into a web application system that will assess and evaluate scholarship requirements, manage all data effectively, and apply analytical tools that will support the management of the system. The proponents planned to have four (4) users for the proposed system: the super-administrator, administrators, applicants, and beneficiaries.

The super-administrators and administrator must input a username and password to log in to the system. Once the username and password are verified, the account will have full access to the system. The super-administrator can view or monitor all the processes in the system and create announcements in the system. Also, the system will provide or generate data reports for the administrator. The administrator is responsible for viewing, evaluating, and determining what will be stored in the system's database. Also, administrators assist the super-administrator. The evaluator/committee is also the administrator. The system will provide all data needed for the evaluation, and the administrators are responsible for evaluating the scholarship. The administrators can view the requirements submitted by the beneficiaries. In grade evaluation, the administrators can



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see the submitted certified true copy of grades and the grades the beneficiaries inputted in the system. Once the requirements are approved or disapproved, the system will notify the scholar through email.

The applicants are the third user of the system; they are categorized into two (2) types: the Educational Assistance Program and Full Scholarship Program. To gain access to the system, the applicants must visit the website of the scholarship office, search for the application tab and select the appropriate scholarship program. After selection, the applicants must fill out the registration and submit the form; then, the applicants may now proceed to the submission of requirements for their applications.

The scholar is the fourth user of the system. To gain access to the system, they will proceed first to the login process, and an OTP code will be sent through SMS to verify the user. After verification, the scholar will move to the account. In the system, the scholar can now accomplish processes related to assessing and evaluating their renewal for a scholarship. The system will cater to all the data inputted by the scholar securely, and an email will be sent to the scholar once the checking is done. The scholar will submit different requirements for the assessment and evaluation: the true certified copy of the registration form, a certified true copy of grades, and a photocopy of the student ID. Also, announcements are available to browse, and you can file inquiries.



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## **System Analysis and Design**

Figure 2 shows the Web Development Life Cycle (WDLC) used to ensure the consistency and completeness of the project. The WDLC comprises six (6) processes that support the system planning and can help the proponents identify what needs to be improved on the project. The following phases are the planning, analysis, development, testing, release, and maintenance. Those phases were followed to ensure the consistency of the project.

The first phase shows the Planning, which focuses on the system's purpose. It is also referred to who the users are, what are the computing environment, and processes. In this phase, the proponents identified the problem within the existing system of the Scholarship Office and its scholar, who is the target client and the project user. The proponents gathered the requirements for the project and other related studies that helped them support the project. Then, the proponents created a course of action to address the problems. After the planning phase, proponents came up with an idea of how the system will work.

The second phase shows the analysis that involves information that is useful to the user of the system. In this phase, proponents analyzed the problem that the users encounter in terms of storing data that the beneficiaries submit. It discusses the analysis of the requirements needed in system development.



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The third phase refers to the development of the system. In this phase, proponents focused on the type of web application. Proponent also worked on a suitable method for creating the system. In the designing stage, frameworks, web hosting sites, database software, and hardware are decided. The proponents will start designing the front end of the proposed system using HTML, CSS, and JavaScript to make the system responsive. The development of the front end helps the proponents to construct its back-end carefully. Through PHP, the proponents will provide the functionality needed for the front-end of the proposed system. Also, the system's database will be created using PhpMyAdmin along with the development of the back end. After the front-end and back-end are completed, the proponents will upload to the system to the web hosting Hostinger.

The fourth phase is testing and evaluating the system, where the proposed system will be tested to see if it works properly. In this phase, the content and functions will be assessed to determine if it is correct. This is a critical phase where the proposed system will test if the user can interact with the system and provide the information needed. In this stage, even how easy to use the system will be tested to this phase. Before the proponents conducted the black box testing, some adjustments were made to the proposed system as it was uploaded to its web hosting. Some of the designs in the system will be changed, and the back-end will be adjusted. Once the proposed system works online, the proponents will start the testing and evaluation of the proposed system. The applicants, beneficiaries,



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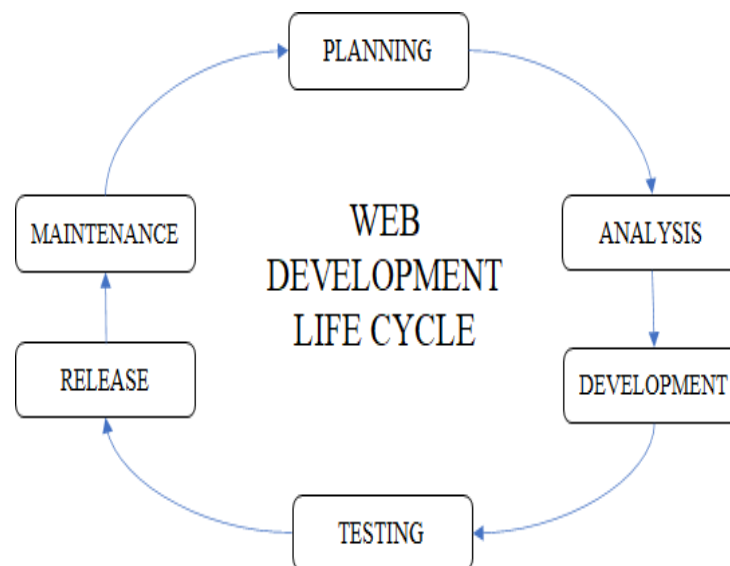
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super-administrators, and administrators can test the proposed system as the proponents will collect their responses and interpret them to produce the result.

Lastly, the fifth phase refers to the maintenance of the system. In this phase, proponents will monitor the responsiveness of the system. This stage is essential to minimize errors during the system's working process. It must maintain functionality to avoid traffic in the working process of the institution. Maintenance is the final phase wherein the program is maintained. The proponents will update the proposed system depending on the needs of the Scholarship Office of Santo Tomas and if there are encountered problems or errors that will be needed to be fixed. The proposed system will be maintained and updated according to the client's demands.



**Figure 2. Web Development Life Cycle (WDLC)**



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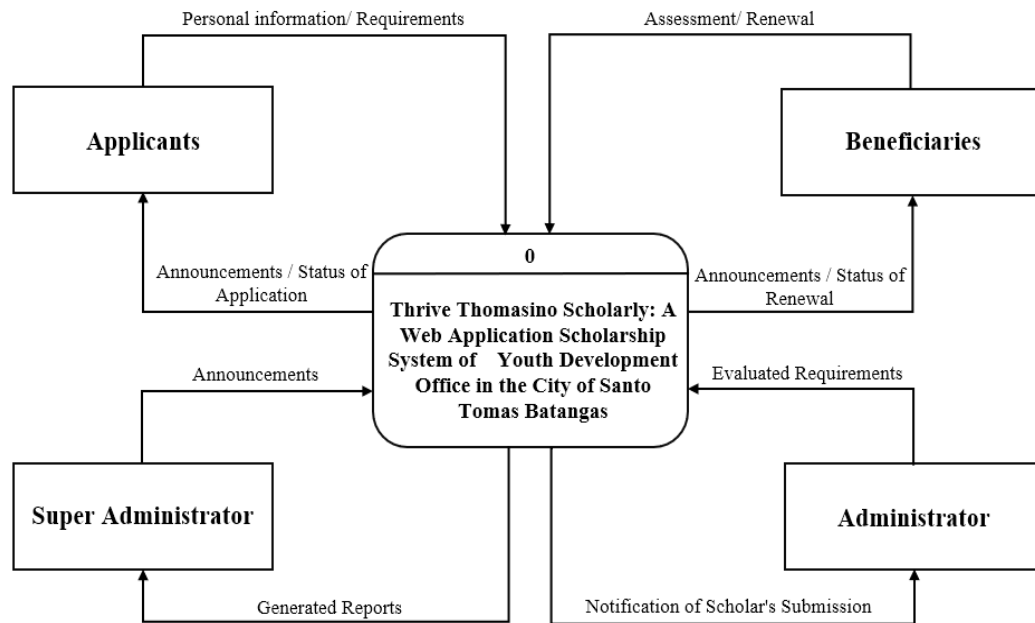
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### Context Flow Diagram

Figure 3 shows the context flow diagram of the system. It comprises four (4) entities: the super-administrator, administrator, applicants, and beneficiaries as the system user. The users can use the system in different interfaces.



**Figure 3. Context Flow Diagram of the Proposed System**

### Data Flow Diagram

Figure 4 shows the data flow diagram of the super - Administrator. The super-administrator must input their username and password to log in to the system. Then, the super-administrator can approve the account of the registered administrator and manage





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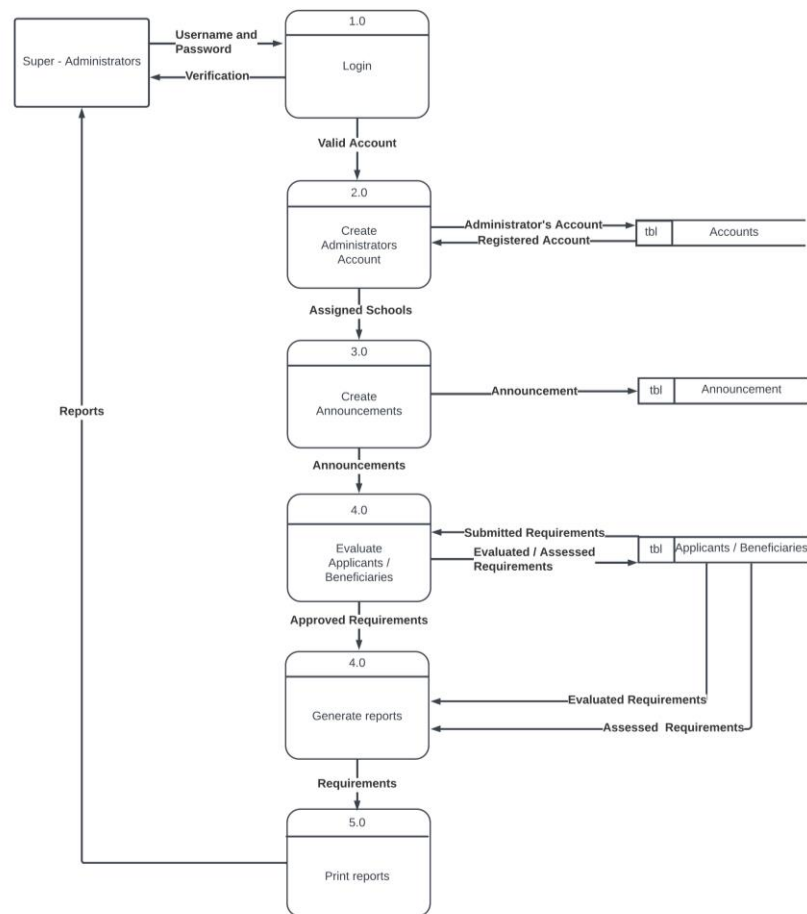
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their accounts. The super-administrator is authorized to. The created announcement will be stored in the super-administrator databases announcement table. The super-administrator can also receive a notification for their reports. Moreover, the super-administrator can finally monitor the progress of checking and status of renewals and applications. Lastly, the super-administrator can generate and print comprehensive reports.



**Figure 4. Data Flow Diagram for Super-Administrator**



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Figure 5 shows the data flow diagram of the Administrator. The administrator needs to request the super-administrator for an account for login purposes wherein a username and password will be given and will be required data for the login process. The system will work to check and authenticate the admin's account. After authentication of the administrator's account, the evaluation will be processed in which the data needed will be provided by the scholar database located in the requirement table. In the evaluation process, data will be evaluated by approving and disapproving the requirements. After sorting data in the evaluation process, it will notify the scholars of the evaluation result, and the proposed system will process the status and emails. It will send it to the scholars and applicants. The administrator can view all of the data on its dashboard. The administrator of the proposed system can generate and print reports with the available data within the system.



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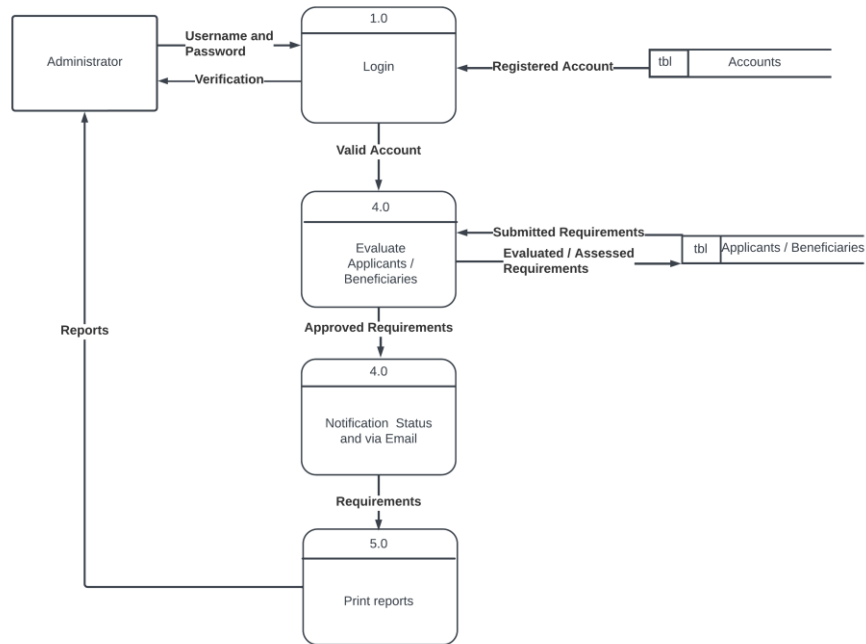
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**Figure 5. Data Flow Diagram for Administrator**

Figure 6 shows the data flow diagram of the proposed system for scholars/beneficiaries. The scholars will be able to register if they have no existing account. All the personal information of the scholars will be stored in the accounts\_info database. Once registered, the scholar shall use the username and password recorded in the accounts tbl so that the system will recognize the data and allow the system to access their account. Within the system, the scholar can update their personal information once required. Any changes in their personal information will save in the user info tbl. On the other hand, the uploading requirements process will allow the scholar to upload their requirements, but the



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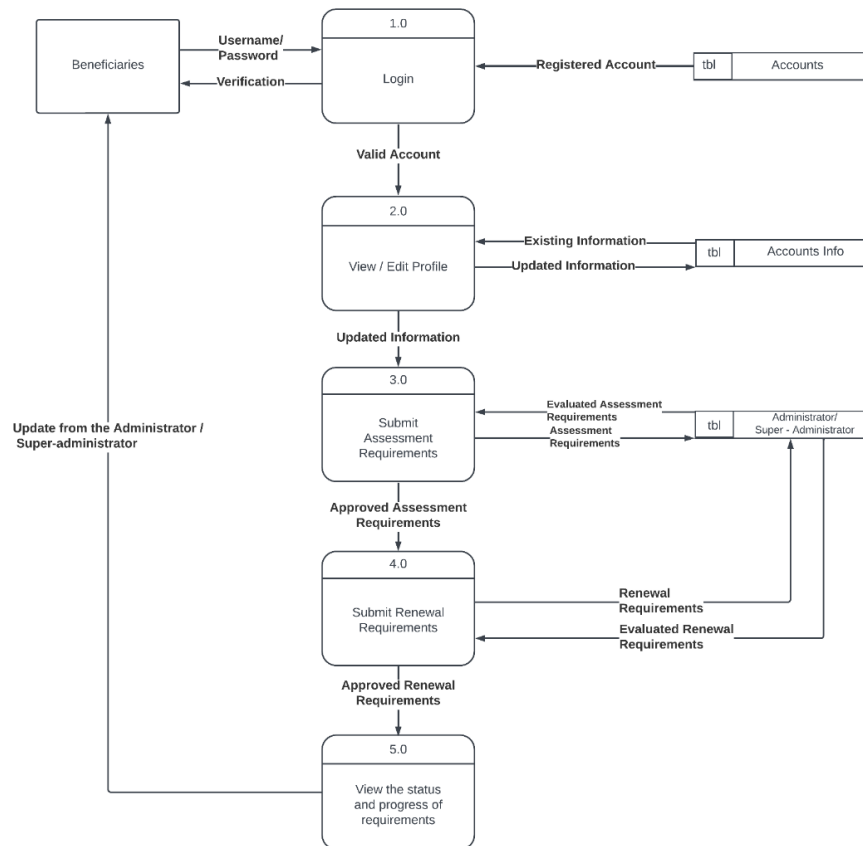
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system only accepts files in pdf format. The assessment and renewal requirements will be evaluated and checked by the administrator/super-administrator for eligibility.



