SCHOOL MANAGEMENT SYSTEM

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PROJECT REPORT BY

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Contents

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1   Tables

Please see the table shown below:-

- Figure 1.1 - Table for Man Hours worked

2   Introduction

A school management system is a large collection of programs which incorporates information handling and connects them to systems that save data from its users, where it saves the hassle of manual record-keeping by making our daily lives more faster then we had ever imagined. The system is especially adept in storing huge amounts of data that can easily be accessed, edited or deleted as according to the user type.

In this age of modern urbanization, schools and educational institutions have always been demanding a solution for that makes their administration more clean. This is where the school management system comes in action.

2.1   About NSHS School Management System

The project, North South High School Management System, serves to give us a glimpse of how useful a well implemented management system can be and how important it is for schools to adopt it into their hectic administration organization.

With graphical user interfaces for the admin, teachers and students, we can easily access different files which we can then access or edit with the click of a button. Moreover, entities can also access each other to create a more dynamic approach in terms of accessing information.

2.2   Purpose of System

The purpose of this system is demonstrate the use of record keeping through easy to use software that increases efficiency by decreasing our time spent writing on paper.

It is also useful in creating effective solutions for the administration to monitor teachers and students and their respective positions in the classroom. Individual classrooms can be created to add more teachers and students by the admin who can view and access everything in the system.

2.3 Benefits of System

- It saves valuable time by creating faster approaches towards data storage and record keeping

- It closes the communication gap between the different entities

- It helps give new life to archaic methods for authorities such publishing grades or attendance

- It handles the lifetime data of students to keep track of a child's daily activities

- It gives parents a new way to monitor their child through an easy approach thus improving communications

2.4 Features of System

- Teacher Management - Teachers can login into their homepage to publish grades, give attendance to a particular student or get their information stored in file by searching their names. They can also view their own information or view their fees as required

- Academic Management - This includes the ability that teachers have to assign different grades to each student while also assigning them their attendances.

- Student Management - Students can login into their homepage to be limited to viewing their personal information, their grades,their attendance and their fees. However, they can also write anonymous teacher reviews which are not accessible by anyone except for the admin.

- Admin Management - The Admin has master control over the whole system as it can access a teacher or student database where every entity information can be accessed by them in a clean and organized manner. They can also search a particular teacher or student to see their respective information.

  Most importantly, they can also add or delete an entity(teacher or student alike) from the system given the need which gives him the most power.

- File Management - The system consists of text files which stores the login data for students and teachers which is also used to verify the data. Each time a user registers, a text file is appended for the teachers or students which serves as a database.

3 User Cases and Examples

This section provides of the three main entities interacting with the system and how the system can react to their needs.

3.1 Use Case - 1

John Doe Jr., a student of Class 8 in North South High School is interested in viewing his assigned grades as he is anxious. He has a few options:-

1. He can login to his account.

2. He can click on a button that will access his file, saved by the teacher and show him his result.

3. He can also see his attendance the same way.

4. If he wishes he can check on his fees or his personal information.

5. He can even write a teacher review at the end of the school year.

3.2 Use Case - 2

Mrs Jane Doe, a junior teacher in North South High School has been tasked by the Dean to use the new system and assign the grades and attendance to the respective students. She has a few options:-

1. She can then create an account and register her information

2. she will be able to access individual student files by searching up their names and assigning the result and the attendance to their files, one by one.

3. She can the also view individual student data.

4. She can see her fees or her own personal information.

3.3   Use Case - 3

The Admin, who has master control over the program can login to the system and be presented with a variety of different options:-

1. He can add students or teacher to the classroom, which acts as a repository of data.

2. He can delete teachers or students, where their individuals file will be deleted along with the auto update of the classroom.

3. He can search individual entities to keep track of particular students and their information.

4. He can see the student or teacher database to see all the user information stored in the system.

5. He can view the teacher reviews written by the students which will still be anonymous.

3.4   Limitations

- The lack of a dedicated database system means information cannot be edited in this system by the admin

- The system is not dynamic since current methods cannot access specific user files and auto updated the interfaces to match with the current user

- Options limited to only view fees or salaries since integration of online banking system is absent

- Security risk is evident since there is no encryption available in this particular prototype

- User interfaces can be interpreted as dated and old since the lack of a dedicated front-end system can make things less responsive

4   Program Breakdown

This section describes the technologies and assets used to build the project from the ground up.

