PROJECT (INDIVIDUAL)

SLIATE ONLINE RESULTS CARE

(SORC)

A REPORT PRESENTED

BY

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ABSTRACT

Title of the project that “SLIATE ONLINE RESULTS CARE”, it’s a Website for ATI – Sammanthurai. This system is implemented using web programming languages such as HTML, CSS, and PHP. It’s a web-based application. The visual studio code was used for implementing the application and this application connected with my SQL database that used XAMPP local server for maintenance.

This system handles many things easily: details of department, subject, student, results, etc.; these things can be added, deleted, and updated and the user can view them. This system is designed with user-friendly interfaces. Here, it has two login pages for Administrator and other accepted staffs in this ATI - Sammanthurai. They can only handle the system for their reason. Administrator can only handle all the system features; others can handle some of the features.

This project objective is done well through this system that, reduces time, is effective, and correctly does all of the results management. The main feature of the web application is that users can open and maintain all details in any place on their devices.

ACKNOWLEDGMENT

It’s a great pleasure to take this opportunity to deliver our worth thanks to those who offered their support to do this project successfully. We express our deepest and sincere gratitude to our supervisor MR. AAM. MATHEE (HOD of the IT Department) for her most valuable assistance and continued guidance and to our demonstrator Mr. NOWFEEK a guide on this project. Mr. SL. MUSTAFA thanked other academic and nonacademic members for the guidance provided within the ATI campus. It’s a great pleasure to our take this opportunity to deliver our worth thanks to AAM. MATHEE (HOD of the IT Department).

In conclusion, I would like to recall my gratitude to my dear parents, all of department’s students, friends, and other members not mentioned above who have supported me to complete this software project successfully.

Thank you!

Higher National Diploma in Information Technology
Advanced Technological Institute,
Sammanthurai.

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LIST OF ABBREVIATION

ATI : Advance Technological Institute ..... passim
CSS : Cascading Style Sheets 2, 15
GPA : Grade Point Average 12
HOD : Head of Department 3, 27
HTML : Hyper Text Markup Language 2
IT : Information Technology 3
OS : Operating System 14
PHP : Hypertext Preprocessor 2, 14, 15
SORC : Sliate Online Results Care ..... passim

CHAPTER 1

INTRODUCTION

I am developing a website for the Advance Technological Institute (SLIATE) - Sammanthurai, and the project I'm working on is called SLIATE ONLINE RESULTS CARE (SORC). The primary objective of this project is to revolutionize the management of student results at SLIATE - Sammanthurai by providing a comprehensive web-based system for efficiently handling and distributing student results online. SORC empowers administrators and authorized staff members to easily manage all aspects of result management, ensuring a streamlined and organized process.

The SORC website offers a user-friendly interface that simplifies the tasks of inputting, updating, and retrieving student results for administrators. Gone are the days of manually storing and handling result sheets provided by the HEAD of ATIs, as SORC allows for the creation and storage of digital result documents for each student. This digitalization not only eliminates the risks of loss or damage but also significantly enhances accessibility and convenience. Moreover, the website features a dedicated portal where students can access and view their results and reports. Students can conveniently retrieve their individual result sheets and even print them directly from the platform.

In this system, the main administrator or acceptable staff members have the ability to add and manage various types of information, such as department details, subjects, academic records, and more. They can effortlessly input, update, and retrieve student results, ensuring a smooth and well-organized process. Furthermore, the system allows for the modification or deletion of added information, providing flexibility and control. This comprehensive solution enhances efficiency, accessibility, and convenience for both administrators and students, revolutionizing the management of student results at SLIATE - Sammanthurai.

The SLIATE ONLINE RESULTS CARE (SORC) project represents a significant step towards the modernization of student result management at SLIATE - Sammanthurai. Through the implementation of this digital solution, the institution strives to enhance efficiency, accessibility, and convenience, benefiting both administrators and students. The SORC system offers solutions to the problems by streamlining the result management process and eliminating the challenges associated with manual processes.

CHAPTER 2

STUDY OF SIMILAR APPLICATION

In a similar context, the official website of SLIATE (http://sliate.ac.lk/) provides a valuable reference for the SORC project. The website showcases SLIATE's commitment to digital transformation and offers various functionalities related to student information. It serves as an inspiration for the design and features of the SORC website, ensuring compatibility with SLIATE's existing systems and processes.

Additionally, the DOE Exams Results website (https://www.doenets.lk/), operated by the Department of Examinations in Sri Lanka, serves as a relevant example. It provides online access to national-level examination results, demonstrating the feasibility of online result management in Sri Lanka. Lessons learned from these platforms inform the development of the SORC project, tailored specifically to meet SLIATE - Sammanthurai's requirements for managing student results efficiently and effectively.

CHAPTER 3

BACKGROUND

The SLIATE Online Results Care (SORC) project is a response to the challenges faced by SLIATE - Sammanthurai in managing and distributing student results. Currently, the Head of the ATIs provides student result sheets in PDF format, resulting in a manual and time-consuming process. This method also not suitable for view and printing each student results.

To address these issues, the SORC project aims to develop a web-based system that streamlines the result management process for ATI - Sammanthurai. Administrators and authorized personnel will have access to a comprehensive platform where they can input, update, and retrieve student results efficiently. The system will generate individual result sheets for each student, eliminating the need for manual printing and distribution. Additionally, the SORC website will provide students with a user-friendly interface to view and print their results and reports.

By computerizing the result management process, the SORC project will enhance efficiency, accuracy, and accessibility, ensuring a seamless experience for both administrators and students at SLIATE - Sammanthurai.

CHAPTER 4

REQUIREMENTS

4.1. FUNCTIONAL REQUIREMENTS

Functional requirements are the product functions or features that must be constructed to enable users to accomplish their tasks. The SORC has included many new or unique features compared with other before. Each feature of the system will be explained clearly.

- Login validation.

  Another functionality of the SORC is Login validation, which is we like to build the system for multi-users, in this system handled by administrator and accepted staffs, so in this case, I need to restrict some major functionality with accepted staffs, so I created two login pages for an administrator and others, so if the username passwords entered wrong by the user in the login inputs, it will show the error message, this is another functionality or feature of the system so system users can easily understand the error of login process and it will help to correct it. In this system has another login that is for academic staff.