**Figure 6. Data Flow Diagram for Scholars/Beneficiaries**

Figure 7 shows the data flow diagram of the proposed system for applicants. The applicants will be able to register their accounts. All applicants' personal information will be stored in the accounts\_info database. Once registered, the applicants will use the



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username and password recorded in the accounts database so that the system will recognize the data and allow the system to access their accounts.

Within the system, the applicants will update their personal information for the assessment of the super-administrator/administrator. Any changes in their data will save in the user info tbl. On the other hand, the uploading requirements process will allow the applicants to upload their requirements, but the system only accepts files in pdf format. Once the submitted requirements are approved, the applicants may proceed to the qualification exam. The examination is system-based, where it will be stored in the Examination database, and the super-administrator/administrator will provide the questions. When the applicants are done, they may now submit it. The exam will be checked and assessed by the super-administrator/administrator. The updated result will be determined by the system's notification status and sent to the email.



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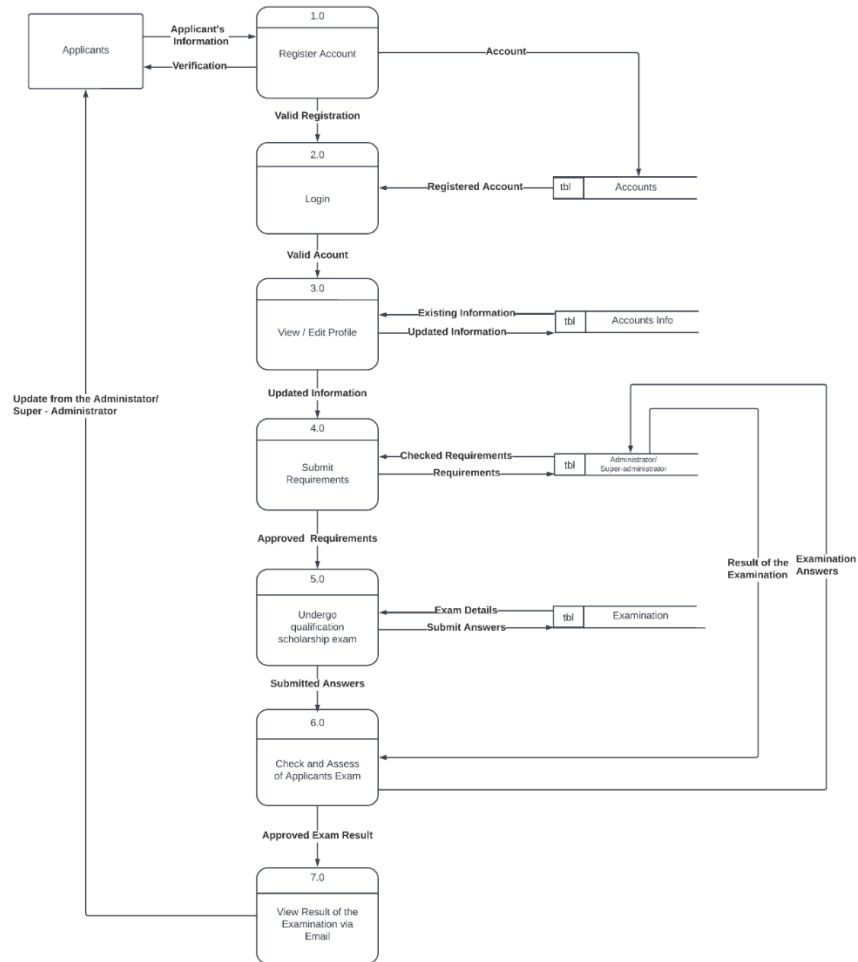
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**Figure 7. Data Flow Diagram for Applicants**

### Development Approach

Figure 8 shows the top-down approach that the proponents of the proposed system will use. It refers to the breaking down of building a system to gain more insight into the compositional subsystem.



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The first phase is planning. The proponents interviewed the client to know their challenges or struggles in organizing the evaluation and its management and using the existing system. During the planning process, the proponents created a flowchart and a step-by-step procedure using a web development life cycle (WDLC) to guide the proposed system.

The second phase is the analysis and design; the plan will be validated to ensure that it applies to the needs of the clients and the users. The proponents analyzed the processes by making context and data flow diagrams and determining the possible problems that may arise while building the system. The phase ensured that the plan would be incorporated into the proposed system. Also, part of this phase is the design. After analyzing the process, designing comes after. The proponents will create website wireframes to visualize the system's interface, illustrate ideas on what the system will look like, and ensure that the interface will be user-friendly.

The third phase is the development, where the plan is incorporated to build the system. The proponents will use different development tools that help meet the system's requirements. It is where the coding or programming happens, creating the back-end and designing the system's front-end. The proponents will use HTML, CSS, and JS for the design and PHP and phpMyAdmin for the functions or back-end of the website.

The fourth phase will be the testing and evaluation. The proponents will modify,



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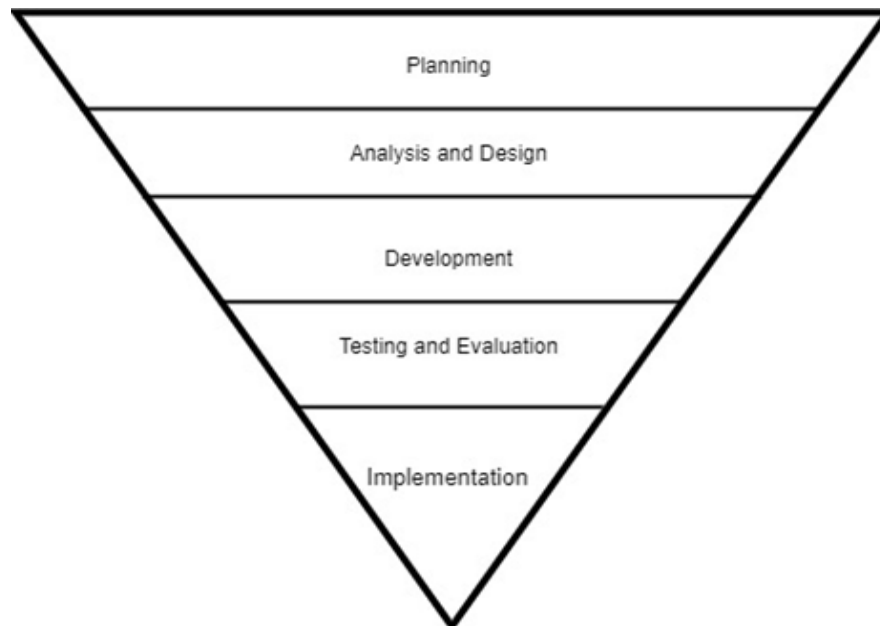
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test, and evaluate the proposed system in this phase. This phase helped the proponents to find the errors that needed to be fixed in the system. The proponents will conduct a test case for the super – administrator, and administrators during the testing and evaluation. The proponents will create a questionnaire for applicants and scholars to test the system’s functionality. The proponents will evaluate the users’ results of the web application.

The fifth phase will be implementation. It will be the end of the development when the system is already done. In this phase, the proponents have already fixed the errors that will be found during test cases and are ready to be implemented and turned over to the client.



**Figure 8. Top-down Development Approach**





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## **Functional Requirements**

The Functional Requirements describe the specific functionality of what the proposed system will accomplish.

### **1.1. Functional Requirements**

#### **1.1.1. Authenticate User**

REQ001. The Scholars and Applicants shall log in to the system by providing their User ID and Password.

REQ002. The Administrator shall log in to the system by providing their Employee User ID and Password given by Super-Administrator.

REQ003. The Super - Administrator shall log in to the system by providing their Employee User ID and Password.

REQ004. The Users shall be able to Update their Accounts.

#### **1.1.2. Manage the Qualification Examination**

REQ005. Applicants shall be able to take the Qualification Examination.

REQ006. The Super-Administrator and Administrator shall be able to create questions, modify the exam settings and check the examination.

REQ007. The Applicants shall be able to view the status of their examination.



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REQ008. The Applicants shall be able to view the status of their examination.

REQ009. The Super-Administrator and Administrator shall be able to send the status of the examination of the applicants.

**1.1.3. Manage Profile Information**

REQ010. The Users shall be able to update their information.

REQ011. The Users shall be able to update their current Photo.

REQ012. The Super- Administrator /Administrator shall be able to organize applicants' and scholars' information.

**1.1.4. Store**

REQ013. The system automatically stores the input to the database.

REQ014. The system automatically restores the deleted input to the database.

REQ015. The system automatically restores the unsaved forms.

**1.1.5. Uploads documents or files**

REQ016. The system allows the applicants/scholars to upload their requirements to the system.

REQ017. The system allows the applicants/scholars to re-upload their requirements to the system.



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REQ018. The system allows the applicants/scholars to view their uploaded requirements

**1.1.6. Monitor**

REQ019. The system allows super-administrators and administrators to view and monitor all records.

REQ020. The Super-Administrator/ Administrator shall be able to monitor the system's performance.

REQ021. The Super-Administrator/ Administrator shall be able to check the progress of the upload requirements of the applicants/scholars.

REQ022. The Super-Administrator/ Administrator shall be able to monitor the system's performance.

REQ023. The Applicants/Scholars shall be able to monitor the status of their application and renewal.

**1.1.7. Announcement**

REQ024. The Super-Administrator/ Administrator shall be able to create an announcement.

REQ025. The Super-Administrator/ Administrator shall be able to send an announcement to the applicants/scholars.



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REQ026. The Applicants/Scholars shall be able to receive via email/SMS the announcements.

REQ027. The Applicants/Scholars shall be able to view the announcements via the webpage.

**1.1.8. Generate Reports**

REQ028. The system allows super-administrators and administrators to view and monitor all records.

REQ029. The system allows super-administrators and administrators to print the reports and download the documents into pdf format.

**Non-Functional Requirements**

The Non-Functional Requirements describe the specific non-functionality of what the proposed system will accomplish.

**1.2. Non-Functional Requirements**

**1.2.1. Operational Requirements**

REQ030. The website will operate on the Windows operating systems platform.

REQ031. The application will operate on the Android operating system platform.



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**1.2.2. Performance Requirements**

REQ032. T.T.S web application shall be able to generate reports.

REQ033. The website shall be able to upload announcements.

REQ034. The T.T.S web application shall be able to upload requirements.

**1.2.3. Security Requirements**

REQ035. Only the Super- Administrator can generate a pin for the administrator's temporary access to the super-admin features.

REQ036. Only the Super-Administrator /Administrator can create Announcements.

REQ037. The system shall use an Authentication code to verify the user before accessing their accounts.

**1.2.4. Cultural & Political Requirements**

REQ038. T.T.S web application will use the English base language only.

**User Design Interface**

The user will be the primary consideration of the interface of the proposed system, and the user-centered design will be the primary goal in developing the interface of the proposed system. The figures shown below are the proponents' guides in creating the



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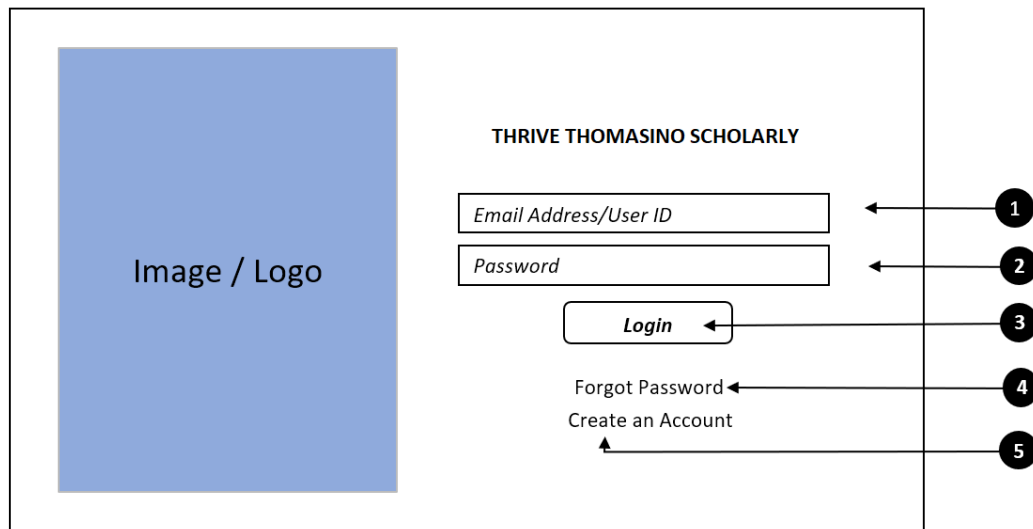
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system. The proponents will make it a user-friendly interface while keeping the interface much more presentable to its users.

Figure 9 shows the login account form for the users. In this form, the users need to fill out the textboxes such as the user's name, (1) Email address/User ID, (2) password; after filling out the following fields, the super-administrator can now click the login button (3). The forgot password link text (4) allows users to change or recover their account if it is forgotten. They already have an account link text (5), allowing users to log in to their existing accounts.



**Figure 9. Conceptual Diagram for Login Account of the Users**

**User Design Interface of Super - Administrator**

Figure 10 shows the user interface of the super-administrator. It includes buttons



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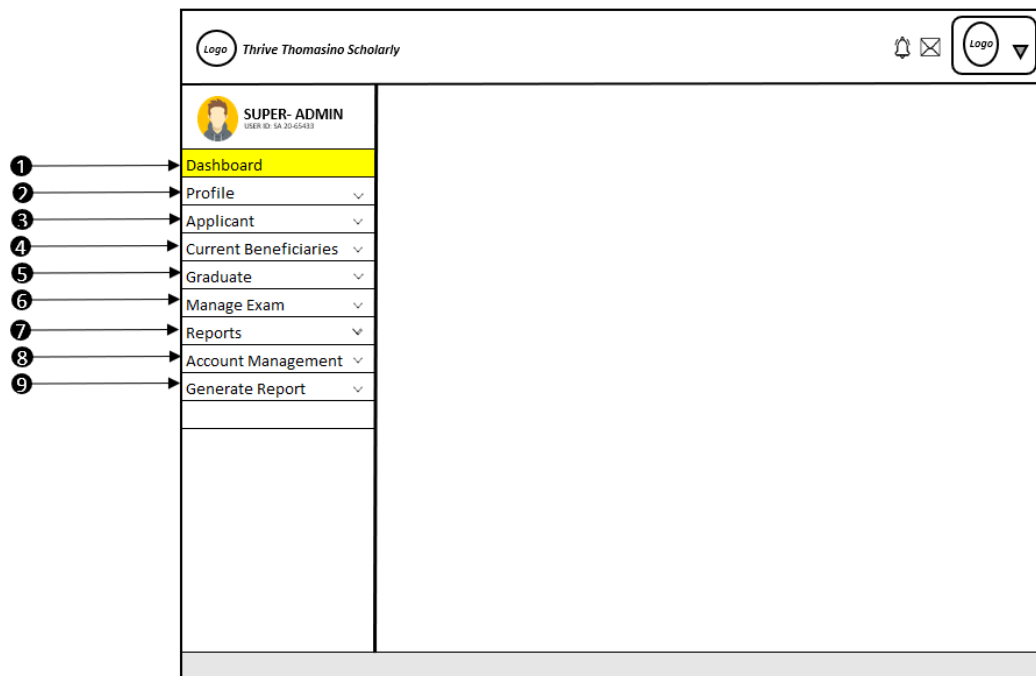
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for navigation such as; the Dashboard (1), the Profile (2), the New Applicant (3), the Current Beneficiaries (4), the Graduate (5), the Manage Exam (6), the Reports (7), the Reports (8), the Account Management (9), and the Generate Report.



**Figure 10. Conceptual Diagram for Dashboard of the Super-Administrator**

Figure 11 shows the Profile of the Super-Administrator (1). It contains the Account information (2) of the Super- Administrator, such as; the User ID, Photo First name, Middle name, Last name, Name suffix, Date of birth, Place of birth, Religion, Sex, Civil status, Contact number, Email account, and Type of Account. If users want to update their



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information, click the Edit Button (3); After editing the following fields, the super-administrator can click the save button (4).

**Figure 11. Conceptual Diagram for Profile of the Super-Administrator**

Figure 12 shows the New Applicants (1). It contains the list and information of the applicants applying for the scholarship program. Above the table is the Filter by (2), which helps filter the applicants' information.