4.1   Front-End Development

There are in total, 28 Graphical User Interfaces used in this project. Some few examples include:-

- Welcome Page

- Student Home Page

- Teacher Home Page

- Admin Home Page

- Teacher Registration and Login Page

- Student Registration and Login Page

4.2   Back-End Development

1. **Account Creation and Login**

   (a) Writing Login Data in Files for Data and Verification

   (b) Registration Forms which save data by Serialization

2. **Profile Management and Homepage Functions**

   (a) View Information

   (b) Publish Grades and Give Attendance

   (c) Teacher Review

   (d) Add or Delete Student and Teachers

3. **Searching Functions**

   (a) Search Students

   (b) Search Teachers

   (c) View Teacher Review

   (d) View Student Database

   (e) View Teacher Database

4.3   Tools and Technologies

1. Java Swing for Graphical User Interfaces

2. Eclipse IDE and WindowBuilder

3. Git for Version Control

4. Draw.io for UML Diagrams

5. LaTex for Project Proposal and Report
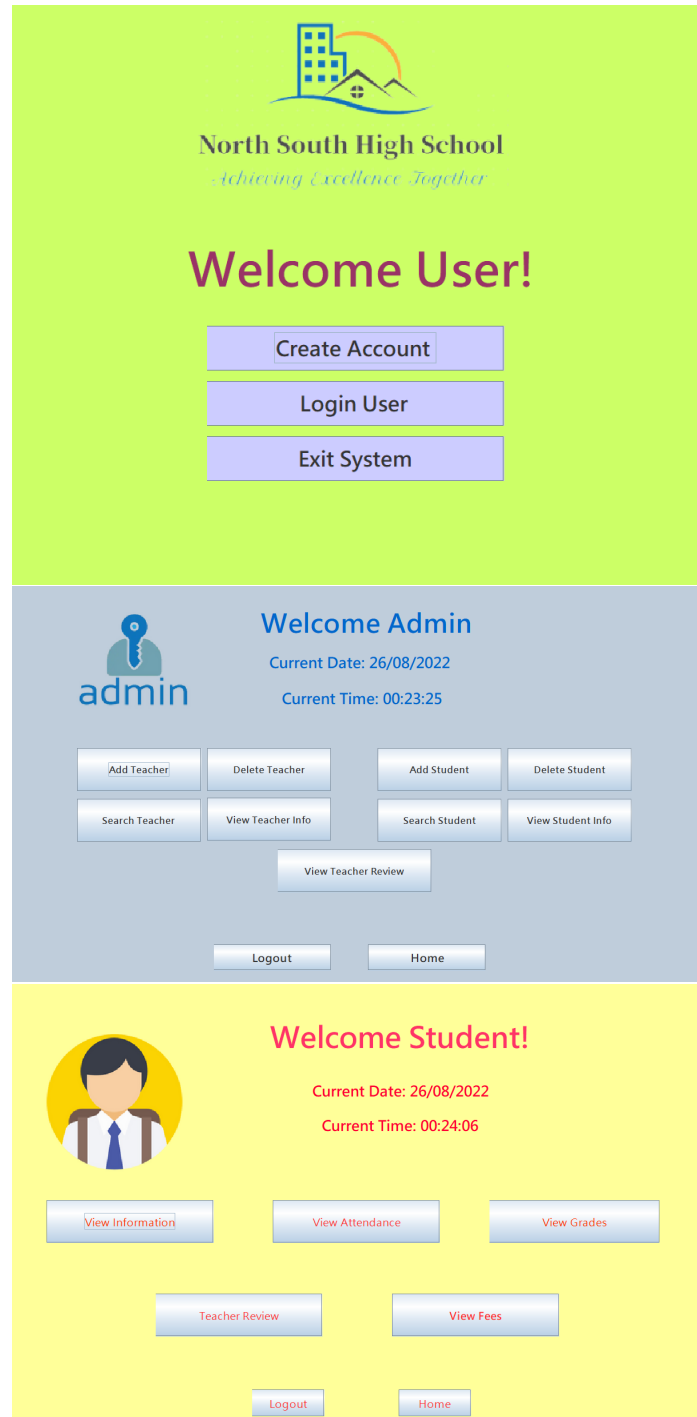
5   Importance of System

1. It helps the school and institution get accustomed to technologies in a non-overwhelming and easy way.

2. It provides a way for user to effectively interact with each other.

3. It provides the authorities to automatically manage student or teacher information during any changes.

4. The school can remove their methods of taking attendance in heavy books since attendance is now more robustly set in the system.

5. It reduces the cost of buying paper and record books.

6   Project Schedule

SL	Features	Weeks				Man Hours
		1st Week	2nd Week	3rd Week	4th Week	
1	Planning Phase					5
2	Back-End Development					5
3	Front-End Development					10
4	File Handling Methods					6
5	Entity Management					4
6	Search Functionalities					5
	Total Duration					35

Figure 1.1 - Table showing Man Hours worked for the Month of July

7 Prototype Screenshots

Welcome Teacher!