- Add information into the system

  In our result management system, administrators and authorized staff can seamlessly input vital information like department details, subject details, academic records, and student particulars. This comprehensive platform enables efficient organization and tracking of data, ensuring accurate management, and facilitating effective result administration.

- View and update added information

  Our result management system empowers administrators and authorized staff to easily view and update the added information. With a user-friendly interface, they can access department details, subject details, academic records, student, and results particulars effortlessly.

- View and delete added information.

  In addition to the ability to add, view, and update information, our result management system also offers a convenient delete function. When the need arises to remove specific details from the system, administrators and authorized staff can initiate the delete process. However, to ensure accuracy and prevent accidental deletions, a confirmation message is displayed prior to finalizing the removal. This thoughtful approach provides an extra layer of security, allowing users to review and confirm their intention before proceeding with the deletion. This feature ensures that only the intended information is removed, enhancing data management, and maintaining the integrity of the result management system.

- Students are view and print their results.

  User-friendly interface allows students to conveniently access their results by following a simple process. Firstly, students are required to enter their department, student ID, and academic details into the system. Once the information is submitted, the system efficiently retrieves the relevant data and generates a comprehensive results sheet tailored to each student. This personalized sheet is then displayed on the interface, ready for immediate viewing. For added convenience, students have the option to print the results sheet directly from the interface. This streamlined approach ensures that students can effortlessly access and obtain their results, empowering them with the information they need for their academic journey.

- Students are view and print their results.

  An intuitive interface provides students with a seamless experience to access their current report. To retrieve their personalized report, students simply need to enter their department and student ID. Once the information is submitted, the system efficiently processes the data and generates a comprehensive report sheet. This report includes the GPA for each semester, as well as the current average GPA, offering students valuable insights into their academic performance. The report is instantly displayed on the interface, allowing students to review and analyze their results. Additionally, students have the convenience of printing the report directly from the interface, enabling them to keep a physical copy for their records or further analysis.

4.2. NON-FUNCTIONAL REQUIREMENTS

The SORC System was built upon the web base technique and put on the web-based server. The system and the server must be able of managing the real-time error functionality occurs by the admin. Future more the system must be secure. All error information on the server side must be managed and allowed for admin and system safety.

4.2.1. Performance and Load Requirements

- Current User Load

  Our system, running on a local host, ensures exceptional speed and performance, surpassing average standards.

- Expected Growth

  As the server speed increases, it is important to note that user interruption may also increase correspondingly.

- Number of Concurrent Users

  Our system is designed to accommodate a significant number of users simultaneously, with the capacity to handle up to one hundred individuals accessing the system concurrently.

- Transaction Size (File Sizes, etc.)

  We anticipate that the minimum transaction size, including file sizes, will range from 5 to 10 megabytes, providing sufficient capacity for data exchange and storage.

- Maximum Average Transaction Time Acceptable

  The system aims to maintain optimal efficiency, with an acceptable range for average transaction times spanning from approximately 4 seconds to 3 minutes, ensuring swift and responsive performance for users.

4.2.2. Compatibility Requirements

Hardware Requirements

- Personal Computer / Laptop
- Smart phones.
- Tablets

Software Requirements

- Any current browser: Google Chrome, Internet Explorer 12(Microsoft Edge)
- PHP version 5.6 (Recommended)
- Database: MySQL
- OS: Windows, Mac, Linux, Android, iOS

CHAPTER 5

METHODOLY AND TECHNIQUES

5.1. DATA MODEL

I developed SLIATE's results management system using an Agile approach. I iteratively planned, designed, built, and reviewed the system, repeating these steps three times. Agile methodology allowed for flexibility and continuous improvement throughout development.

Figure 1 : SORC Development Methodology (Agile)

5.2. TECHNOLOGIES

- Visual Studio Code
- XAMPP
- Apache Server
- HTML
- CSS
- PHP
- MySQL
- JavaScript
- JQuery
- Bootsrap

