

MINI PROJECT

**ICT2132
OBJECT ORIENTED PROGRAMMING PRACTICUM**

**BY
GROUP 04**



Bachelor of Information and Communication Technology
Department of Information and Communication Technology
Faculty of Technology
University of Ruhuna.

Contents

- Introduction
- Home page
- Login Prompt
- Admin
 - Admin Dashboard
 - User Handling
 - Create and maintain all User Profiles
 - Create and maintain Courses
 - Create and maintain Notices
 - Create and maintain Timetables
- Lecturer
 - Lecturer Login
 - Welcome Page
 - Update Profile
 - Lecturer Dashboard
 - Student Handling
 - Student Details View
 - Student Eligibility Checking
 - Student Medical View
 - Courses
 - Add course material
 - Whole attendance view
 - Attendance summary view
 - Examination
 - Upload Marks
 - Students Marks view
 - Grade and GPA
 - More
 - Notice View
 - Technical Officers
 - Can update their profile except user name and password
 - Can add and maintain attendance details of students
 - Can add and maintain medical details of students
 - Can see notices
 - Can see timetables of their department
 - Students
 - Can update only contact details and profile picture of their profile
 - Can see attendance details
 - Can see medical details
 - Can see their course details
 - Can see their grades and GPA
 - Can see their timetables
 - Can see notice

INTRODUCTION

In the OOP mini project, we have created a Software system called University Information Management System to the Faculty of Technology (TECMIS). In that System, we divided entire Software into Two parts such As,

- Service Provider
- Service Requester

In the Service provider and Requester, we include four Types of Human categories into the system such as,

- Service Provider
 - I. Admin
- Service Requester
 - I. Student
 - II. Lecturer
 - III. Technical Officer

So in our system, there are four students so we divide our System into four parts and each person got a topic among the above Admin, Student, Lecturer, Tech. Officer under the common GUI for the System i.

Home page

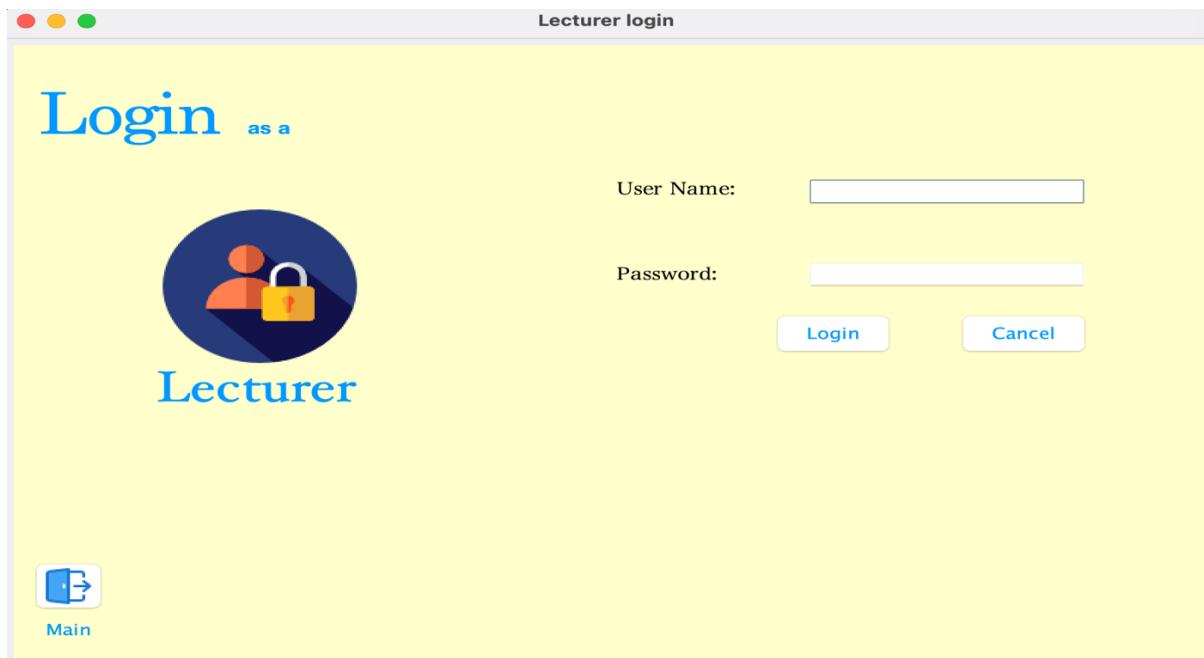


(References: Our Project which we made under OOP)