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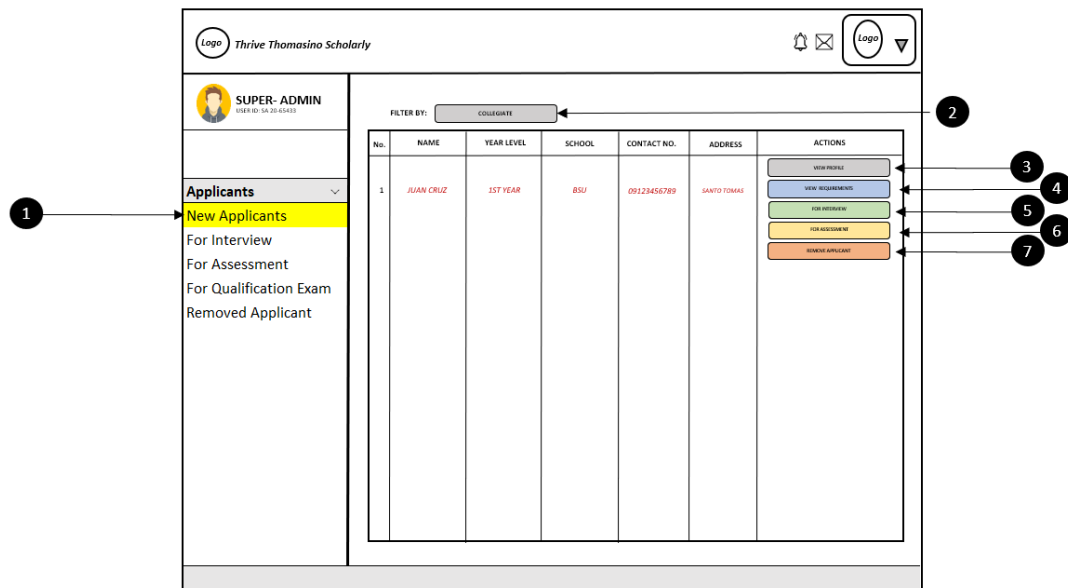
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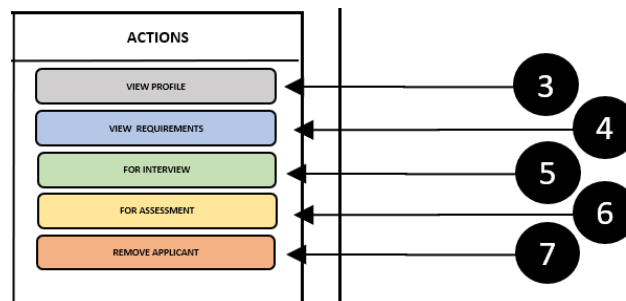
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**Figure 12. Conceptual Diagram for New Applicants**

Figure 13 shows the Action Buttons indicated in the New Applicants table. It contains the View Profile (3); the View Requirements (4); For Interview (5); For Assessment (6), and; Remove Applicant (7).



**Figure 13. Conceptual Diagram for Action buttons in the New Applicants Table**



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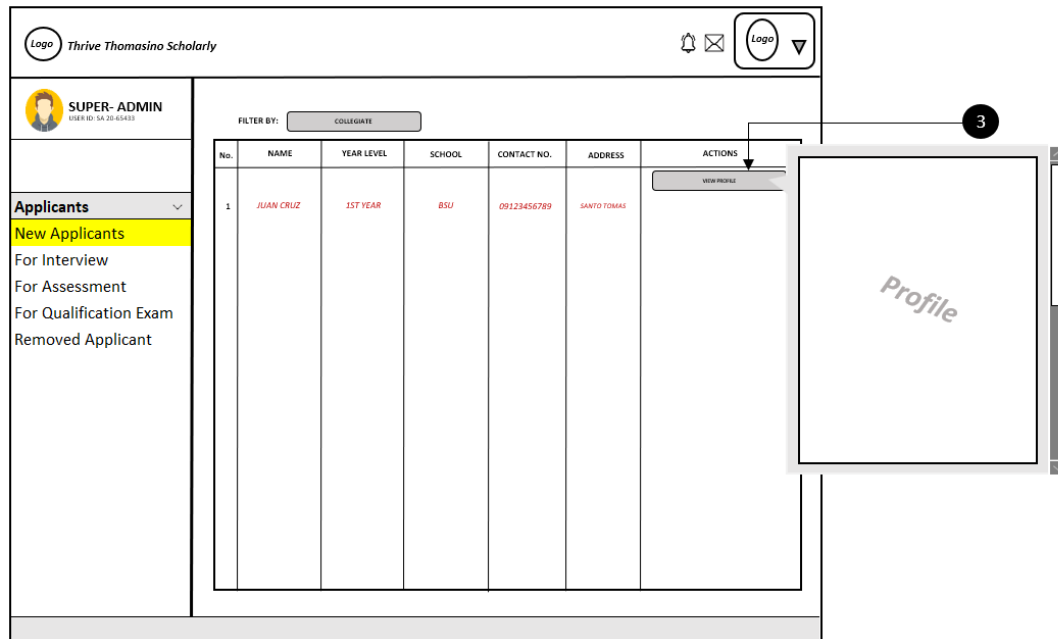
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Figure 14 contains the View Profile button (3), where the super-administrator can view the complete information of the applicants;



**Figure 14. Conceptual Diagram for the View Profile button of the Applicants**

Figure 15 contains the View Requirements button (4), where the super-administrator can view the requirements submitted by the applicants;



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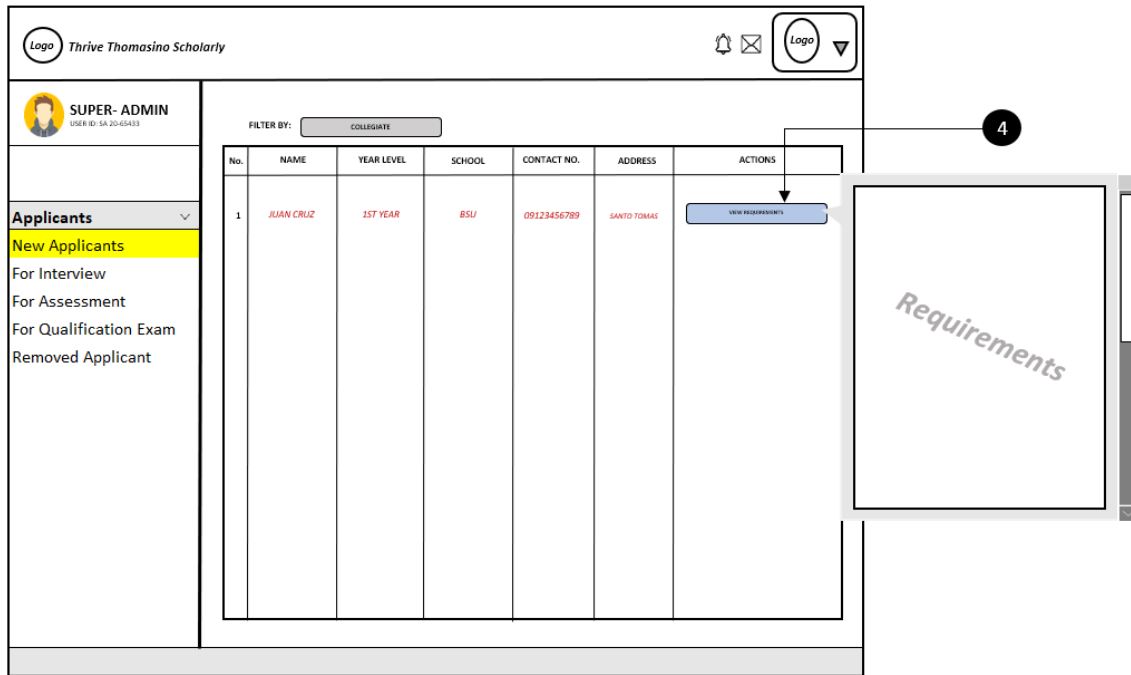
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**Figure 15. Conceptual Diagram for View Requirements button of the Applicants**

Figure 16 contains the rest of the following buttons; For the Interview button (5), when the applicant passes the requirements, the super-administrator will click the For Interview button to transfer the applicant to the list of Interviews; For the Assessment button (6); when the applicant passes the Interview, the super-administrator will click the For Assessment button to transfer the applicant to the Assessment List. For the Remove Applicant button (7), the applicant will be removed if the applicant fails the following procedures.



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Logo

Thrive Thomasino Scholarly

Logo

▼

**SUPER- ADMIN**  
USER ID: SA-20-65433

Applicants

New Applicants

For Interview

For Assessment

For Qualification Exam

Removed Applicant

FILTER BY: COLLEGIATE

No.	NAME	YEAR LEVEL	SCHOOL	CONTACT NO.	ADDRESS	ACTIONS
1	JUAN CRUZ	1ST YEAR	BSU	09123456789	SANTO TOMAS	<div>FOR INTERVIEW</div> <div>FOR ASSESSMENT</div> <div>REMOVED APPLICANT</div>

**Figure 16. Conceptual Diagram for Interview, Assessment, and  
Remove Applicant button**

Figure 17 shows For Interview (1). This is where the super-administrator can find the list of applicants for Interviews; the Send message button (2) is where the super-administrator can message the applicant about the status and updates of their application.



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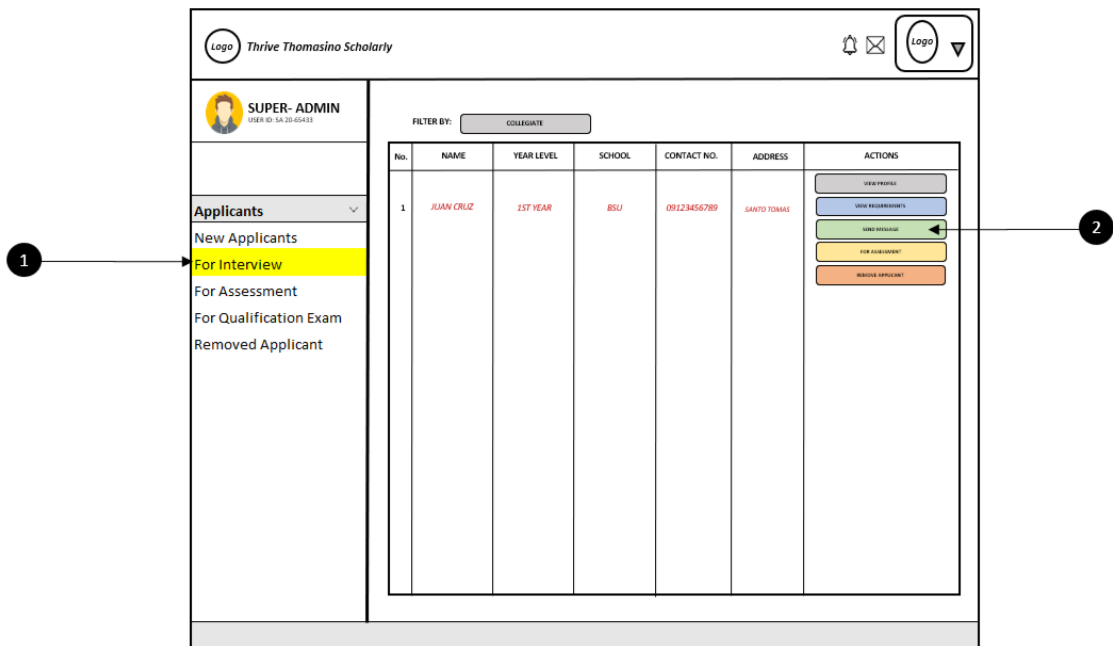
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**Figure 17. Conceptual Diagram for Interview of the Applicants**

Figure 18 shows For Assessments (1). This is where the super-administrator can find the list of applicants for Assessments; the Qualification Examination button (2); when the applicant passes the assessment, the super-administrator will click the Qualification Examination button to transfer the applicants to the list of Examinees.



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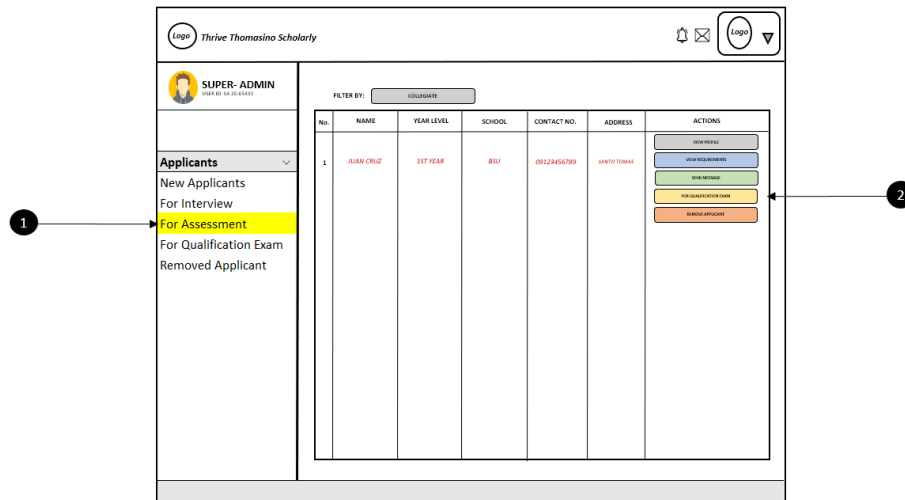
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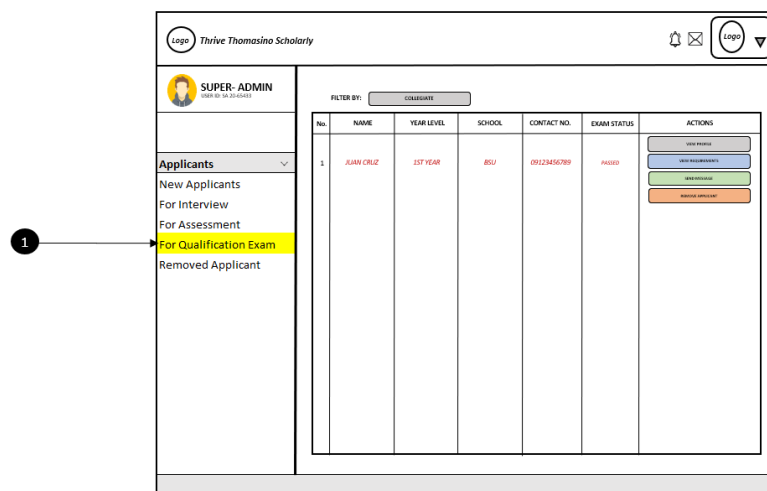
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**Figure 18. Conceptual Diagram for Assessment of Applicants**

Figure 19 shows For Qualification Examination (1). This is where the super-administrator can find the list of qualified applicants who will take the examination;



**Figure 19. Conceptual Diagram for Qualification Exam**



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Figure 20 shows the Removed Applicants (1). This is where the super-administrator can find the list of removed Applicants.

The screenshot displays the 'Thrive Thomasino Scholarly' web application. On the left, a sidebar menu for 'SUPER-ADMIN' includes options like 'New Applicants', 'For Interview', 'For Assessment', 'For Qualification Exam', and 'Removed Applicant' (highlighted with a yellow background and labeled with a circled '1'). The main area shows a table of removed applicants with columns for No., NAME, YEAR LEVEL, SCHOOL, CONTACT NO., EXAM STATUS, and ACTIONS. A single entry for 'JUAN CRUZ' is visible. The 'ACTIONS' column for this entry contains three buttons: 'VIEW PROFILE', 'VIEW REQUIREMENTS', and 'RESTORE APPLICANT' (labeled with a circled '2'). A 'FILTER BY:' dropdown menu is set to 'COLLEGIATE'.

No.	NAME	YEAR LEVEL	SCHOOL	CONTACT NO.	EXAM STATUS	ACTIONS
1	JUAN CRUZ	1ST YEAR	BSU	09123456789	FAILED	<div>VIEW PROFILE</div> <div>VIEW REQUIREMENTS</div> <div>RESTORE APPLICANT</div>

**Figure 20. Conceptual Diagram for Removed Applicants**

Figure 21 shows the Scholars (1). This is where the super-administrator can find the list of current Scholars. The Restore Scholar button (2) is where the super-administrator can restore the removed applicants.