Current Date: 26/08/2022

Current Time: 00:24:44

| View Information | Give Attendance | Publish Grades |

| View Student Info | View Salary |

| Logout | Home |

STUDENT REGISTRATION

Full Name :

Email :

Address :

Birthdate :

Age :

Gender : Male ▼

Phone Number :

Standard :

ID :

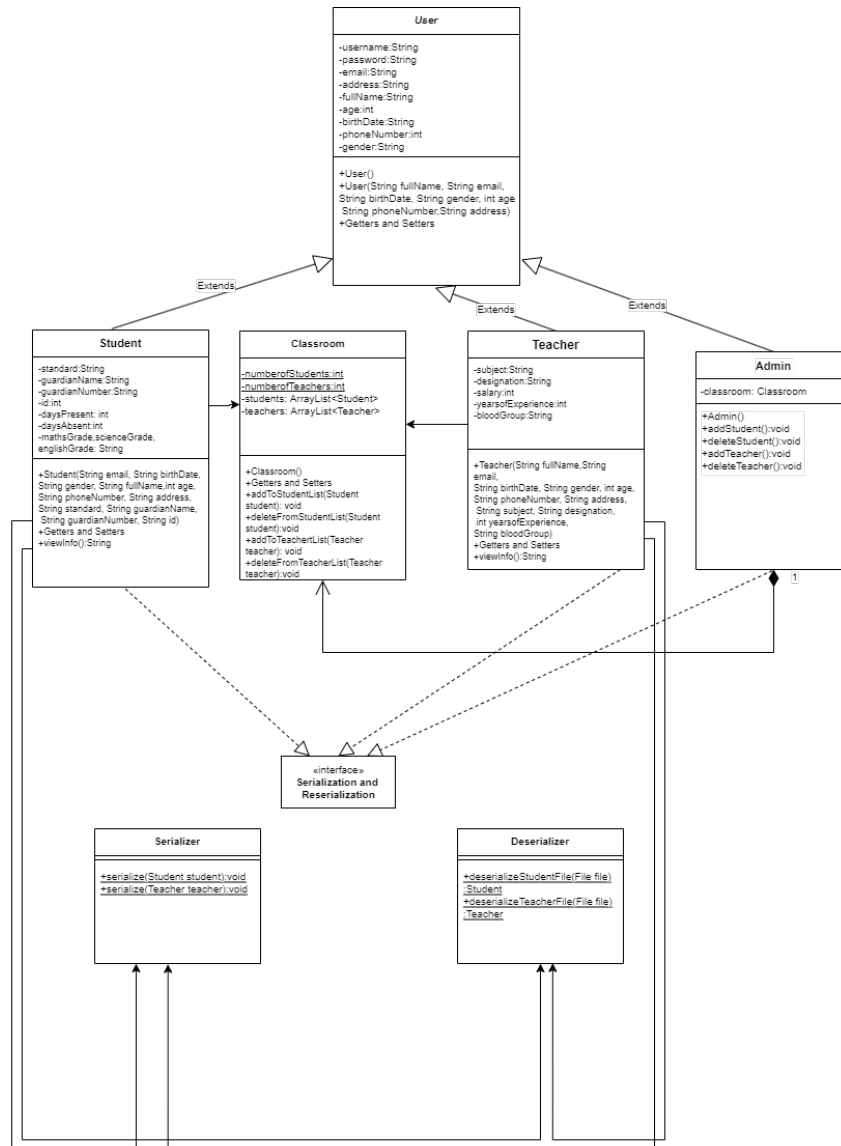**Guardian Name :**

Guardian Number :