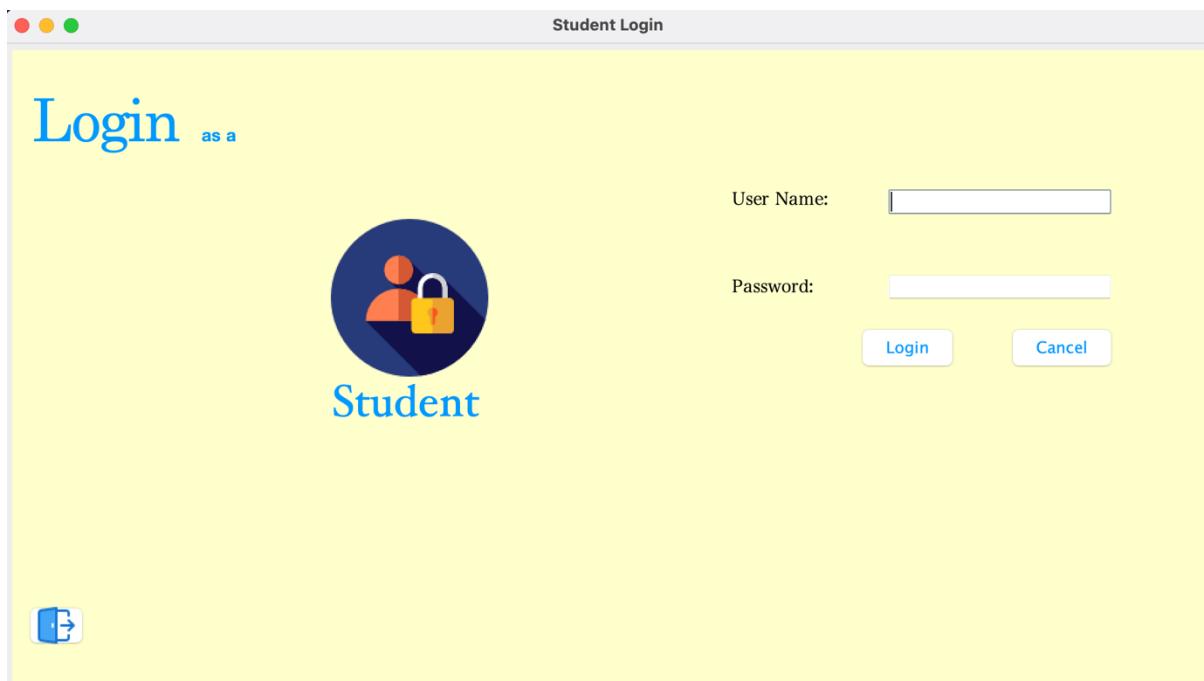
This is Our Home Page and if U entered this Page You can See 4 buttons here if you are an admin then u can click the Admin button and it will jump to the Admin Log. Same as the content I created for the Other Three also.

After that, if you Clicked Admin Or Another button in the UI Then U will jump Into the relevant log page.