5.3. BIRD'S EYE VIEW OF THE SYSTEM

5.3.1. UNIFIED MODELLING LANGUAGE (UML) DIAGRAMS

5.3.1.1 *Use case Diagram*

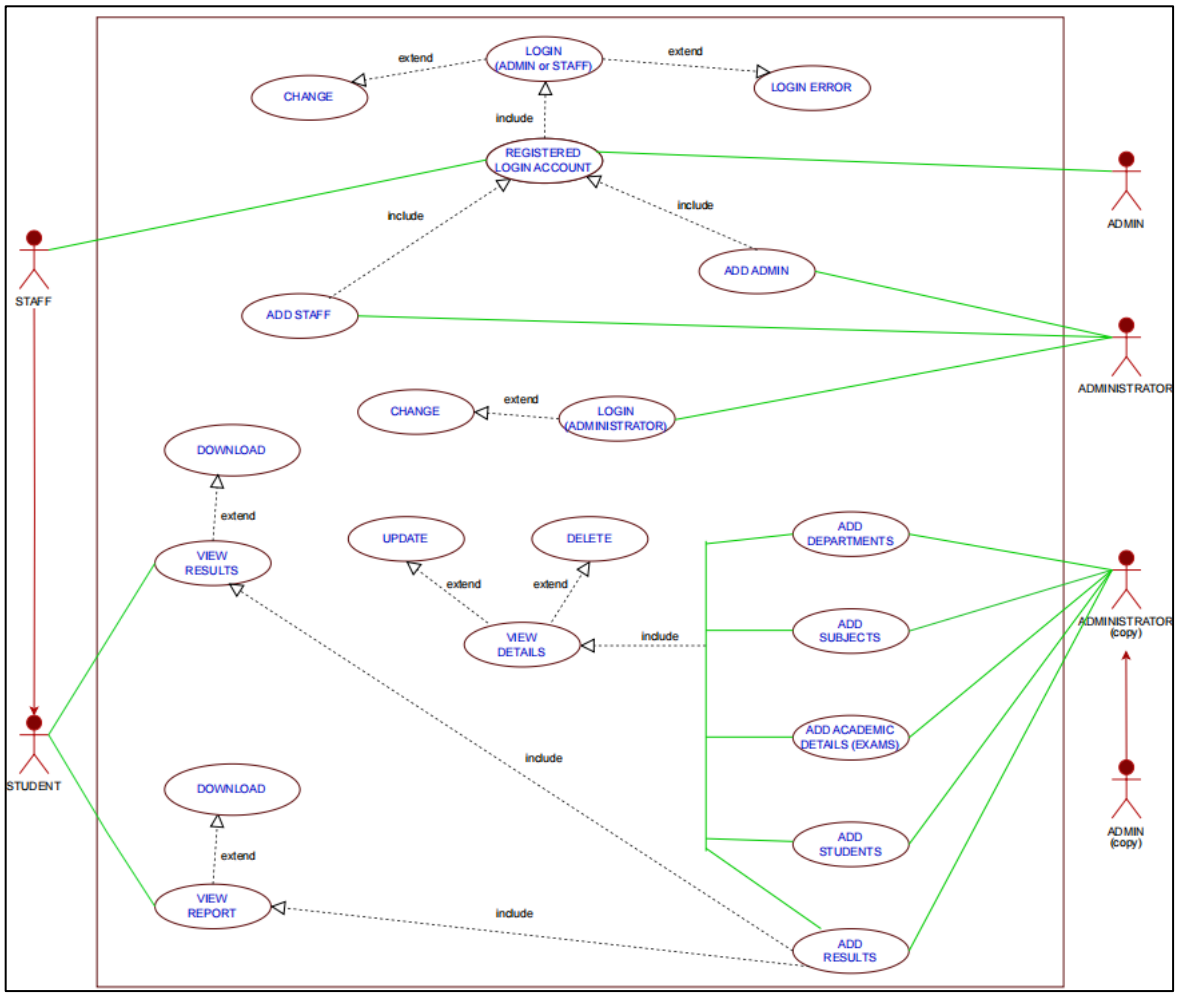

Figure 2 : Use Case Diagram for SORC

5.3.2. DATABASE DESIGN

5.3.2.1 *Entity Relationship Diagram*

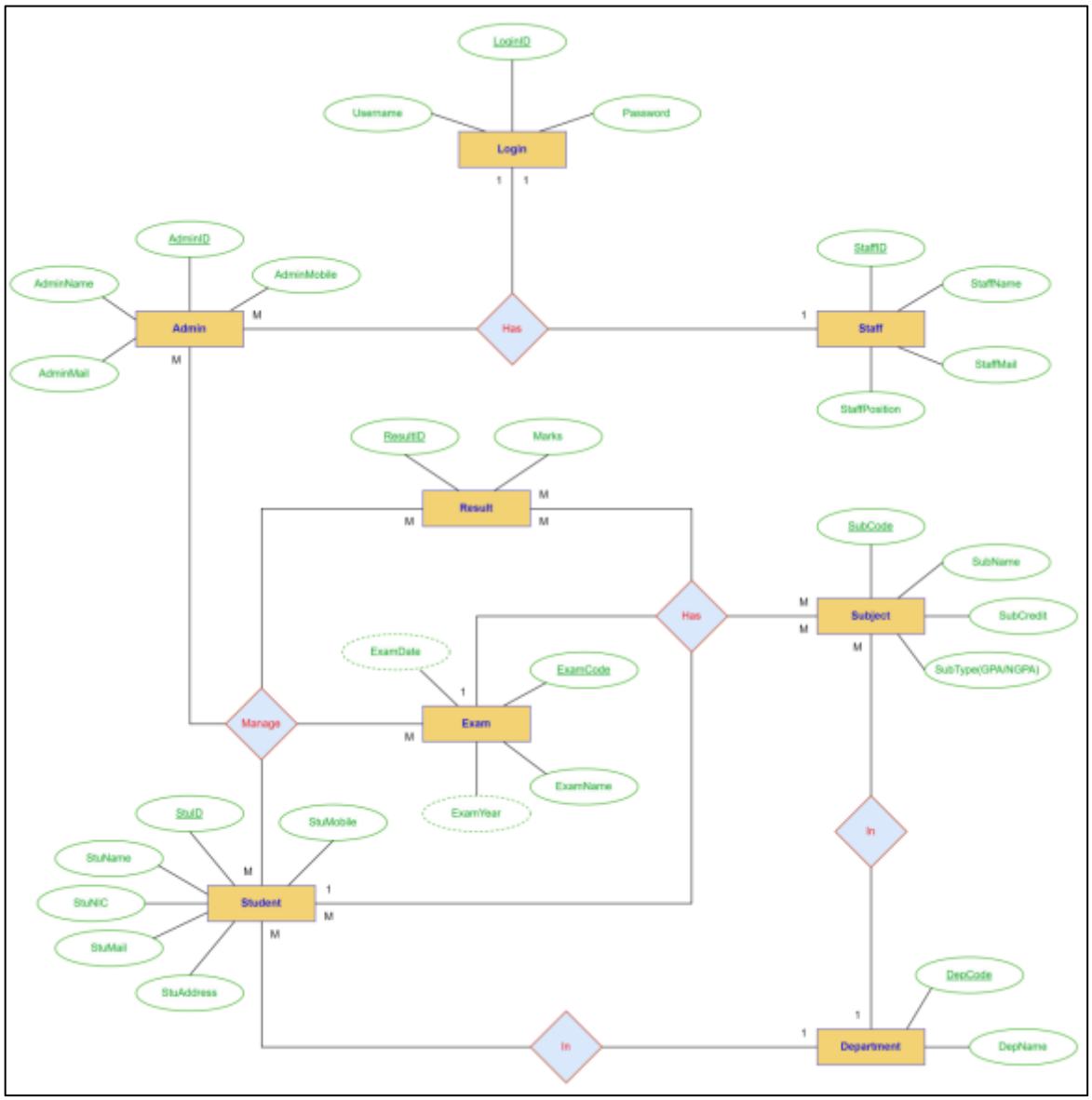

Figure 3 : Entity Relationship Diagram for SORC

5.3.3. USER INTERFACE DESIGN

The results management system is a web application with three interfaces: the student interface (the default interface upon opening the application), the main administrator interface, and additional staff interfaces for management purposes. The home interface, displayed below, is specifically designed for students.