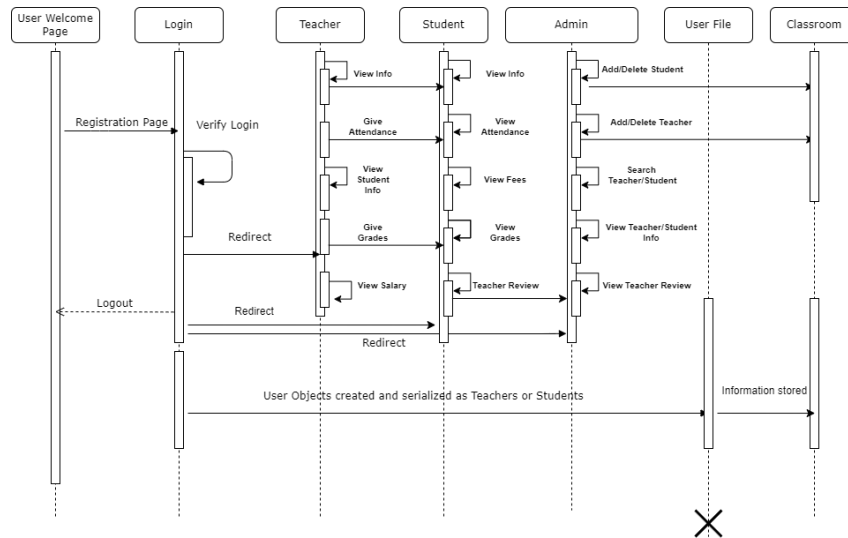○ I accept all the Terms and Conditions

Register

8 Final UML Diagrams

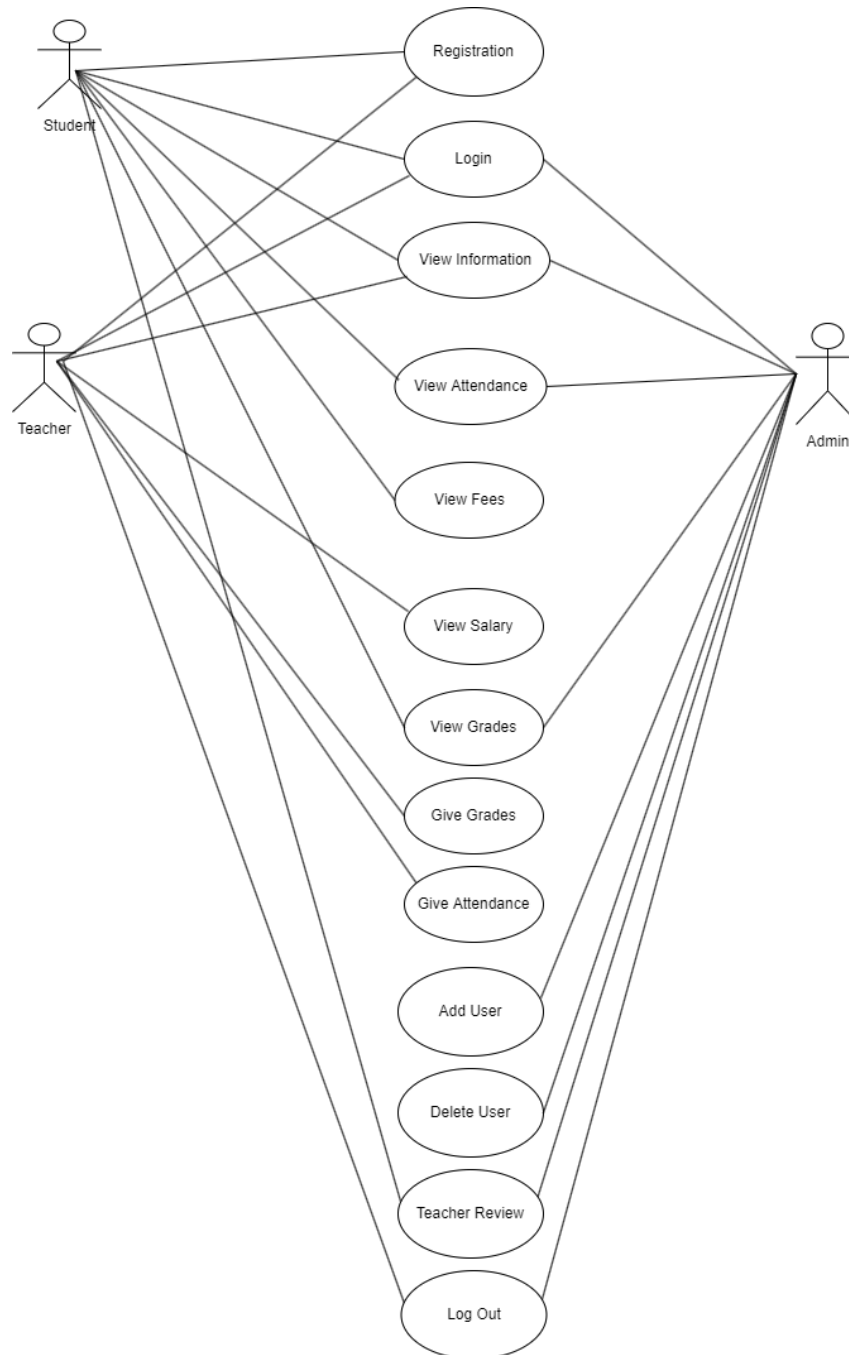This section contains the final UML Diagrams for the project.

8.1 Class Diagram

8.2 Sequence Diagram

8.3   Use Case Diagram

9   Conclusion

In recent years, with the current pace of technological development, people have become more and more demanding in terms of quality. The school authorities in recent years have been looking forward to improve their student's performances in their school, where they obtain the highest percentage of knowledge and experience by interacting more with technology. This idea became more popular in the aftermath of COVID-19 period since more people were stuck home. Educational institutions therefore have become more reliable on management systems to conduct their daily tasks where, people under the system are highly benefited and can work without any hassle. This therefore became our ultimate goal, to bring forward a solution to change the current standards, and hopefully, make it better.

10   About Us

This was project was created by Group 3 of CSE215.12L under the supervision of **Nazmul Alam Dipto**, Lab Instructor. The team consists of:-

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