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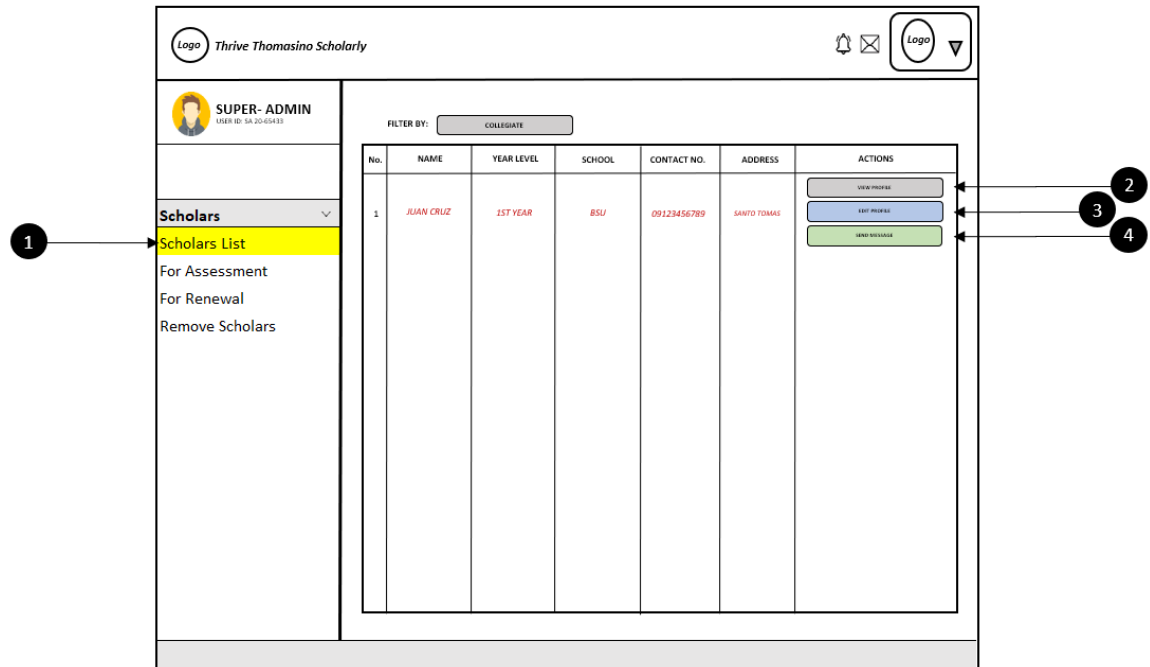
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**Figure 21. Conceptual Diagram for the List Scholars**

Figure 22 shows For Assessment of the Scholars (1). This is where the super-administrator can find the list of current Scholars and view the requirements for assessment. When the applicant passes the evaluation, the super-administrator will click the Renewal button to transfer them to the list of Renewals. When the applicant's requirements do not meet the qualifications, the super-administrator will remove the applicant.





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The screenshot shows a web application interface for 'Thrive Thomasino Scholarly'. At the top, there is a header with a logo, a bell icon, and a user profile icon. Below the header, the user is logged in as 'SUPER-ADMIN' with ID 'SA-20-61431'. A sidebar menu on the left contains the following items: 'Scholars' (expanded), 'Scholars List', 'For Assessment' (highlighted with a yellow background and labeled with a circled '1'), 'For Renewal', and 'Remove Scholars'. The main content area has a 'FILTER BY:' dropdown set to 'COLLEGIATE'. Below this is a table with the following columns: 'No.', 'NAME', 'YEAR LEVEL', 'SCHOOL', 'CONTACT NO.', 'ADDRESS', and 'ACTIONS'. The table contains one row for 'JUAN CRUZ', '1ST YEAR', 'BSU', '09123456789', and 'SANTO TOMAS'. The 'ACTIONS' column for this row contains five buttons: 'VIEW PROFILE', 'VIEW REQUIREMENTS', 'VIEW RENEWAL', 'FOR RENEWAL' (labeled with a circled '2'), and 'REMOVE APPLICANT'.

No.	NAME	YEAR LEVEL	SCHOOL	CONTACT NO.	ADDRESS	ACTIONS
1	JUAN CRUZ	1ST YEAR	BSU	09123456789	SANTO TOMAS	<div><div>VIEW PROFILE</div><div>VIEW REQUIREMENTS</div><div>VIEW RENEWAL</div><div>FOR RENEWAL</div><div>REMOVE APPLICANT</div></div>

**Figure 22. Conceptual Diagram for the Assessment of the Scholars**

Figure 23 shows For Renewal of the Scholars (1). This is where the super-administrator can find the list of Scholars for Renewal and view the requirements. If the super-administrator approves the requirements of the applicant, the super-administrator will click the Approve Renewal buttons (2). If the applicant's requirements do not meet the eligibility, the super-administrator will remove the applicant by clicking the Removed Scholar button.



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The screenshot shows the 'Thrive Thomasino Scholarly' web application. On the left sidebar, under the 'SUPER- ADMIN' section, the 'For Renewal' option is highlighted. A callout '1' points to this option. The main content area displays a table with columns: No., NAME, YEAR LEVEL, SCHOOL, CONTACT NO., ADDRESS, and ACTIONS. The table contains one row for 'JUAN CRUZ'. In the ACTIONS column for this row, there is a button labeled 'Restore Scholar'. A callout '2' points to this button.

No.	NAME	YEAR LEVEL	SCHOOL	CONTACT NO.	ADDRESS	ACTIONS
1	JUAN CRUZ	1ST YEAR	BSU	09123456789	SANTO TOMAS	Restore Scholar

**Figure 23. Conceptual Diagram for the Renewal of the Scholars**

Figure 24 shows For Renewal of the Scholars (1). This is where the super-administrator can find the list of Scholars who have been removed. The Restore Scholar button (2) is where the super-administrator can restore the removed scholars.



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The screenshot shows the 'Thrive Thomasina Scholarly' web application. On the left sidebar, under the 'SUPER- ADMIN' section, the 'Scholars' menu is expanded, and the 'Remove Scholars' option is highlighted. A callout '1' points to this option. The main content area displays a table of scholars with columns: No., NAME, YEAR LEVEL, SCHOOL, CONTACT NO., ADDRESS, and ACTIONS. The first row shows a scholar named 'JUAN CRUZ' from 'BSU' in the '1ST YEAR'. A callout '2' points to the 'View Profile' button in the 'ACTIONS' column of this row.

No.	NAME	YEAR LEVEL	SCHOOL	CONTACT NO.	ADDRESS	ACTIONS
1	JUAN CRUZ	1ST YEAR	BSU	09123456789	SANTO TOMAS	<a href="#">VIEW PROFILE</a> <a href="#">VIEW REQUIREMENTS</a> <a href="#">SEND MESSAGE</a> <a href="#">REVIEW APPLICATION</a>

**Figure 24. Conceptual Diagram for the Removed Scholars**

Figure 25 shows the Graduating Scholars (1). This is where the super-administrator can find the list of Graduating Scholars. The View Profile button (2) is where the super-administrator can see the complete information of the Graduating Scholars.



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Logo Thrive Thomasino Scholarly

SUPER- ADMIN  
USER ID: SA-2045433

FILTER BY: COLLEGIATE

No.	NAME	YEAR LEVEL	SCHOOL	CONTACT NO.	ADDRESS	ACTIONS
1	JUAN CRUZ	1ST YEAR	BSU	09123456789	SANTO TOMAS	VIEW PROFILE

**Figure 25. Conceptual Diagram for the Graduating Scholars**

Figure 26 shows the Graduates (1). This is where the super-administrator can find the list of Graduates Scholars. The View Profile button (2) is where the super-administrator can see the complete information of the Graduates Scholars.



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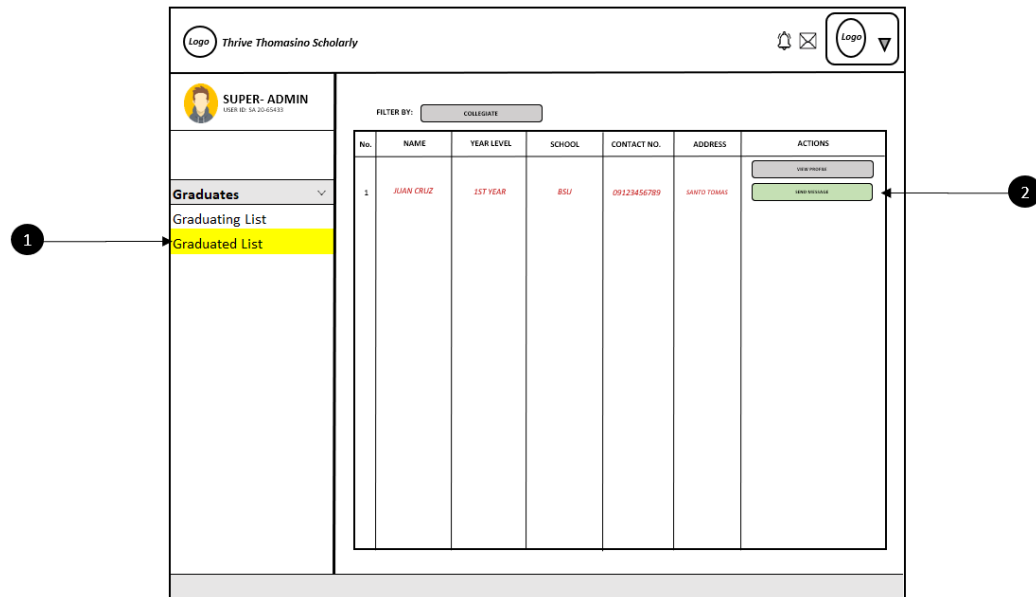
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**Figure 26. Conceptual Diagram for the Graduates Scholars**

Figure 27 shows the Exam Settings (1). This is where the super-administrator can create the Qualification Examination. The Type of Exam (2) is where the super-administrator can choose the type of test; The Number of Items (3) is where the super-administrator can set the total number of Items for the Examination; The Time of Exam (4) is where the super-administrator set up the start time and end time of the Exam; The Passing Type (5), is where the super-administrator set up the passing rate of the exam either equivalent or percentage; The Edit button (6) is where the super-administrator can edit the Exam settings and; The Save button is where the super-administrator can update the Exam settings.



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SUPER- ADMIN  
USER ID: SA-20-09413

Manage Exam

Exam Settings

Exam Questions

Type of Examination

No. of Items

Time of Exam

Passing type

EDIT

SAVE

**Figure 27. Conceptual Diagram for the Exam Settings**

Figure 28 shows Exam Questions (1). This is where the super-administrator can create questions for Qualification Examination. The Add button (2) is where the super-administrator can make additional questions; The Edit button (3) is where the super-administrator can edit the questions and; The Delete button (4) is where the super-administrator can delete the questions.



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SUPER- ADMIN  
USER ID: SA-20240401

Manage Exam ▾  
Exam Settings  
Exam Questions

ADD

No.	TYPE	QUESTION	CHOICES	ANSWER	POINT/S	ACTIONS
1	MULTIPLE CHOICE	LOREM IPS?	1,2,3,4,5	1	2	EDIT DELETE

**Figure 28. Conceptual Diagram for the Exam Questions**

Figure 29 shows how Exam Questions will be edited (1). This is where the super-administrator edits the questions for Qualification Examination. The Type of Examination (2) is where the super-administrator can choose the type of test; The Questions (3) are where the super-administrator inputs the questions for the Examination; The Choices (4) are where the super-administrator inputs the choices for the question; The Answer (5), is where the super-administrator inputs the correct answer; The Points (6) is where the super-administrator can input the points per questions and; the Save button is where it can update the questions that have been edited.



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The diagram illustrates the 'Edit Exam Questions' interface. It features a sidebar on the left with a user profile for 'SUPER-ADMIN' and a menu containing 'Manage Exam', 'Exam Settings', and 'Exam Questions' (highlighted with a yellow background and labeled with a circled '1'). The main content area contains a form with five input fields: 'Type of Examination' (a dropdown menu labeled with a circled '2'), 'Questions' (a text box labeled with a circled '3'), 'Choices' (a text box labeled with a circled '4'), 'Answer' (a text box labeled with a circled '4'), and 'Point/s' (a text box). At the bottom right of the form are 'EDIT' and 'SAVE' buttons. A top navigation bar includes a 'Logo', the text 'Thrive Thomasino Scholarly', and a notification icon.

**Figure 29. Conceptual Diagram for the Edit Exam Questions**

Figure 30 shows Generate Report (1). This is where the super-administrator can generate reports. The Filter button (2) filters what reports should be generated; The Search button (3) is where the super-administrator can search what data they are looking for quickly; The Charts and the tables (4) will be used to summarize the data so that it can be easily interpreted by the super -administrator and; The Generate/Print button will be used to generate and print the reports.





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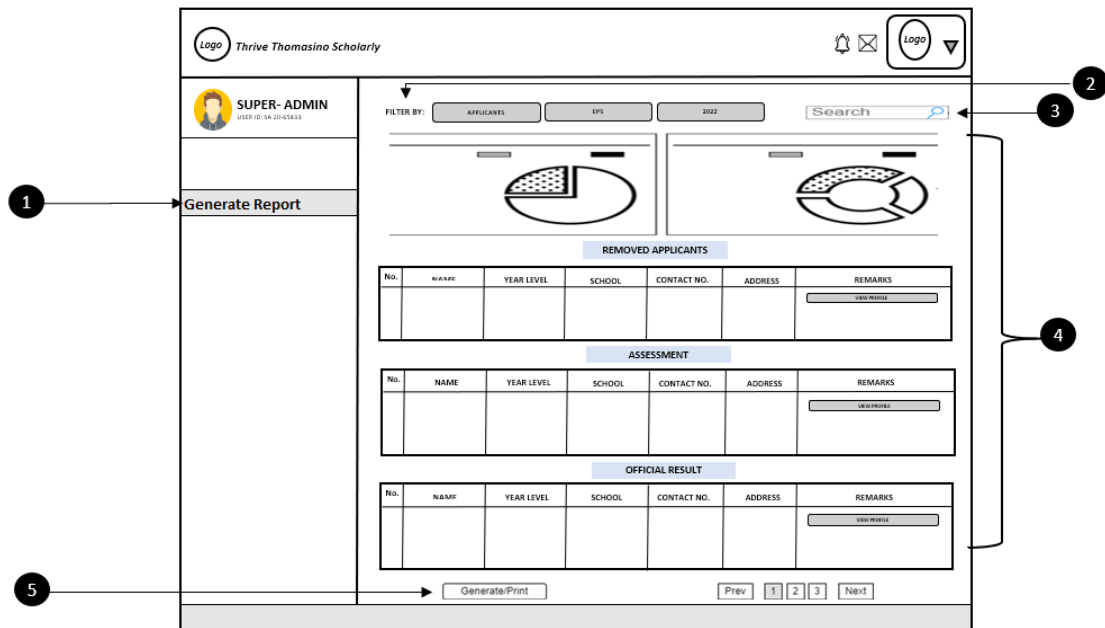
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**Figure 30. Conceptual Diagram for the Generate Report**

Figure 31 shows Account Management (1). This is where the super-administrator can create/ add an account for the Administrator. It contains the Username, Name, School assigned, Status, and Super admin; The Buttons consist of View Profile (1), Message (2), Edit (3), and Remove user (4) and; The assign pin button (3) is where the super-administrator can generate a pin for the administrator to able to gain access to the other features that the administrator cannot access.



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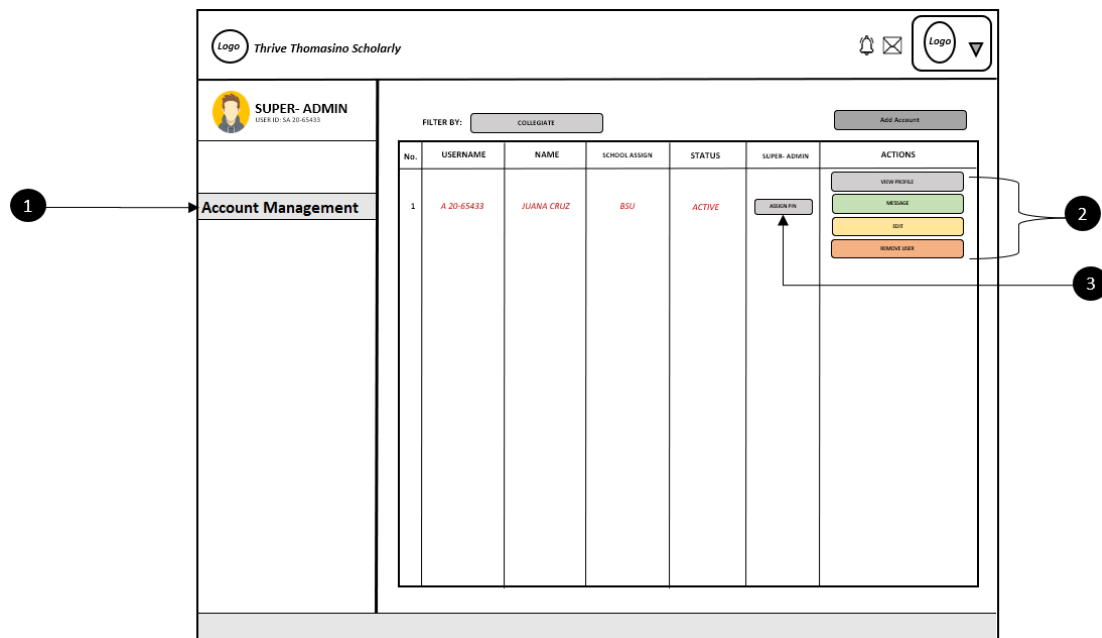
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**Figure 31. Conceptual Diagram for the Account Management**

Figure 32 shows Add Account Button (1). This is where the super-administrator can create/ add an account for the Administrator. It contains the Type of Account (1), First Name (2), Middle Name (3), Last Name (4), and Email (5). After inputting the details needed to create the administrator account, this will be submitted (6).