Figure 4 : Administrator interface Design

The interface shown above features a login option highlighted in a red box. This option is intended for management purposes. When clicked, it opens the login interface displayed below.

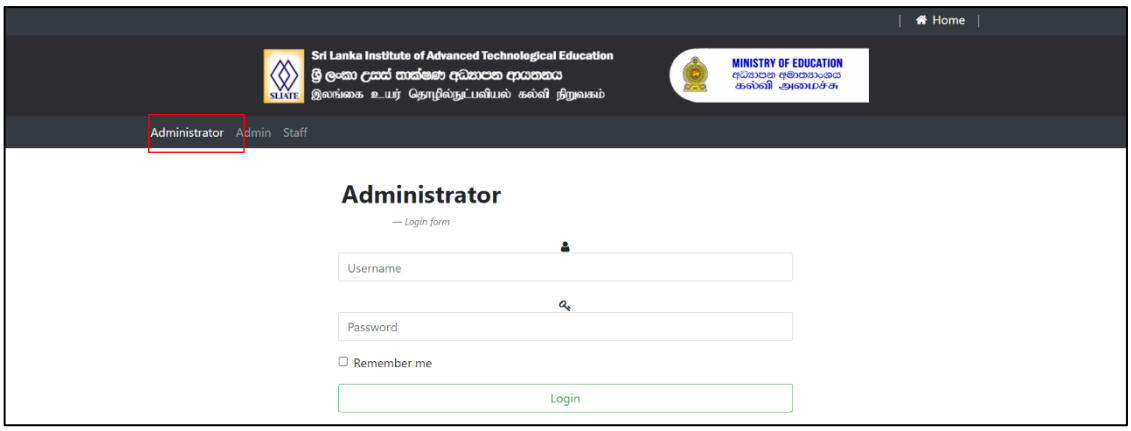

Figure 5 : Administrator Login Interface

On the above login page for the main administrator, upon successful login, they gain access to manage various information stored on the server. This includes department details, subject details, results, etc. The main administrator's home navbar is displayed below.

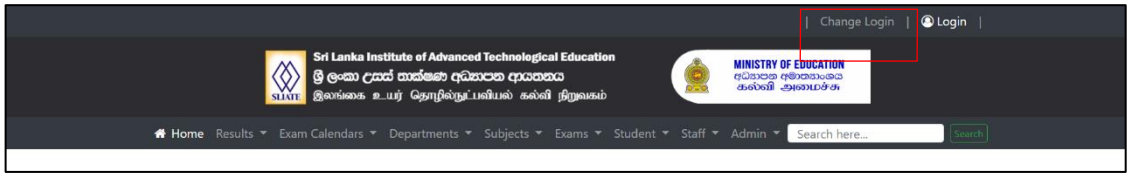

Figure 6 : Administrator Home Navbar

The area highlighted in the red box below allows users to change their login account. By clicking on it, the interface to change login details is displayed, as shown in the "Change Login" interface below,

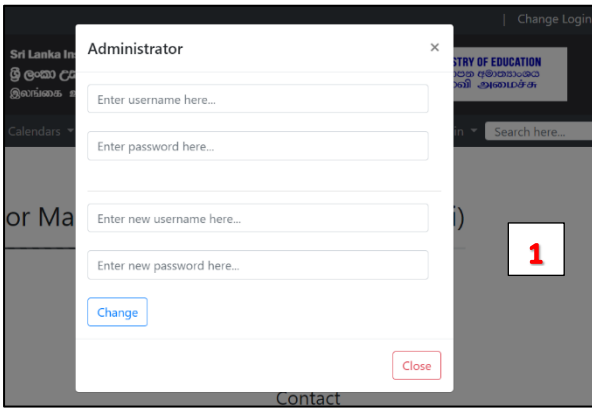

Figure 7 : Change Login Details (I)

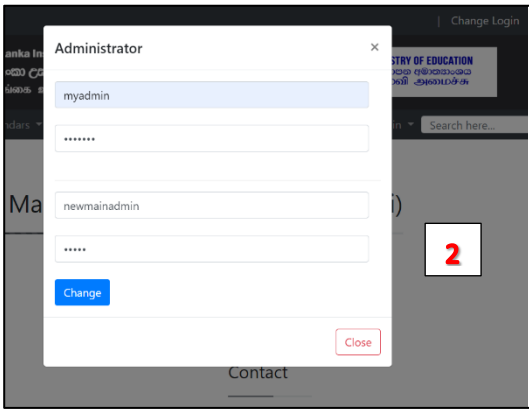

Figure 8 : Change Login Details (II)

In the interface above, when the "Change" button is clicked and the username and password are successfully changed, the windows messages shown above will indicate the successful change,

Figure 9 : Change Password Message

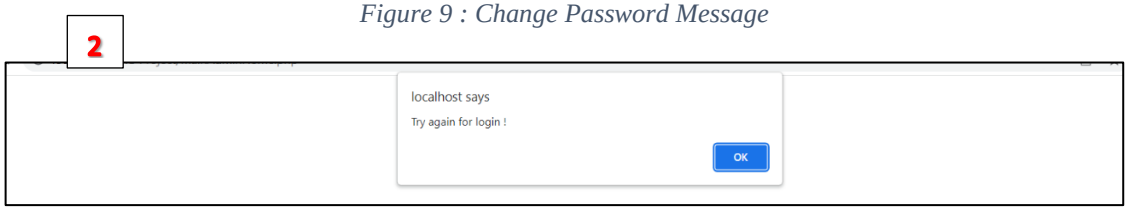

Figure 10 : Try Again Message

In case of incorrect username or password input, an error message will be displayed as shown below. Similarly, when attempting to login with incorrect credentials, an error message will be shown to notify the user.

Figure 11 : Username and Password Incorrect Message

The interface shown above is for the administrator login and login errors, as well as changing the login account. Similar functionalities are also available for other authorized staff members.

The management has the capability to add, modify, and delete information. The interface below demonstrates this functionality, allowing actions such as adding a new admin, modifying existing admin details, and deleting admin interfaces.

❖ Add new admin information.

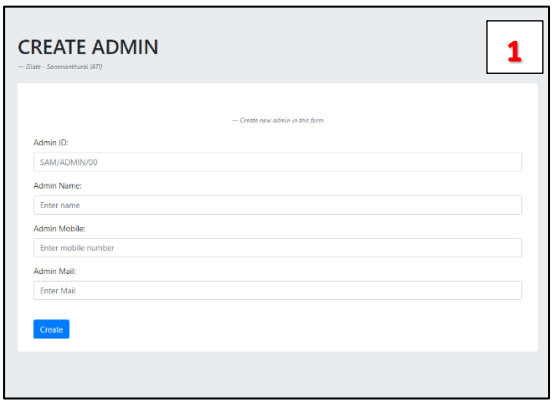

Figure 12 : Create a New Admin Details (I)

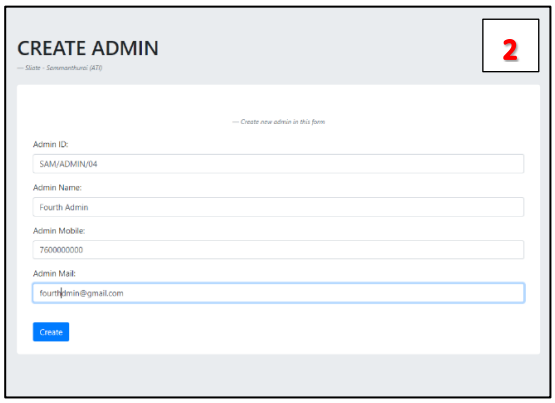

Figure 13 : Create a New Admin Details (II)

Figure 14 : Admin New Record Created Succeed Message

❖ View added admin information.

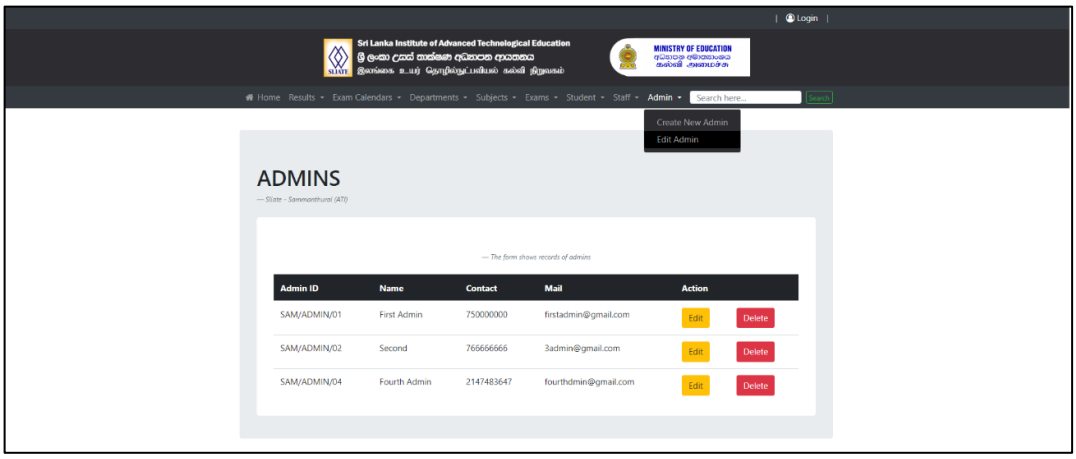

Figure 15 : View Admin Information Interface

❖ Delete an added admin information.

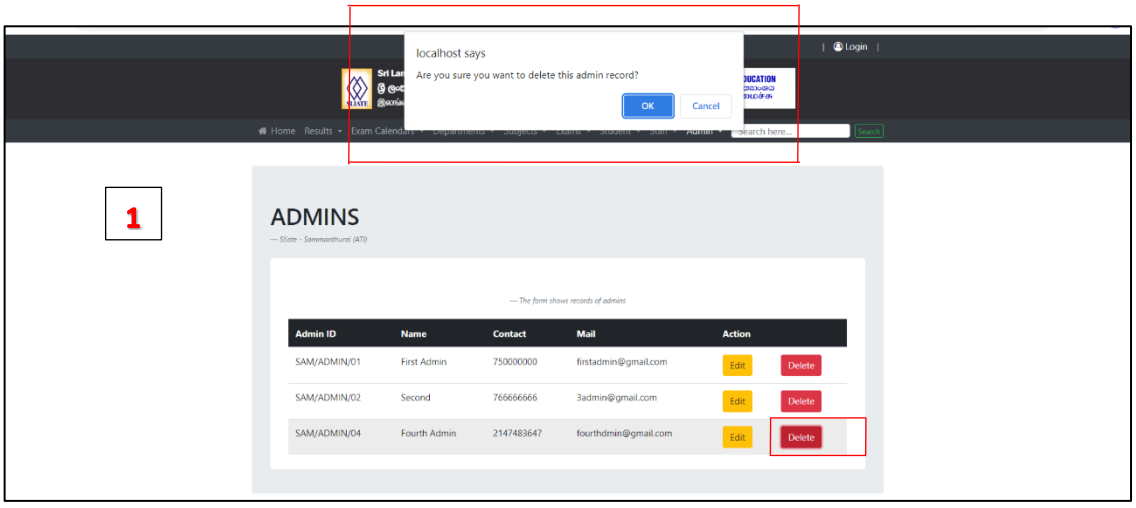

Figure 16 : Delete Option in Display Interface

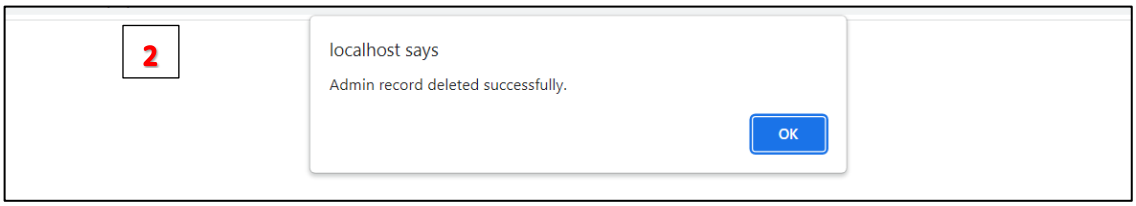

Figure 17 : Delete Success Message

❖ Modify an added admin information.