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No.	USERNAME	NAME	SCHOOL ASSIGN	STATUS	SUPER-ADMIN	ACTIONS
1	A-20-65433	JUANITA CRUZ	BSU	ACTIVE	ADMIN	<div>View Profile</div> <div>Update Profile</div> <div>Reset Password</div> <div>Deactivate Account</div>

**Account Information**  
Type of Account: Select Account  
First Name:   
Middle Name:   
Last Name:   
Email Address:   

Save

**Figure 32. Conceptual Diagram for the Add Account for Administrator**

### User Design Interface of Administrator

Figure 33 shows the user interface of the Administrator. It includes buttons for navigation such as; the Dashboard (1), the Profile (2), the New Applicant (3), the Current Beneficiaries (4), the Graduate (5), the Manage Exam (6), the Reports (7), the Reports (8), the Account Management (9), and the Generate Report.





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The diagram shows a web interface for an administrator's profile. On the left is a sidebar with a user profile icon and the name 'ADMIN'. Below it is a 'Profile' link highlighted in yellow, indicated by a circled '1'. The main content area features a user profile picture, a name field with sub-fields for First, Middle, Last, and Name Suffix, and fields for Date of Birth, Place of Birth, Religion, Sex, Civil Status, and Contact Number. An 'Email Account' field is at the bottom. An 'Upload Photo' button is below the profile picture. At the bottom right are 'Edit' and 'Save' buttons, indicated by a circled '3'. A circled '2' points to the main form area, and a circled '4' points to the 'Save' button.

**Figure 34. Conceptual Diagram for Profile of the Administrator**

Figure 35 shows the New Applicants (1). It contains the list and information of the applicants applying for the scholarship program. Above the table is the Filter by (2), which helps filter the applicants' information.

The diagram shows a web interface for a list of new applicants. On the left is a sidebar with a user profile icon and the name 'ADMIN'. Below it is a dropdown menu with 'Applicants' selected, indicated by a circled '1'. The main content area has a 'FILTER BY:' section with a dropdown menu set to 'COLLEGE', indicated by a circled '2'. Below this is a table with columns: No., NAME, YEAR LEVEL, SCHOOL, CONTACT NO., ADDRESS, and ACTIONS. The first row shows an applicant named 'JUAN CRUZ' with year level '1ST YEAR' and school 'BSU'. The ACTIONS column contains five buttons: 'View Details', 'Edit Information', 'Cancel Application', 'Interview', and 'Remove Applicant', indicated by circled numbers 3, 4, 5, 6, and 7 respectively.

**Figure 35. Conceptual Diagram for List of New Applicants**



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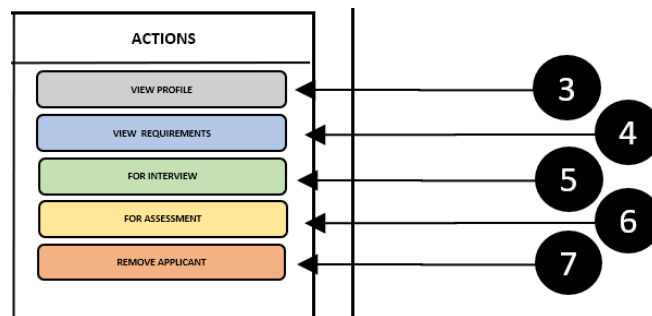
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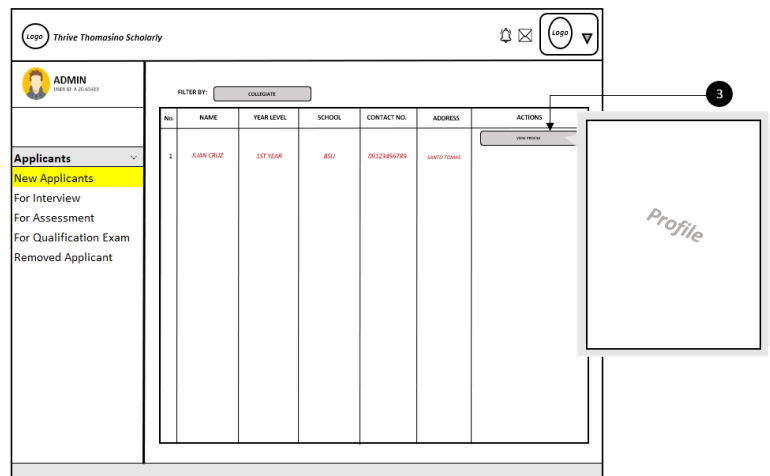
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Figure 36 shows the Action Buttons indicated in the New Applicants table. It contains the View Profile (3); the View Requirements (4); For Interview (5); For Assessment (6), and; Remove Applicant (7).



**Figure 36. Conceptual Diagram for Action buttons in the New Applicants Table**

Figure 37 contains the View Profile button (3), where the Administrator can view the complete information of the applicants;





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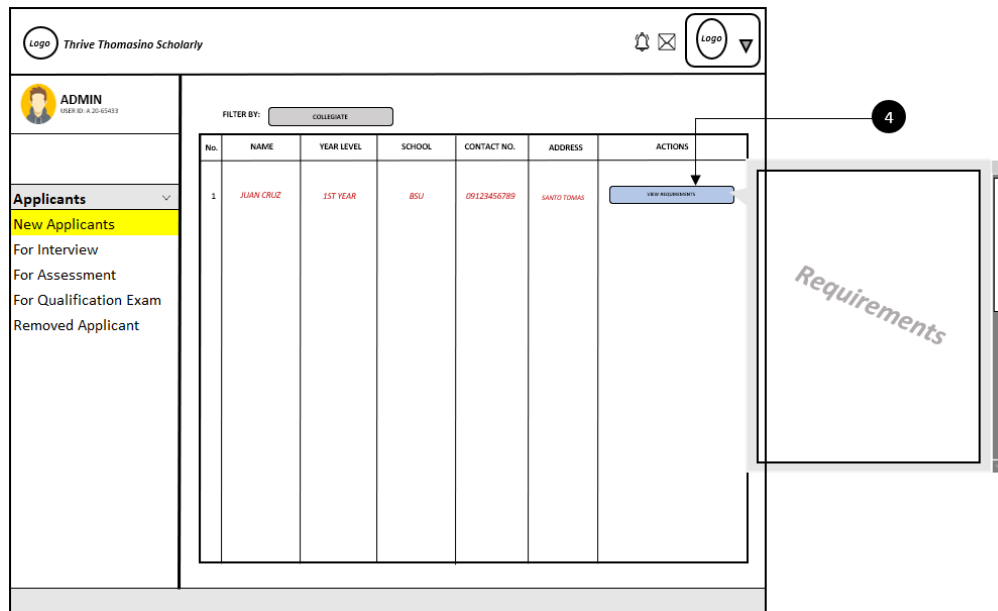
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**Figure 37. Conceptual Diagram for the View Profile button of the Applicants**

Figure 38 contains the View Requirements button (4), where the Administrator can view the requirements submitted by the applicants;



**Figure 38. Conceptual Diagram for View Requirements button of the Applicants**

Figure 39 contains the rest of the following buttons; For the Interview button (5), when the applicant passes the requirements, the Administrator will click the For Interview button to transfer the applicant to the list of Interviews; For the Assessment button (6); when the applicant passes the Interview, the Administrator will click the For Assessment



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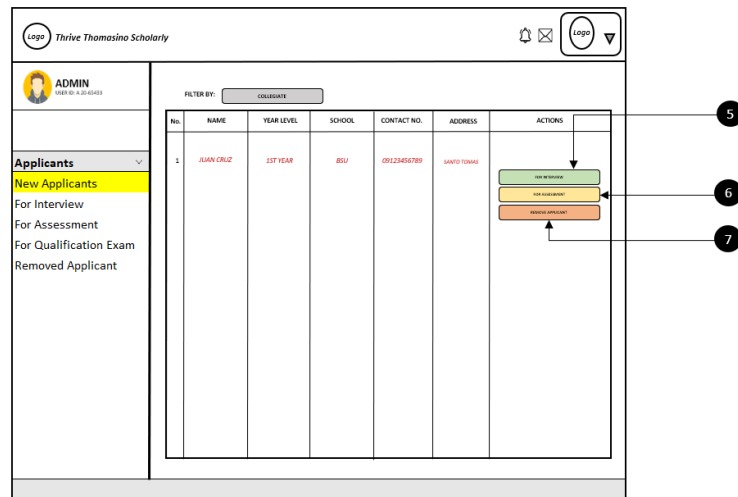
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button to transfer the applicant to the Assessment List. For the Remove Applicant button (7), the applicant will be removed if the applicant fails the following procedures.



**Figure 39. Conceptual Diagram for Interview, Assessment, and Remove Applicant button**

Figure 40 shows For Interview (1). This is where the Administrator can find the list of applicants for Interviews; the Send message button (2) is where the super-administrator can message the applicant about the status and updates of their application.





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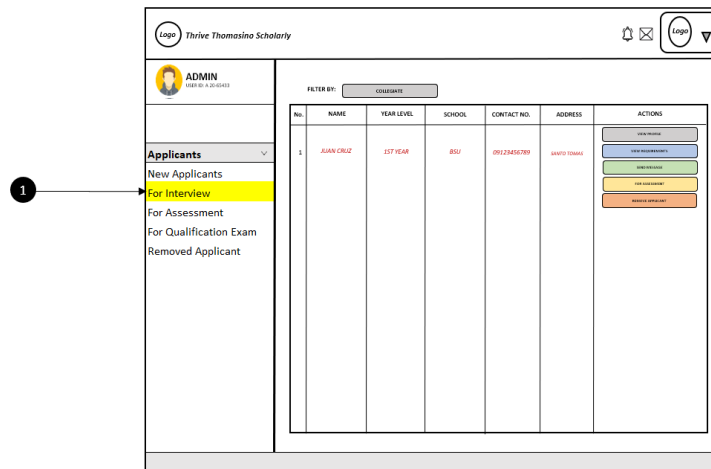
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**Figure 40. Conceptual Diagram for Interview of the Applicants**

Figure 41 shows For Assessments (1). This is where the Administrator can find the list of applicants for Assessments; the Qualification Examination button (2); when the applicant passes the assessment, the Administrator will click the Qualification Examination button to transfer the applicants to the list of Examinees.



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Logo Thrive Thomasino Scholarly

ADMIN  
USER ID: A-10-0433

Applicants

- New Applicants
- For Interview
- For Assessment**
- For Qualification Exam
- Removed Applicant

FILTER BY: COLLEGE

No.	NAME	YEAR LEVEL	SCHOOL	CONTACT NO.	ADDRESS	ACTIONS
1	JUAN CRUZ	1ST YEAR	BSU	09123456789	SANTO TOMAS	<ul style="list-style-type: none"><li>VIEW PROFILE</li><li>EDIT INFORMATION</li><li>SEND MESSAGE</li><li>JOIN QUALIFICATION EXAM</li><li>REMOVE APPLICANT</li></ul>

**Figure 41. Conceptual Diagram for Assessment of Applicants**

Figure 42 shows For Qualification Examination (1). This is where the Administrator can find the list of qualified applicants who will take the examination;



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Logo

Thrive Thomasino Scholarly

SUPER- ADMIN

USER ID: SA-20-65433

Applicants

New Applicants

For Interview

For Assessment

For Qualification Exam

Removed Applicant

FILTER BY: COLLEGIATE

No.	NAME	YEAR LEVEL	SCHOOL	CONTACT NO.	EXAM STATUS	ACTIONS
1	JUAN CRUZ	1ST YEAR	BSU	09123456789	PASSED	<div>VIEW PROFILE</div> <div>VIEW REQUIREMENTS</div> <div>SEND MESSAGE</div> <div>REMOVE APPLICANT</div>

**Figure 42. Conceptual Diagram for Qualification Exam**

Figure 43 shows the Removed Applicants (1). This is where the Administrator can find the list of removed Applicants.



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No.	NAME	YEAR LEVEL	SCHOOL	CONTACT NO.	EXAM STATUS	ACTIONS
1	JUAN CRUZ	1ST YEAR	BSU	09123456789	PASSED	<div>VIEW PROFILE</div> <div>VIEW REQUIREMENTS</div> <div>RESTORE APPLICANT</div>

**Figure 43. Conceptual Diagram for Removed Applicants**

Figure 44 shows the Scholars (1). This is where the Administrator can find the list of current Scholars. The Restore Scholar button (2) is where the Administrator can restore the removed applicants.



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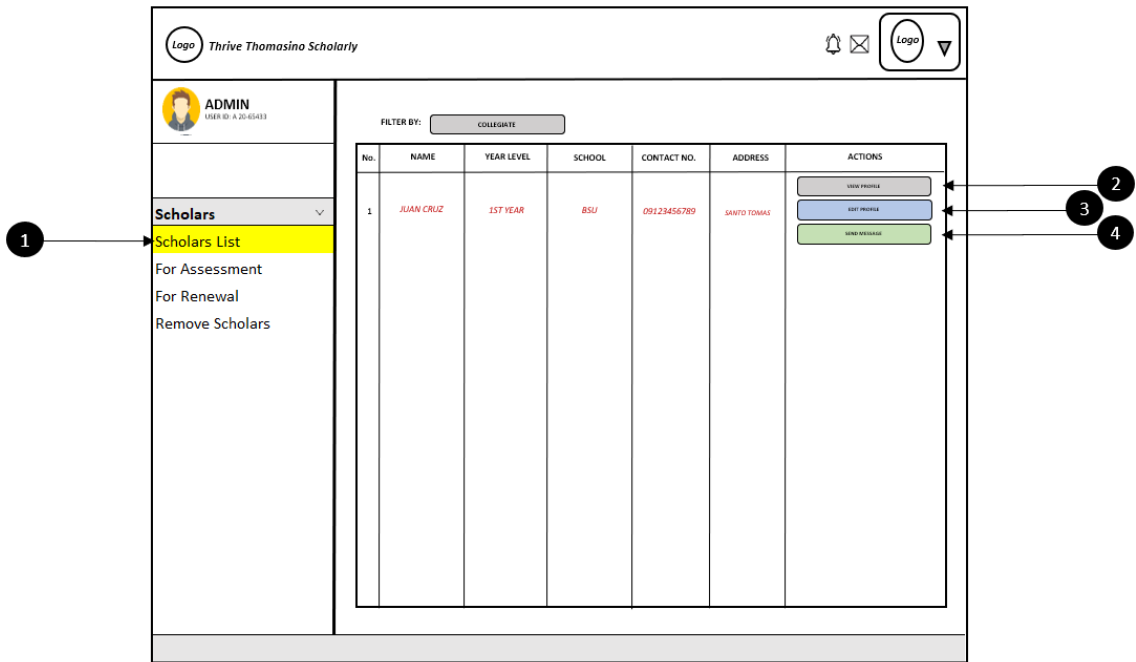
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**Figure 44. Conceptual Diagram for the List Scholars**

Figure 45 shows For Assessment of the Scholars (1). This is where the Administrator can find the list of current Scholars and view the requirements for assessment. When the applicant passes the evaluation, the Administrator will click the Renewal button to transfer them to the list of Renewals. When the applicant's requirements do not meet the qualifications, the Administrator will remove the applicant.



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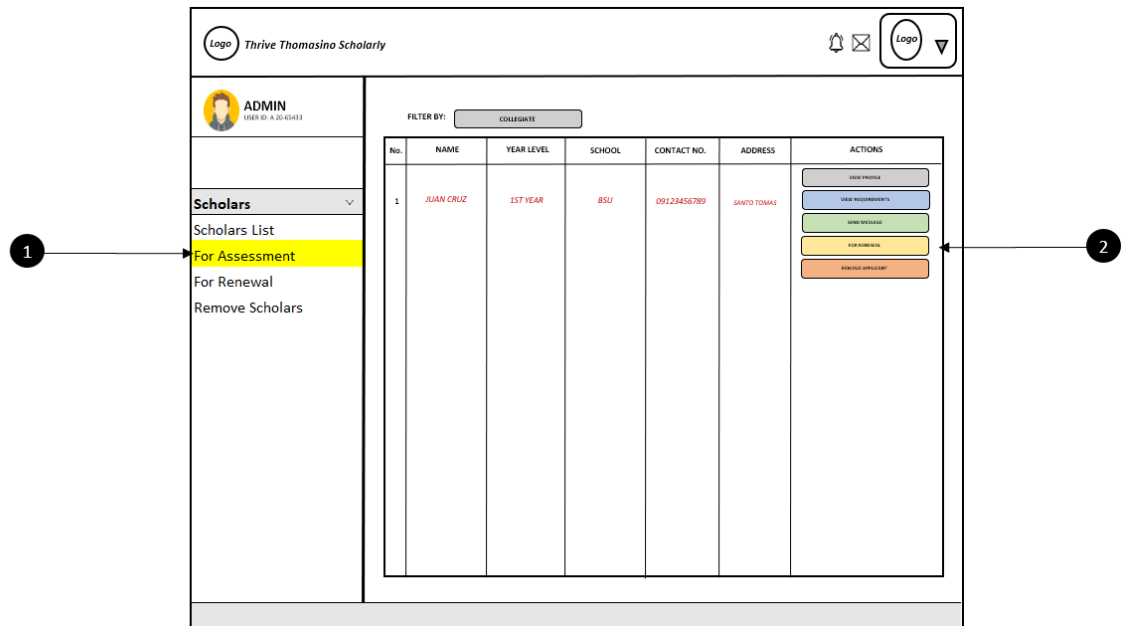
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**Figure 45. Conceptual Diagram for the Assessment of the Scholars**

Figure 46 shows For Renewal of the Scholars (1). This is where the Administrator can find the list of Scholars for Renewal and view the requirements. If the Administrator approves the applicant's requirements, the Administrator will click the Approve Renewal buttons (2). If the applicant's requirements do not meet the eligibility, the Administrator will remove the applicant by clicking the Removed Scholar button.



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No.	NAME	YEAR LEVEL	SCHOOL	CONTACT NO.	ADDRESS	ACTIONS
1	JUAN CRUZ	1ST YEAR	BSU	09123456789	SANTO TOMAS	<div>VIEW PROFILE</div> <div>VIEW REQUIREMENTS</div> <div>SEND MESSAGE</div> <div>APPROVE RENEWAL</div> <div>REVOKE APPLICATION</div>

**Figure 46. Conceptual Diagram for the Renewal of the Scholars**

Figure 47 shows For Renewal of the Scholars (1). This is where the Administrator can find the list of Scholars who have been removed. The Restore Scholar button (2) is where the Administrator can restore the removed scholars.



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The screenshot shows a web application interface for 'Thrive Thomasino Scholarly'. On the left is a sidebar with a user profile for 'ADMIN' (USER ID: A-20-6543) and a menu with options: 'Scholars List', 'For Assessment', 'For Renewal', and 'Remove Scholars' (highlighted with a yellow background and labeled with a circled '1'). The main area features a table with columns: 'No.', 'NAME', 'YEAR LEVEL', 'SCHOOL', 'CONTACT NO.', 'ADDRESS', and 'ACTIONS'. A filter dropdown is set to 'COLLEGIATE'. The table contains one row for 'JUAN CRUZ', '1ST YEAR', 'BSU', '09123456789', 'SANTO TOMAS'. The 'ACTIONS' column for this row contains four buttons: 'VIEW PROFILE' (labeled with a circled '2'), 'VIEW REQUIREMENTS', 'VIEW SCHOLARSHIP', and 'REVIEW APPLICATION'.

No.	NAME	YEAR LEVEL	SCHOOL	CONTACT NO.	ADDRESS	ACTIONS
1	JUAN CRUZ	1ST YEAR	BSU	09123456789	SANTO TOMAS	<button>VIEW PROFILE</button> <button>VIEW REQUIREMENTS</button> <button>VIEW SCHOLARSHIP</button> <button>REVIEW APPLICATION</button>

**Figure 47. Conceptual Diagram for the Removed Scholars**

Figure 48 shows the Graduating Scholars (1). This is where the Administrator can find the list of Graduating Scholars. The View Profile button (2) is where the Administrator can see the complete information of the Graduating Scholars.





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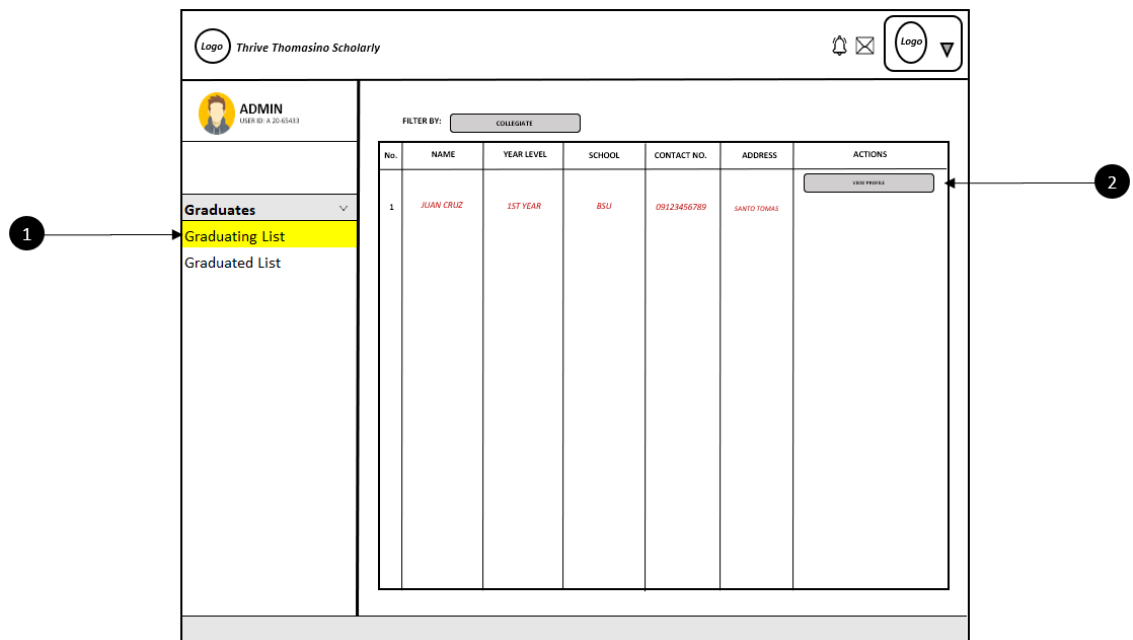
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**Figure 48. Conceptual Diagram for the Graduating Scholars**

Figure 49 shows the Graduates (1). This is where the Administrator can find the list of Graduates Scholars. The View Profile button (2) is where the Administrator can see the complete information of the Graduates Scholars.



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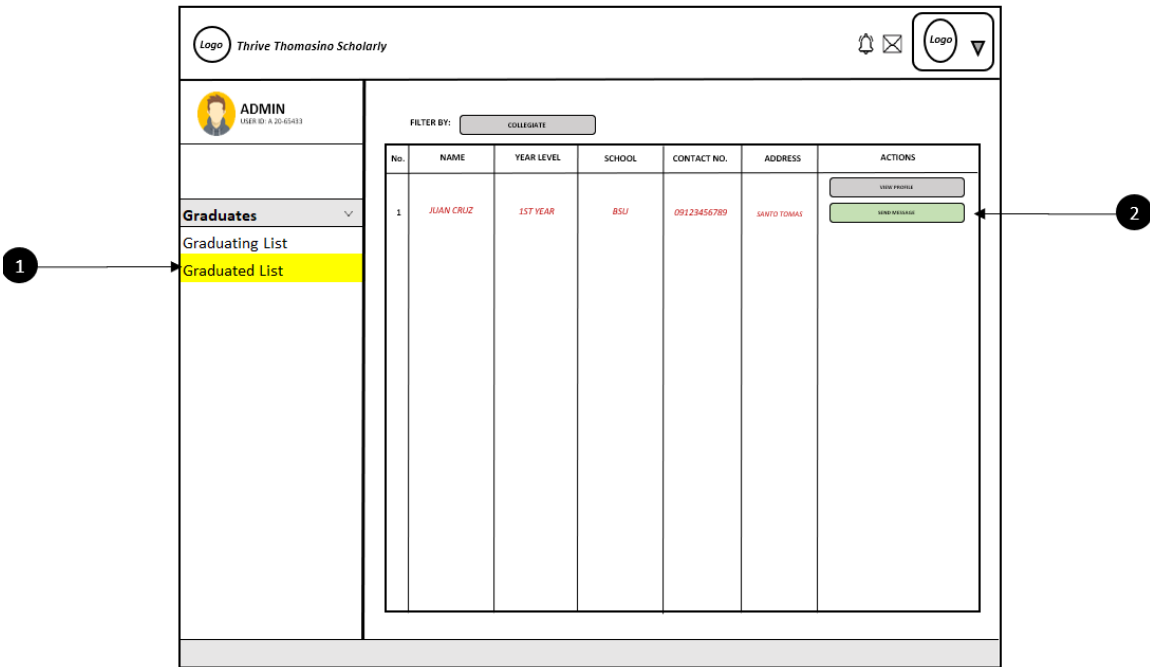
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**Figure 49. Conceptual Diagram for the Graduates Scholars**

Figure 50 shows the Exam Settings (1). This is where the Administrator can create the Qualification Examination. The Type of Exam (2) is where the Administrator can choose the type of test; The Number of Items (3) is where the Administrator can set the total number of Items for the Examination; The Time of Exam (4) is where the Administrator set up the start time and end time of the Exam; The Passing Type (5), is where the Administrator set up the passing rate of the exam either equivalent or percentage; The Edit button (6) is where the Administrator can edit the Exam settings and; The Save button is where the Administrator can update the Exam settings.



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**Figure 50. Conceptual Diagram for the Exam Settings**

Figure 51 shows Exam Questions (1). This is where the Administrator can create questions for Qualification Examination. The Add button (2) is where the Administrator can make additional questions; The Edit button (3) is where the Administrator can edit the questions and; The Delete button (4) is where the Administrator can delete the questions.



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Thrive Thomasino Scholarly

ADMIN  
USER ID: A-20-65432

Manage Exam  
Exam Settings  
Exam Questions

No.	TYPE	QUESTION	CHOICES	ANSWER	POINT/S	ACTIONS
1	MULTIPLE CHOICE	LOREM IPS?	J,K,X	1	2	EDIT DELETE

**Figure 51. Conceptual Diagram for the Exam Questions**

Figure 52 shows how Exam Questions will be edited (1). This is where the Administrator edits the questions for Qualification Examination. The Type of Examination (2) is where the Administrator can choose the type of test; The Questions (3) are where the Administrator inputs the questions for the Examination; The Choices (4) are where the Administrator inputs the choices for the question; The Answer (5), is where the Administrator inputs the correct answer; The Points (6) is where the Administrator can input the points per questions and; the Save button is where it can update the questions that have been edited.



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The screenshot displays a web application interface for managing exams. On the left, a sidebar shows the user 'ADMIN' and a menu with 'Manage Exam' expanded, highlighting 'Exam Questions'. The main content area is titled 'Thrive Thomasino Scholarly' and contains a form for editing exam questions. The form includes five input fields: 'Type of Examination' (with a dropdown arrow), 'Questions', 'Choices', 'Answer', and 'Point/s'. Each field is associated with a number in a circle: 2 for 'Type of Examination', 3 for 'Questions', 4 for 'Choices', and 4 for 'Answer'. The 'Point/s' field is also associated with a 4. At the bottom right of the form are 'EDIT' and 'SAVE' buttons. Arrows point from the numbers in the circles to their respective input fields.

**Figure 52. Conceptual Diagram for the Edit Exam Questions**

Figure 53 shows Generate Report (1). This is where the Administrator can generate reports. The Filter button (2) filters what reports should be generated; The Search button (3) is where the Administrator can search what data they are looking for quickly; The Charts and the tables (4) will be used to summarize the data so that it can be easily interpreted by the super -administrator and; The Generate/Print button will be used to generate and print the reports.



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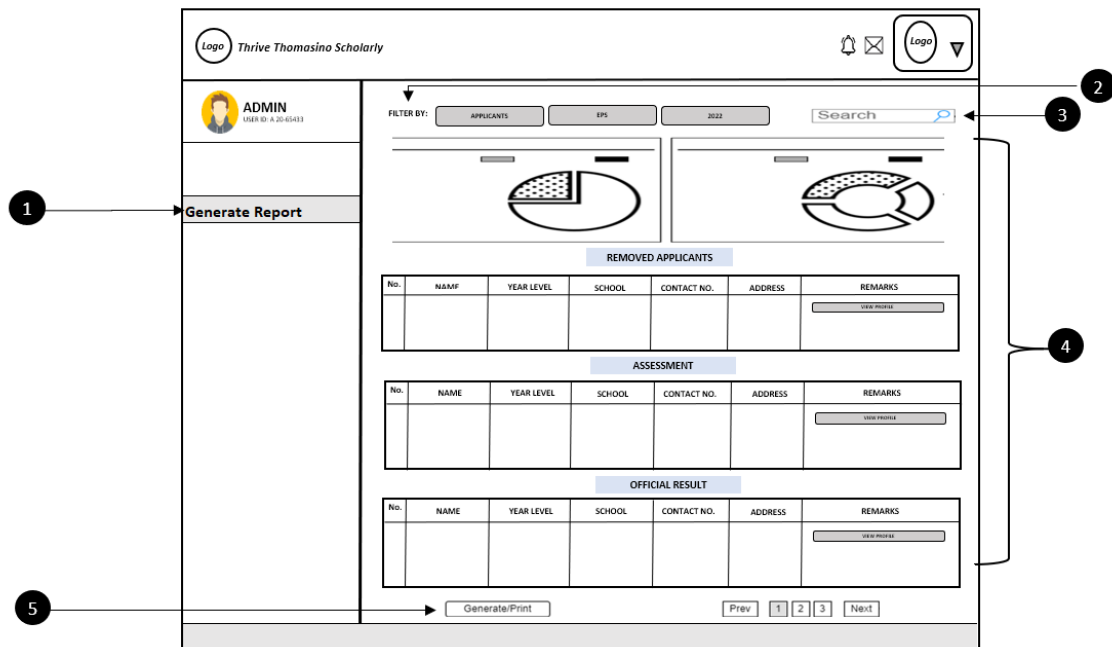
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**Figure 53. Conceptual Diagram for the Generate Report**

### Software Development Tool

To develop the proposed system, the proponents will use several programming languages and software to achieve the desired functions of the proposed system. The proponents will use PhpMyAdmin and Hypertext Pre-processing (PHP) for backend development. The proponents will use PhpMyAdmin for storing data. The software product stores and retrieves data as other software applications request. They will be focusing on using an application that is easy to understand and has many operations and functions which the proposed system will need. It can be a data storage back-end with a variety of



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data. PHP is an HTML- embedded server-side scripting language. Also, it will be used to create web systems and frameworks. The proponents will also use HTML, CSS, and Bootstrap for front- end development of the system.

The proponents will use Visual Studio Code as the programming tool of the system. To make the development of the system possible, the proponents combine all of the software mentioned above to make the system’s functionalities. They will be able to meet the requirements of the user.

### **User Design Interface of Applicants**

Figure 54 shows the personal information in the registration form for the new applicant for the Santo Tomas, Batangas scholarship program. The personal information contains the following inputs; the First Name, Middle Name, Last Name, Suffix, Date of Birth, Place of birth, Religion, Sex, Civil status, Contact number, House/Block/Lot no./Street/Subdivision/Village, Barangay, Educational level, Educational Level, Course/Strand, Name of school, Type of school, Academic Year, School Address, Type of



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scholarship the applicant applying for, and User ID of the applicant(1).