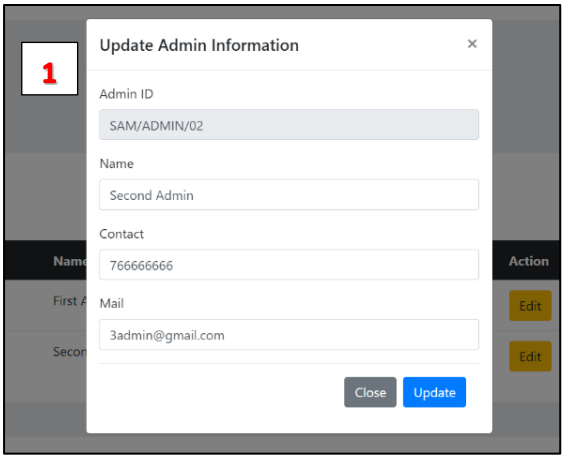

Figure 18 : Update Admin Details (I)

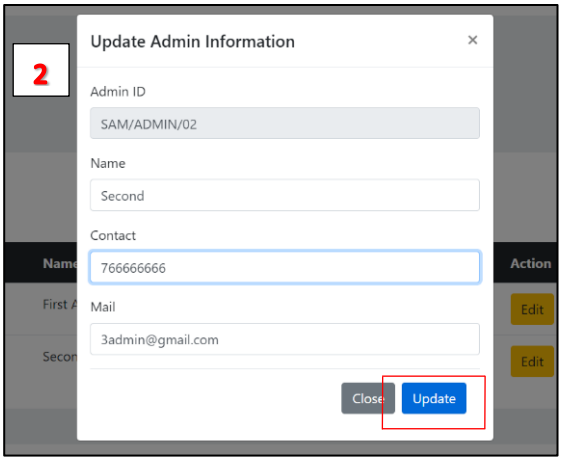

Figure 19 : Update Admin Details (II)

Figure 20 : Record Update Success Message

The management displayed is akin to other management roles, involving information handling, while staff in acceptable positions also contribute to information management.

In the following display, the results have been augmented with an intuitive interface,

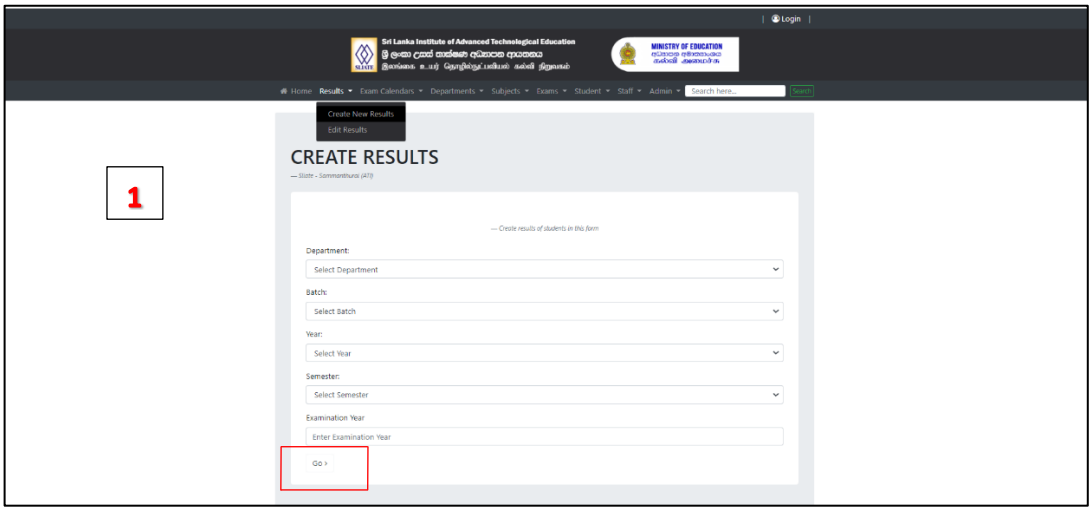

Figure 21 : Create New Results (I)

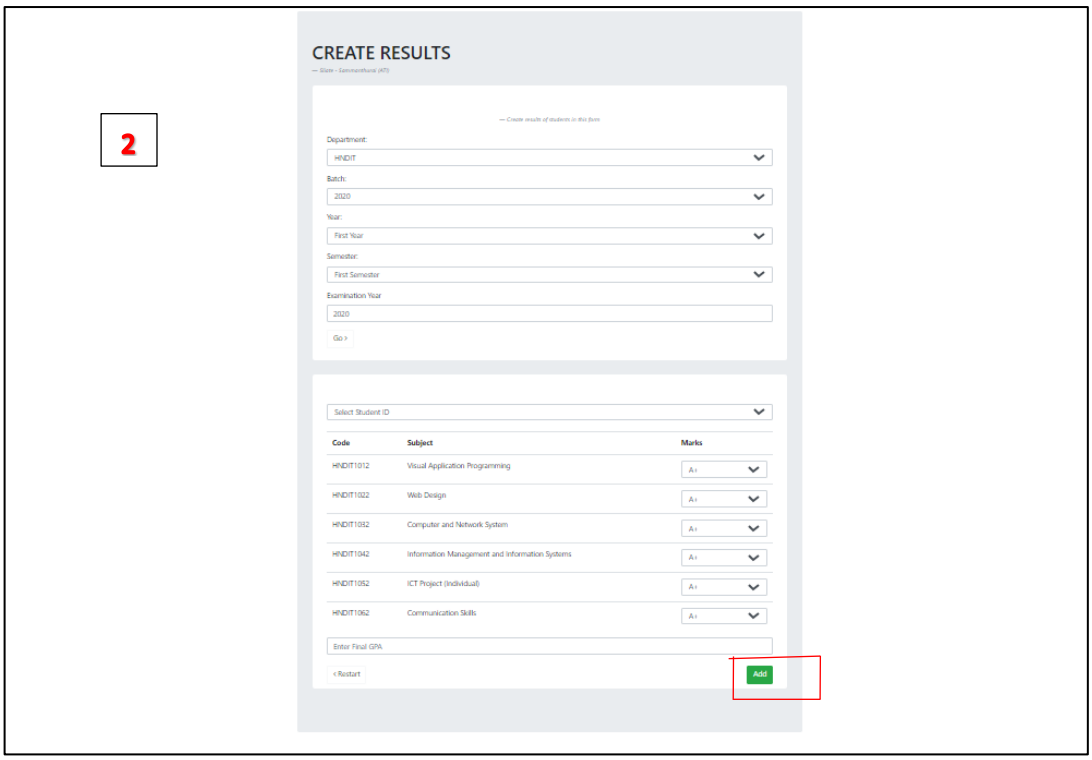

Figure 22 : Create New Result (II)

Figure 23 : Success Message for Create New results

After entering their verification details through the provided interface, students can access and print their results and current report. Once the verification process is finalized, clicking the submit button will display the sheet below, showcasing the results and report. Moreover, by clicking the download button, students can conveniently print the sheet.