Logo Thrive Thomasino Scholarly

**Personal Information**

First Name\* Middle Name\* Last Name\* Suffix\*

Date of Birth\* Place of Birth\* Religion\*

Sex\* Civil Status\* Contact Number\*

House/Block/Lot no./Street/Subdivision/Village\* Barangay\*

Educational Level\* Year Level\* Course/Strand\*

Name of School\* Type of School\*

Academic Year\* School Address\*

Type of Scholarship you are Applying for?\* User ID\*

**Figure 54. Conceptual diagram for new applicant registration form.**

Figure 55 shows the other part of the registration form, such as the account information, which contains the following inputs; Email address, Verification code, and password for the account (2). The form also has an agreement that says the applicant inputs must be accurate, correct, and complete and provide privilege to the head/ authorized representative to verify and validate the content. This will be done by checking the provided checkbox (3). After validating the inputs, the applicant can submit information using the submit button (4). The inputs will be stored in the system database and used by





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the admin and super admin to identify the applicant.

**Account Information**

Email address\*  
Email address

Verification Code\*  
Email address

Create Password\*  
Password

Confirm Password\*  
Confirm Password

☐ We declare that all information we provided is true, correct and complete statement pursuant to the provisions of pertinent laws, rules and regulations of the Republic of the Philippines. We authorize the agency head/authorized representative to verify/validate the contents stated herein.

**Privacy Statement**

Santo Tomas Batangas collects your personal information for the primary purpose of providing our services to you, providing information to our clients/or endorsing the same to other PGL department/government/private entities. And in accordance with the law, you are entitled to access and rectify your personal data.

Where reasonable and practicable to do so, we will collect your personal information only from you. However, in some circumstances we may be provided with information by third parties. In such a case we will take reasonable steps to ensure that you are made aware of the information provided to us by the third party.

In terms of security, the City of Santo Tomas takes technical and organizational measures to ensure that all information processed by personal information controller is protected from unauthorized access, changes or destruction.

By registering, you are giving your consent to process your personal information based on the Data Protection Policy.

Submit

**Figure 55. Conceptual diagram for new applicant registration form.**

Figure 56 shows the Confirmation window; it asks the applicant if they want to continue submitting the information (1). Through this, it will ensure everything is transparent in terms of uploading and submitting the requirements.



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1

**Figure 56. Conceptual diagram of Confirmation window.**

Figure 57 shows a pop-up window indicating a successful submission of requirements (1).

1

**Figure 57. Conceptual diagram of a Successful submission.**



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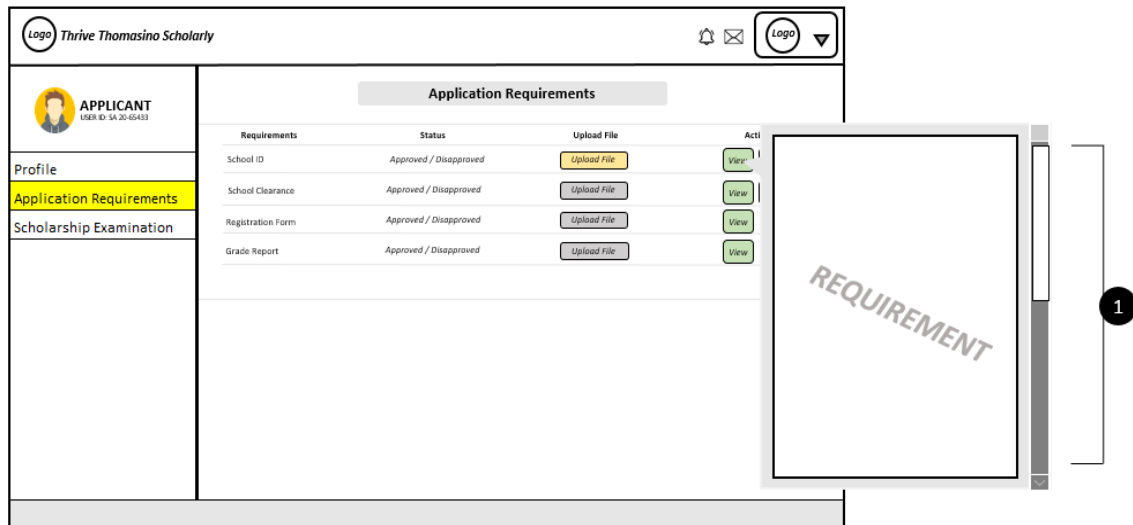
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Figure 58 shows the View Button (1). The applicant can see and check their uploaded file using this button. Giving the applicants the capability to view their uploaded requirements before submitting them to the admin will help them avoid submitting the wrong file. Fewer mistakes provide a faster phase of applying for a scholarship.



**Figure 58. Conceptual diagram of View Button.**

Figure 59 shows the Application Requirements button (1), where the applicant will upload the requirements. In the application requirements, the applicant can upload a file, view it, and delete it (2).



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The diagram shows a web application interface for 'Thrive Thomasino Scholarly'. On the left is a sidebar with a user profile (APPLICANT, USER ID: SA 20-65433) and three menu items: 'Profile', 'Application Requirements' (highlighted with a yellow background and a red circle labeled '1'), and 'Scholarship Examination'. The main content area is titled 'Application Requirements' and contains a table with four rows: 'School ID', 'School Clearance', 'Registration Form', and 'Grade Report'. Each row has columns for 'Requirements', 'Status' (with a link to 'Approved / Disapproved'), 'Upload File' (with an 'Upload File' button), and 'Action' (with 'View' and 'Delete' buttons). A red circle labeled '2' is placed to the right of the table, indicating the area where the exam results will appear.

Requirements	Status	Upload File	Action
School ID	<a href="#">Approved / Disapproved</a>	<button>Upload File</button>	<button>View</button> <button>Delete</button>
School Clearance	<a href="#">Approved / Disapproved</a>	<button>Upload File</button>	<button>View</button> <button>Delete</button>
Registration Form	<a href="#">Approved / Disapproved</a>	<button>Upload File</button>	<button>View</button> <button>Delete</button>
Grade Report	<a href="#">Approved / Disapproved</a>	<button>Upload File</button>	<button>View</button> <button>Delete</button>

**Figure 59. Conceptual diagram of Application Requirements.**

Figure 60 shows the Scholarship Examination button where the admin or super-admin uploads the exam that will be taken by the College Applicants (1). The exam will appear on the right side of the UI (2);



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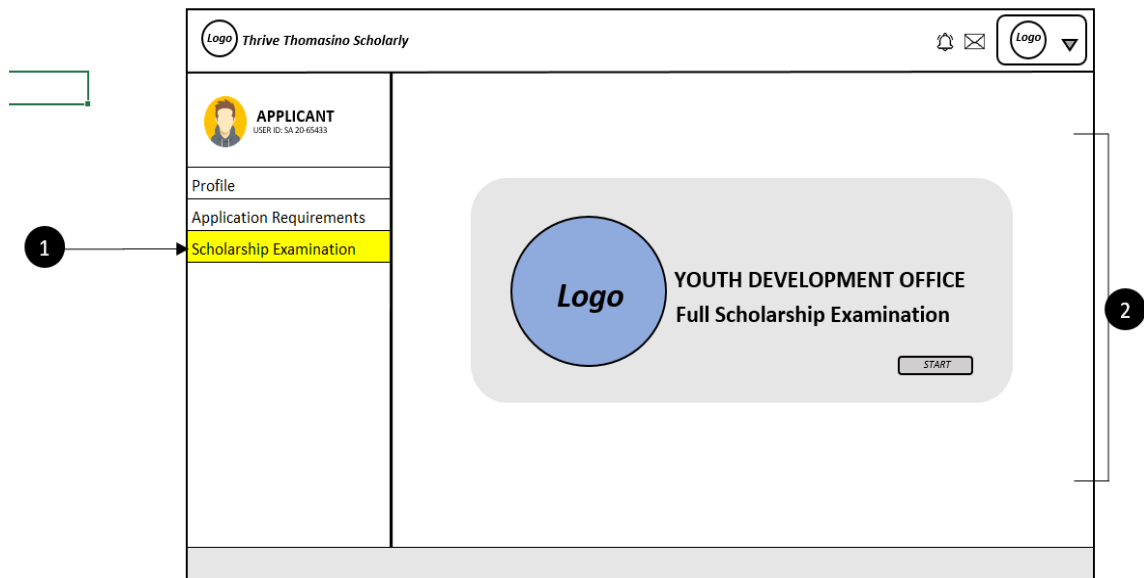
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**Figure 60. Conceptual diagram of Scholarship Examination.**

Figure 61 shows the area where the exam will appear (1), together with the Page number (2), the Back Button to back on the previous page (3), the Next Button to proceed on the next page, and lastly, the Submit Button to provide the applicant exam details and score to the administrator (4).



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The diagram shows a web interface for a scholarship examination. At the top, there is a header bar with a logo, the text "Thrive Thomasino Scholarly", a notification bell icon, a messages icon, and a user profile dropdown menu. Below the header, the interface is divided into two main sections. On the left is a sidebar menu with a user profile icon and the text "APPLICANT USER ID: SA 20-05433". The menu items are "Profile", "Application Requirements", and "Scholarship Examination", with the last one highlighted in yellow. The main content area on the right displays a paragraph: "An eagerly awaited new album has been leaked several hours before its official release. Listeners are now able to download the album for free. How will this affect album sales?". Below this text are four radio button options: "Fewer albums will be sold.", "The same number of albums will be sold.", "More albums will be sold.", and "The effect on sales cannot be predicted.". At the bottom of the main content area are four buttons: "50", "Back", "Next", and "Submit". Numbered callouts (1-5) point to specific elements: (1) points to the main content area, (2) points to the notification bell icon, (3) points to the messages icon, (4) points to the user profile dropdown menu, and (5) points to the "Submit" button.

**Figure 61. Conceptual diagram of Scholarship Examination content.**

### **User Design Interface of Beneficiaries**

Figure 63 shows the beneficiaries' interface that contains three options: The profile, where they can view their personal and account information. In this assessment, they can upload their requirements and renewal where they can upload there for renewal requirements (1). The interface also includes a Notification Bell button where the announcements of the admin or super-admin will display (2) and a Messages button used to communicate to the admin for clarifications and corrections of the requirements (3). Upon clicking the logo, the system will pop up a window that shows the Beneficiary Name, User ID, and Email. The window also contains account settings and logout buttons (4). In



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the account settings, the beneficiary can modify their account information (5) and the logout button to prevent other users from accessing the system without verifying their credentials (6).



**Figure 63. Conceptual diagram of Beneficiary Interface.**

Figure 64 shows the interface where the administrator and super-administrator announcements are displayed (1).



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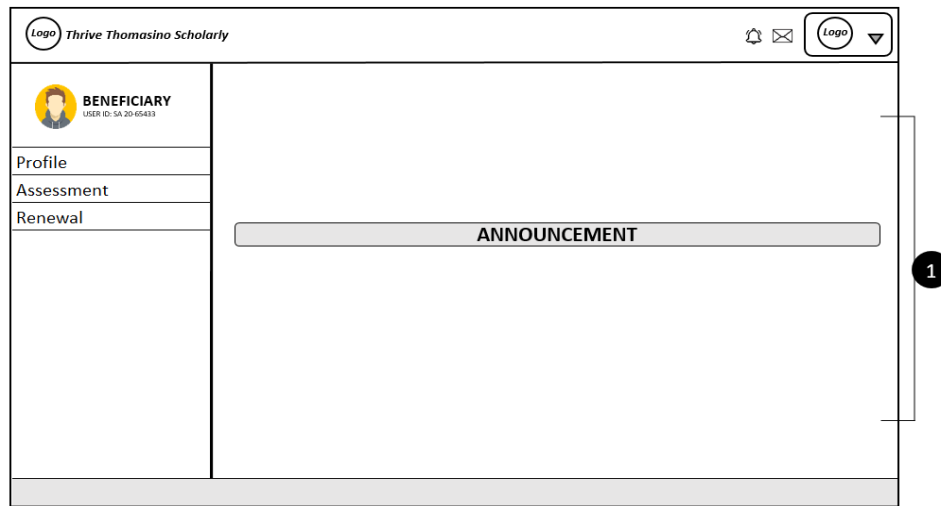
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**Figure 64. Conceptual diagram of Beneficiary Announcement Interface.**

Figure 65 shows the information inside the profile option/button (1); it contains personal information, family background, educational background, general information, and additional information about the beneficiary (2). Using the next (3) and back buttons (4), the beneficiary can go to the page they like, where the other information is displayed.





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The diagram shows a web interface for a beneficiary's personal information. On the left is a sidebar with a 'Logo' and 'Thrive Thomasino Scholarly' header, and a 'BENEFICIARY' section with 'USER ID: SA 20-65433'. Below this are three menu items: 'Profile' (highlighted with a yellow background and a black arrow pointing to it from a circled '1'), 'Assessment', and 'Renewal'. The main content area is titled 'Personal Information' and contains a form with various fields: 'First Name\*', 'Middle Name\*', 'Last Name\*', 'Name Suffix (Ex. Sr, Jr, III, etc.)', 'Date of Birth\*', 'Place of Birth\*', 'Religion\*', 'Sex\*' (with a dropdown), 'Civil Status\*' (with a dropdown), 'Contact Number\*' (with a '+63' prefix), 'Email Account\*', 'Citizenship\*', 'Years of residency\*', 'Language\*', 'House/Block/Lot No. / Street / Subdivision/Village\*', 'Province\*' (with a dropdown), 'Municipality\*' (with a dropdown), and 'Barangay\*' (with a dropdown). There is an 'Upload Photo' button next to a placeholder image. At the bottom right of the form are 'Back' and 'Next' buttons, with a circled '2' pointing to the 'Next' button. A circled '3' points to the 'Barangay' dropdown, and a circled '4' points to the 'Next' button.

**Figure 65. Conceptual diagram of Personal Information of Beneficiary.**

Figure 66 shows the information about the family background of the beneficiary.

The diagram shows a web interface for a beneficiary's family background. On the left is a sidebar with a 'Logo' and 'Thrive Thomasino Scholarly' header, and a 'BENEFICIARY' section with 'USER ID: SA 20-65433'. Below this are three menu items: 'Profile' (highlighted with a yellow background), 'Assessment', and 'Renewal'. The main content area is titled 'Family Background' and contains a form with various fields: 'Living with Family?' (with a '(Yes or No?)' dropdown), 'Total number of Family\*', 'Years of Residency\*', 'Source of Living\*' (with a dropdown), 'Is your Home Rent or Owned?' (with a dropdown), 'Others\*' (with a dropdown), 'If rent, How much is the monthly cost?' (with a dropdown), 'Father's First Name\*', 'Father's Middle Name\*', 'Father's Last Name\*', 'Name Suffix (Ex. Sr, Jr, III, etc.)', 'Complete Address\*', 'Contact Number\*' (with a '+63' prefix), 'Age\*', and 'Living or Deceased\*' (with a dropdown). At the bottom right of the form are 'Back' and 'Next' buttons, with a circled '1' pointing to the 'Next' button and a circled '2' pointing to the 'Back' button.

**Figure 66. Conceptual diagram of Family Background in Beneficiary's Interface.**



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
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Figure 67 shows the actions the beneficiary can take; they can Edit the Name, Relationship, and Occupation in the list of siblings (1) and delete it (2).

No.	Name	Relationship	Occupation	Action
1.				 
2.				 
3.				 
4.				 

**Figure 67. Conceptual diagram of action buttons on the list of siblings.**

Figure 68 shows the information about the General Information of the beneficiary.

**BENEFICIARY**  
USER ID: SA-20-65433

**Profile**  
Assessment  
Renewal

**Educational Background**

**General Information**

Graduating this Semester/Term?  Are you Graduating with Honors?  Specify your Award/Honor?

Expected Academic Year for Graduation?  If not graduating, how many sem/term needed including the current sem/term?

**Figure 68. Conceptual diagram of General Information in Beneficiary's Educational Background.**



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Figure 69 shows the information about the College Educational Background of the beneficiary.

The form is titled "Thrive Thomasino Scholarly" and "Educational Background". It has a sidebar with "BENEFICIARY" (USER ID: SA-20-65433) and a menu with "Profile", "Assessment", and "Renewal". The main section is "College". It includes fields for "COURSE\*", "Major in", "Year Level\*", "Academic Year\*", "Name of School\*", "Complete Address of the School\*", and "School Type\*". There is a "List of Honors / Awards" table with columns "No.", "Honor / Award", "Academic Year", and "Action". The table has 4 rows. The "Action" column has green checkmarks and red X marks. There are "Back" and "Next" buttons at the bottom. Callout numbers 1, 2, and 3 point to the "Academic Year" field, the "Action" column, and the "Back" button respectively.