❖ Results

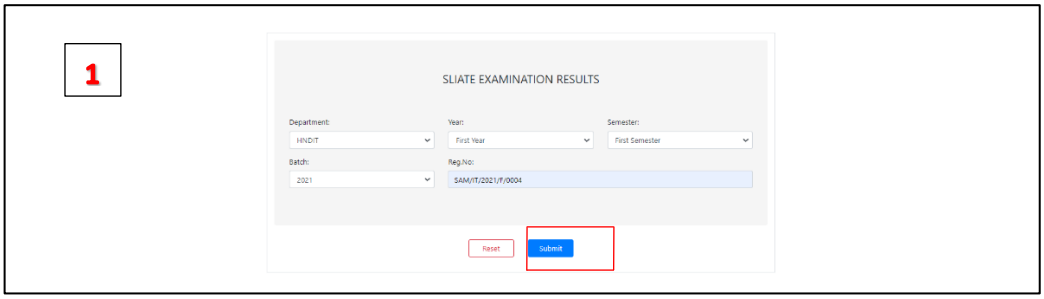

Figure 24 : Student Verification Interface for View Results

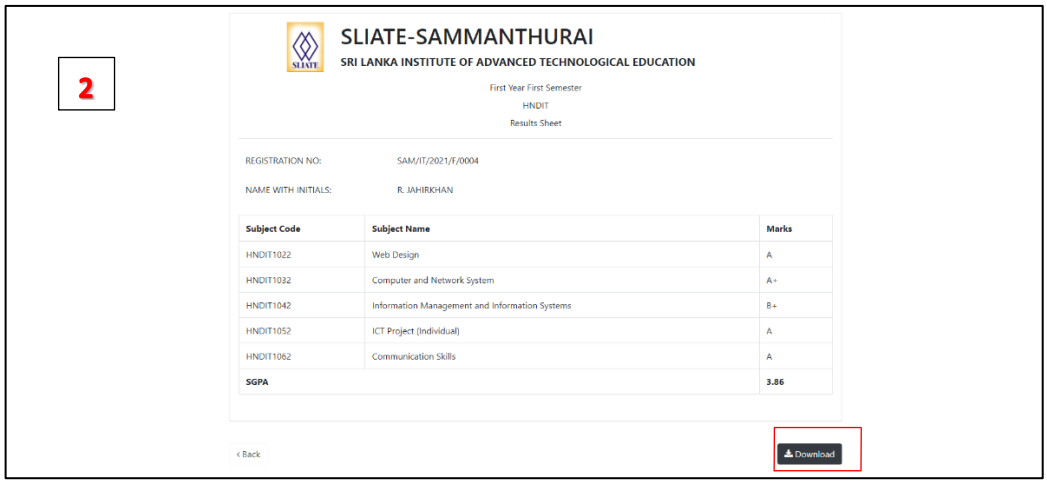

Figure 25 : Result Sheet

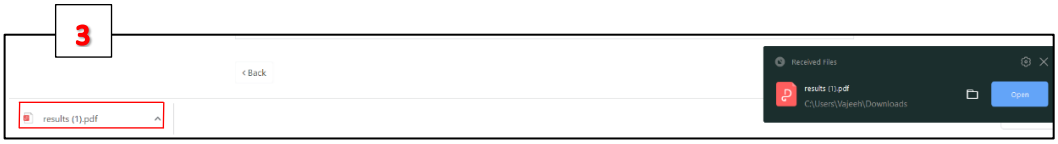

Figure 26 : Download PDF

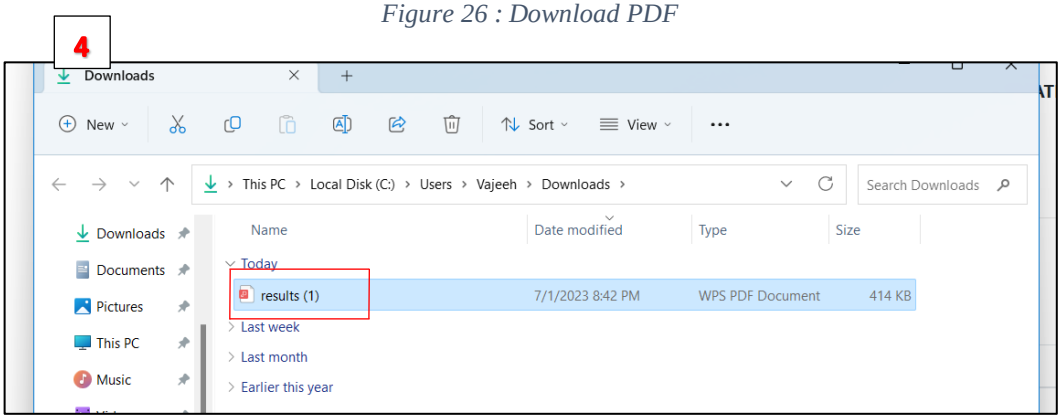

Figure 27 : Downloaded PDF in Local PC

❖ Report

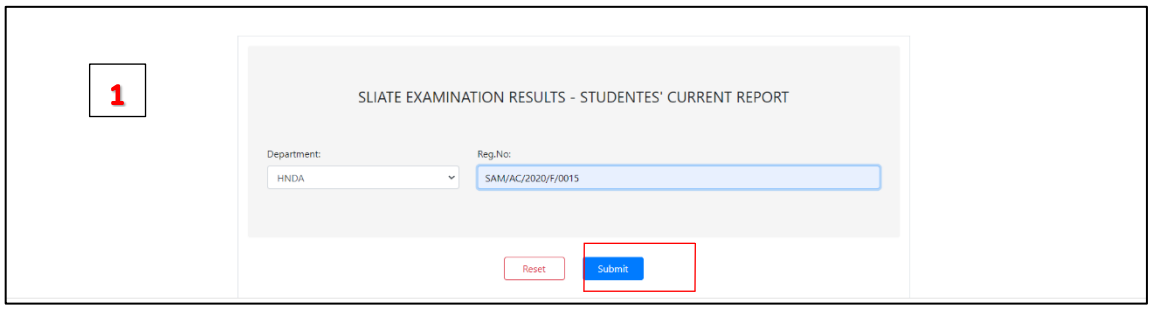

Figure 28 : Student Verification interface for View Report

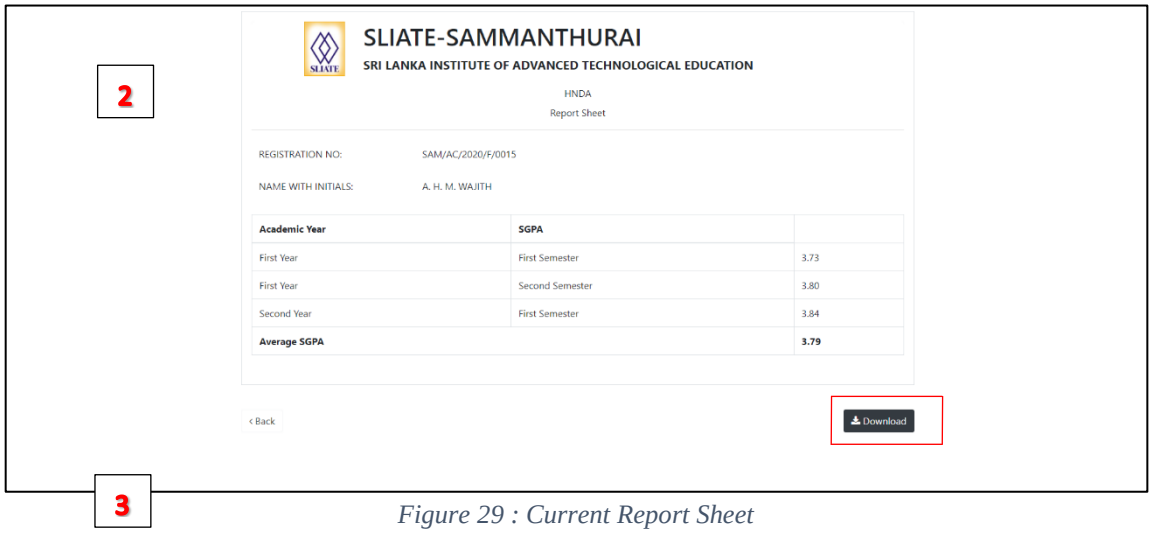

Figure 29 : Current Report Sheet

Figure 30 : Download Report

Above, I provided an overview of the main interfaces in this project, highlighting their functionalities and significance. These interfaces play a crucial role in facilitating user interactions and ensuring seamless system operation. By incorporating user-friendly designs and intuitive features, these interfaces enhance user experience and enable efficient access to essential information. Overall, the well-designed interfaces in this project contribute to its overall success and effectiveness, fostering a positive user experience and optimizing usability.

5.3.4. PROFILES, ROLES, AND PRIVILEGES

- Administrator Profile

  Role: The administrator has full access and control over the SORC system.

  Privileges: The administrator can manage user accounts, including creating and deleting accounts, assigning roles and privileges to staff members, and accessing all functionalities of the system. They can add, update, and delete information, generate reports, and oversee the overall management of the system.

- Academic Staff Profile

  Role: Academic staff members have restricted access compared to the administrator.

  Privileges: Academic staff can input and update student-related information, including academic records and results. They have access to department details, subject details, and student particulars relevant to their assigned responsibilities. However, they do not have administrative privileges such as user management or system configuration.

- Students Profile

  Role: Students have limited access to view and retrieve their results and reports.

  Privileges: Students can log in using their credentials and access their individual result sheets by entering their department, student ID, and academic details. They can view their results and reports and have the option to print them directly from the interface.

CHAPTER 6

CONCLUSION

In conclusion, the SLIATE ONLINE RESULTS CARE (SORC) project is a significant milestone in the advancement of student result management at SLIATE - Sammanthurai. By developing a comprehensive web-based system, SORC revolutionizes the way student results are handled, offering enhanced efficiency, accessibility, and convenience. The user-friendly interface empowers administrators and authorized staff members to effortlessly input, update, and retrieve student information, ensuring a streamlined and organized process. Moreover, students benefit from the convenience of accessing and printing their results and current reports through the platform. With features like login validation, information management, and the ability to view, update, and delete data, SORC provides a robust solution for result management. This project not only modernizes the result management process but also eliminates the challenges associated with manual systems. SORC sets a new standard for result management, transforming the way SLIATE - Sammanthurai handles student results and enhancing overall efficiency and effectiveness.

FUTURE DEVELOPMENT

- View and Print the Student's Results by Staffs

  In this future development, academic staff members will have the capability to view and print student results and reports. This enhancement will enable staff members to easily identify each student's current level.

- The Each Department's HODs Will Manage Practical Marks

  As part of the future development, each department's Head of Department (HOD) will have a system that allows them to manage student results according to their specific requirements, such as using an Excel sheet. This development will assist HODs in efficiently managing and storing practical marks on an online website. Additionally, management will be able to access the practical marks sheet once the HODs have entered the data. Furthermore, students will have the ability to view and print their practical marks.

- Developed the System for Whole ATIs

  While the initial system is developed for ATI-Sammanthurai, there are multiple ATIs across different locations. In this future development, it will be beneficial for the Head of ATI as they will have the capability to manage all student results online. This eliminates the need for separate PDF documents for each ATI and department on the official website. Instead, all ATI students will be able to view and print their results from a single website, streamlining the result release process and providing easy access for all ATIs.

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