No.	Honor / Award	Academic Year	Action
1.			✓ ✗
2.			✓ ✗
3.			✓ ✗
4.			✓ ✗

**Figure 69. Conceptual diagram of Beneficiary's College Educational Background.**

Figure 70 shows the information about the Senior High School Educational Background of the beneficiary.

The form is titled "Thrive Thomasino Scholarly" and "Educational Background". It has a sidebar with "BENEFICIARY" (USER ID: SA-20-65433) and a menu with "Profile", "Assessment", and "Renewal". The main section is "Senior High School". It includes fields for "STRAND\*", "Year Level\*", "Academic Year\*", "Name of School\*", "Complete Address of the School\*", and "School Type\*". There is a "List of Honors / Awards" table with columns "No.", "Honor / Award", "Academic Year", and "Action". The table has 4 rows. The "Action" column has green checkmarks and red X marks. There are "Back" and "Next" buttons at the bottom. Callout numbers 1, 2, and 3 point to the "Academic Year" field, the "Action" column, and the "Back" button respectively.

No.	Honor / Award	Academic Year	Action
1.			✓ ✗
2.			✓ ✗
3.			✓ ✗
4.			✓ ✗

**Figure 70. Conceptual diagram of Senior High School in Beneficiary's Educational Background.**



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Figure 71 shows the beneficiary's High School Educational Background of the beneficiary.

The form is titled "Thrive Thomasino Scholarly" and features a sidebar with "Profile", "Assessment", and "Renewal" options. The main section is "Educational Background" with a sub-tab "High School". It includes fields for "Name of School", "Year Level", "Academic Year", "Complete Address of the School", and "School Type". Below these is a "List of Honors / Awards" table with columns for "No.", "Honor / Award", "Academic Year", and "Action". The table contains four rows, each with a green checkmark and a red X icon in the "Action" column. Navigation buttons "10", "Back", and "Next" are at the bottom right.

No.	Honor / Award	Academic Year	Action
1.			 
2.			 
3.			 
4.			 

**Figure 71. Conceptual diagram of Beneficiary's High School Educational Background.**

Figure 72 shows additional information about the Beneficiary's Educational Background.



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**BENEFICIARY**  
USER ID: SA 20-65433

**Profile**  
Assessment  
Renewal

**Educational Background**

**Additional Information**

Are you a Working Student? \*  
Select Yes or No

Company Name \*  
Location \*

Are you a PWD? \*  
Select Yes or No

Please Specify (PWD) \*

Are your Parents an OFW? \*  
Select Yes or No

Parents (PWD)? \*  
Select Yes or No

Other Family members (OFW)? \*  
Select Yes or No

Other Family members (PWD)? \*  
Select Yes or No

Single Parent? \*  
Select Yes or No

Are your Parents separated? \*  
Select Yes or No

Informed Thru \*  
Select Position

If others, Please add then ame of officials who informed you \*

11 Back Next

**Figure 72. Conceptual diagram of Additional information on Beneficiary's Educational Background.**

Figure 73 shows the profile information of the beneficiary (1). The beneficiary can use the edit button to make changes to the information (2), the save button to store the inputs in the system database (3), and submit the data using the submit button (4).



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Logo Thrive Thomasino Scholarly

**BENEFICIARY**  
USER ID: SA 20-65433

**Profile**

**Assessment**

**Renewal**

**Profile**

First Name\* Middle Name\* Last Name\* Name Suffix (Ex. Sr., Jr., III, etc.)

Date of Birth\* Place of Birth\* Religion\*

Sex\* Civil Status\* Contact Number\*

Select Sex Select Civil Status +63

Email Account\*

Citizenship\* Years of residency\* Language\*

House/Block/Lot No. / Street / Subdivision/Village\*

Province\* Municipality\* Barangay\*

Select Province Select Municipality Select Barangay

Edit Save Submit

1

2

3

4

**Figure 73. Conceptual diagram of Profile Information in Beneficiary's Interface.**

Figure 74 shows the Assessment option/button (1) is where the beneficiary will upload the requirements. In the assessment requirements, the applicant can upload the file, view the uploaded file, and also able to delete it (2).



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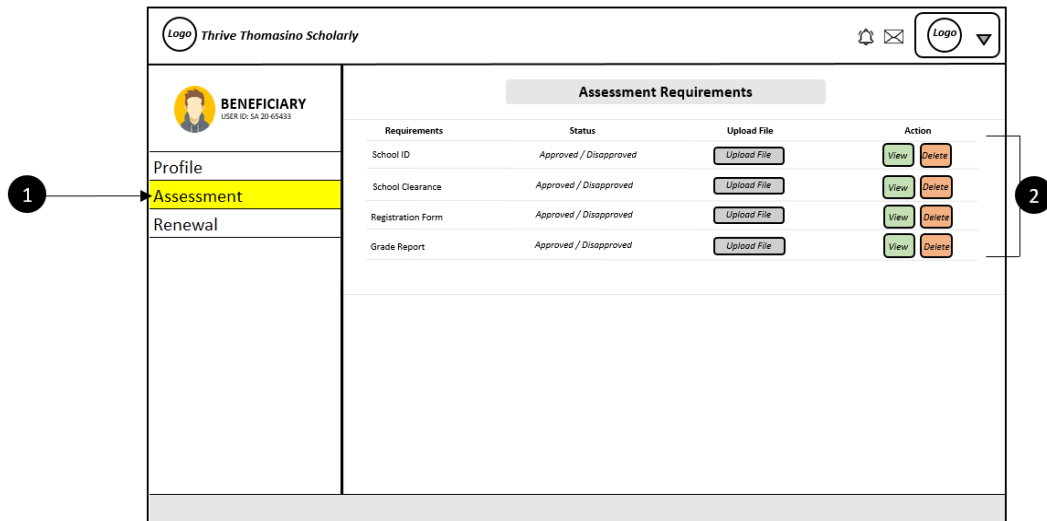
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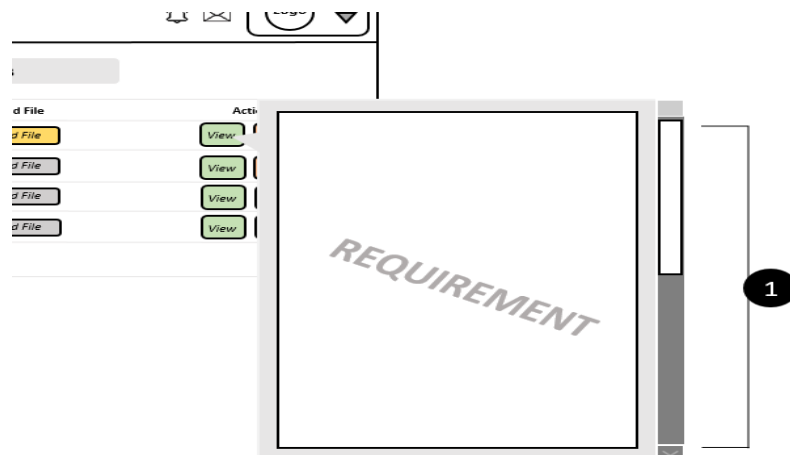
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**Figure 74. Conceptual diagram of Assessment Requirements in Beneficiary's Interface.**

Figure 75 shows the View Button (1). Using this button, the beneficiary can see and check their uploaded file.



**Figure 75. Conceptual diagram of View Button in Assessment Requirements.**



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Figure 76 shows the Renewal button (1), where the beneficiary will upload the requirements. In the renewal process, the beneficiary can Upload a file, View the Uploaded file, and Delete it (2).

Assessment Requirements			
Requirements	Status	Upload File	Action
School ID	Approved / Disapproved	<input type="button" value="Upload File"/>	<input type="button" value="View"/> <input type="button" value="Delete"/>
School Clearance	Approved / Disapproved	<input type="button" value="Upload File"/>	<input type="button" value="View"/> <input type="button" value="Delete"/>
Registration Form	Approved / Disapproved	<input type="button" value="Upload File"/>	<input type="button" value="View"/> <input type="button" value="Delete"/>
Grade Report	Approved / Disapproved	<input type="button" value="Upload File"/>	<input type="button" value="View"/> <input type="button" value="Delete"/>

**Figure 76. Conceptual diagram of Assessment Requirements.**

Figure 77 shows that using the View button (1), the beneficiary can see and check their loaded file.





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Requirements	Status	Upload File	Action
School ID	Approved / Disapproved	Upload File	View
School Clearance	Approved / Disapproved	Upload File	View
Registration Form	Approved / Disapproved	Upload File	View
Grade Report	Approved / Disapproved	Upload File	View

**Figure 77. Conceptual diagram of Viewing Renewal Requirements.**

## Hardware Requirements

For the hardware requirements, personal computers and an internet connection are required to run the system since it is web-based. The hardware requirements mentioned are needed for a better approach to the system. These will help the users to operate the proposed system properly and accurately. The proponents will require at least 10 GB to store large amounts of data for the memory space.

Table 1 shows the minimum hardware specifications of the system. The following hardware devices and equipment will be used to develop the proposed system. Also, these will be the requirements and the tools, together with their function, that will help meet the



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proper standard needed by the proposed system for the proponents to develop the proposed system properly.

**Table 1**

**Hardware Requirements for Developing the System**

Equipment	Type/Specification
Processor	At least 2.0 GHz
RAM	At least 4 GB
Free Memory Space (Hard drive)	At least 5 GB of free space
Internet Speed Connection	At least 5 Mbps

Table 2 illustrates the hardware specifications for the users to use the proposed system.

**Table 2**

**Hardware Requirements for Using the System**

Equipment	Type/Specification
Processor	At least 1.6 GHz
RAM	At least 4 GB
Free Memory Space (Hard drive)	At least 4 GB



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Internet Speed Connection

At least 3mbps

### Software Requirements

The software tools used for the system are Windows 7 or up for the operating system, visual studio code as the programming tool, and PHP, CSS, JavaScript, and HTML as a programming language. PhpMyAdmin 5.6 for the database.

Table 3 illustrates the software specification for the server of the proposed system. These are the minimum software requirements for the website to run properly. This may help the proponents to achieve their goals for the proposed system, which includes the following: programming tool, programming language, database, and operating system used to attain the proposed system.

**Table 3**

**Software Requirements for Developing the System**

Software	Type/Specification
Operating System	Windows 7 or up
Environment	Visual Studio Code
Programming Language	PHP, CSS, JavaScript, Bootstrap, and HTML



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Database Management

PhpMyAdmin 5.6

Table 4 illustrates the software specification for the users of the system. These are the requirements for the users to run the website with a better approach.

**Table 4**

**Software Requirements for Using the System**

Software	Type/Specification
Operating System	Windows 7 or above
Web Browser	Google Chrome, Mozilla Firefox, Microsoft Edge

**Testing and Evaluation**

System testing is vital in the system's developmental progress because it checks whether it meets the functional necessities. The proponents will practice several types of testing that will aim to test the different aspects of the system.

In testing the system, the proponents will prepare a survey questionnaire composed of different criteria that the system must possess and use it to measure the components of the system. In development, unit testing will be done during the development process. The system's features will be tested and checked to see if every part is functioning as expected.



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**Test Case**

The proponents will use a test case to measure the system's success rate based on the objectives. The test cases were administered to the client.

A test case is a set of conditions defining a single test to achieve a particular software testing objective. It is used to determine whether a system under test satisfies requirements and is ready for implementation.

If the user's response is equivalent to 100%, the proposed system complies with all the required specifications and is considered successful. If it is 99% or below, the system does not meet the client's needs, which will be considered failed. All failed results are fixed, then another set of testing for all the improved outcomes is tested.

**Table 5. Sample Test Case for Super-Administrator/ Administrator**

Task No.	Task Description	Expected Result	Actual	Status
1	Access System Login	The super-admin and the admin should be able to access the system using the correct email & password.		
2	View/Update Announcements	The super-admin and the admin should be able to view and update/modify the announcements.		



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<b>3</b>	Search and Print for Specific data.	The super-admin and the admin should be able to search and get a printed copy of the data sent by the scholars.		
<b>4</b>	View All Generated Reports	The super-admin and the admin should be able to check the reports in a dashboard.		
<b>5</b>	Generate Pin for the Administrator	The super-admin should be able to generate a pin for the admin to access some features only for the super-admin.		
<b>6</b>	Manage Scholarship Examination	The super-admin and the admin should be able to manage the scholarship examination of the applicants.		
<b>7</b>	Review/Evaluate submitted requirements.	The super-admin and the admin should be able to review/ evaluate the submitted requirements.		
<b>8</b>	Approve/Deny the Requirements submitted.	The super-admin and the admin should be able to reject and accept the requirements.		
<b>9</b>	Send notifications	The super-admin and the admin should be able to send notifications to the		



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		users.		
<b>10</b>	Verification of the uploaded information and documents	The super-admin and the admin should be able to check the information and documents.		

**Table 6. Sample Test Case for Scholars/ Applicants**

<b>Task No.</b>	<b>Task Description</b>	<b>Expected Result</b>	<b>Actual</b>	<b>Status</b>
<b>1</b>	Access System Login	The applicants and scholars should be able to access the system using the correct email & password.		
<b>2</b>	View Announcements	The applicants and scholars should be able to view the announcements.		
<b>3</b>	Fill up the Registration form Online.	The super-admin and the admin should be able to search and get a printed copy of the data that the scholars sent.		
<b>4</b>	Fill up the Application Form Online	The applicants should be able to input their information in the application form.		
<b>5</b>	Edit and Update Forms	The applicants and scholars should be able		



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		to edit and update the forms in the system.		
6	Upload/ Re-upload Requirements	The applicants and scholars should be able to upload and re-upload their requirements.		
7	Take the Application Scholarship Examination	The applicants and the scholars should be able to answer the qualification examination.		
8	View the Status of the Requirements and Eligibility	The applicants and the scholars should be able to know the status of their application/renewal.		
9	Receive notifications	The applicants and the scholars should be able to receive notifications.		
10	Reset Password through authentication via email and mobile number	The applicants and the scholars should be able to check the information and documents.		

**Method of Testing**

ISO/IEC 25010 standards provide a comprehensive approach to testing web application scholarship systems that will ensure functionality, usability, efficiency, reliability, and maintainability. Future testers will use the standards to develop test cases and scenarios to verify the system's requirements and features. Usability testing will





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evaluate the system's interface, navigation, and overall user experience. Efficiency testing will assess the system's performance and resource utilization. Reliability testing will ensure the system is available and dependable, while maintainability testing will evaluate the ease of maintenance and updates. By using ISO/IEC 25010 as a method of testing, web application scholarship systems will be fully functional, usable, efficient, reliable, and maintainable if it meets the needs of their users.

### **System Evaluation**

Questionnaires will be used to evaluate the quality of a web application scholarship system. These questionnaires will be based on ISO/IEC 25010 standards and will cover different aspects of the system's performance, including functionality, efficiency, usability, maintainability, and reliability.

The Functionality will evaluate if the system does what it is supposed to do. Efficiency looks at how quickly and efficiently the system performs its functions. Usability looks at how easily users can navigate and use the system. Maintainability looks at how easy it is to update and maintain the system. Reliability evaluates the system's ability to perform consistently and avoid errors.

The use of questionnaires will help educational institutions to identify areas where the system is performing well and areas where improvements can be made. The data that



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will be collected will be used to make informed decisions and improve the performance of the scholarship system to meet the needs of its users better.

Table 7 will illustrate the Likert Scale ratings for the statements included in the survey questionnaires. The proponents will collect responses from 50 users through the survey questionnaires to assess the system's quality.

**Table 6**

**Likert Scale**

Rating	Interpretation
5	Strongly Agree
4	Agree
3	Neither Agree nor Disagree
2	Disagree
1	Strongly Disagree

The proponents will also include a range of verbal interpretations of the survey results. Table 8 shows the range of the corresponding oral understanding.



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**Table 7**

**Range of Verbal Interpretation**

Rating	Interpretation
4.51-5.0	Strongly Agree
3.51-4.50	Agree
2.51-3.50	Neither Agree nor Disagree
1.51-2.50	Disagree
1.00-1.50	Strongly Disagree

**Project Teams and Their Responsibilities**

**Table 8**

**Project Teams and Their Responsibilities**

Name	Responsibilities
<b>Rowell Jay T. Canta</b>	Researcher, Documentation, Designer, and Developer
<b>Angeli M. Reyes</b>	Researcher, Documentation, Designer, and Developer



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**Table 6**  
**Gantt chart**