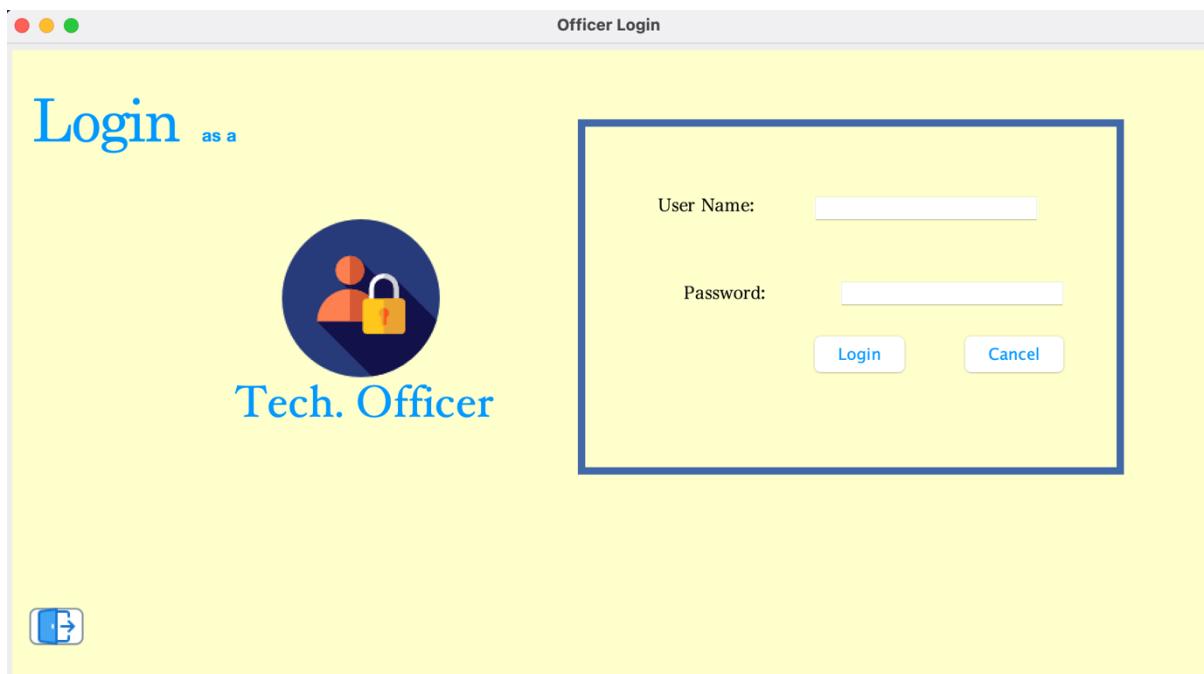
Login Promot



(References: Our Project which we made under OOP)



(References: Our Project which we made under OOP)



(References: Our Project which we made under OOP)

These are the four Screen Shoots from the Log Page which we are included to the System.

At the same time we created separate four Log tables for four Kinds of Peoples to secure the Unauthorized Access from the (inside the System) otherwise the Students also can Log into the System so we separated the data storages.

```

| Database
+-----+
| classicmodels
| endsem
| ex
| information_schema
| i8
| maxelectronics
| maxtronic
| m10
| mysql
| mytestDB
| performance_schema
| restaurantdb
| student
| sys
| tecmis
| t9710
| w3
| w8
| w8
| week4
+-----+
20 rows in set (0.01 sec)

mysql> use Tecmis;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> show tables;
+-----+
| Tables_in_tecmis |
+-----+
| admin
| admin_log
| admin_phone
| attendance
| attendance_summary
| ca_summary
| com_memo
| department
| eligibility_checking
| exam_marks
| lec_log
| lec_phone
| lecturer
| logined_user
| medical
| notice
| st_cou_mod
| stu_log
| stu_phone
| students
| technicalofficers
| tecoff_log
| tecoff_phone
| time_table
+-----+
24 rows in set (0.00 sec)

mysql> 

```

(References: Our Project which we made under OOP)

Here You can see the Log tables separately.

```

| st_cou_mod          |
| stu_log            |
| tecoff_phone        |
| students            |
| technicalOfficers   |
| tecoff_log          |
| tecoff_phone        |
| time_table          |
+-----+
24 rows in set (0.00 sec)

mysql> select * from admin_log;
+-----+-----+-----+
| ad_id | username | password |
+-----+-----+-----+
| AD001 | AD001 | admin123 |
| AD710 | Akther   | 1234      |
| AD106 | z       | z          |
| AD510 | a       | a          |
| Ad399 | a       | a          |
+-----+
5 rows in set (0.00 sec)

mysql> select * from stu_log;
+-----+-----+-----+
| st_id | username | password |
+-----+-----+-----+
| T0/2020/901 | T0R01 | stu123 |
| T0/2020/710 | Zaem   | 12334    |
| T0/2020/798 | otheriya | asd      |
| T0/2020/800 | a      | a          |
| T0/2020/840 | a      | 1          |
+-----+
7 rows in set (0.00 sec)

mysql> select * from lec_log;
+-----+-----+-----+
| lec_id | username | password |
+-----+-----+-----+
| LEC001 | LEC001 | lecturer123 |
| LEC009 | Subash  | 1234      |
| LEC001 | a       | 1234      |
| LEC010 | a       | 1234      |
| LEC012 | a       | a          |
| LEC090 | q       | q          |
| LEC070 | a       | 1          |
| LEC361 | a       | a          |
+-----+
8 rows in set (0.01 sec)

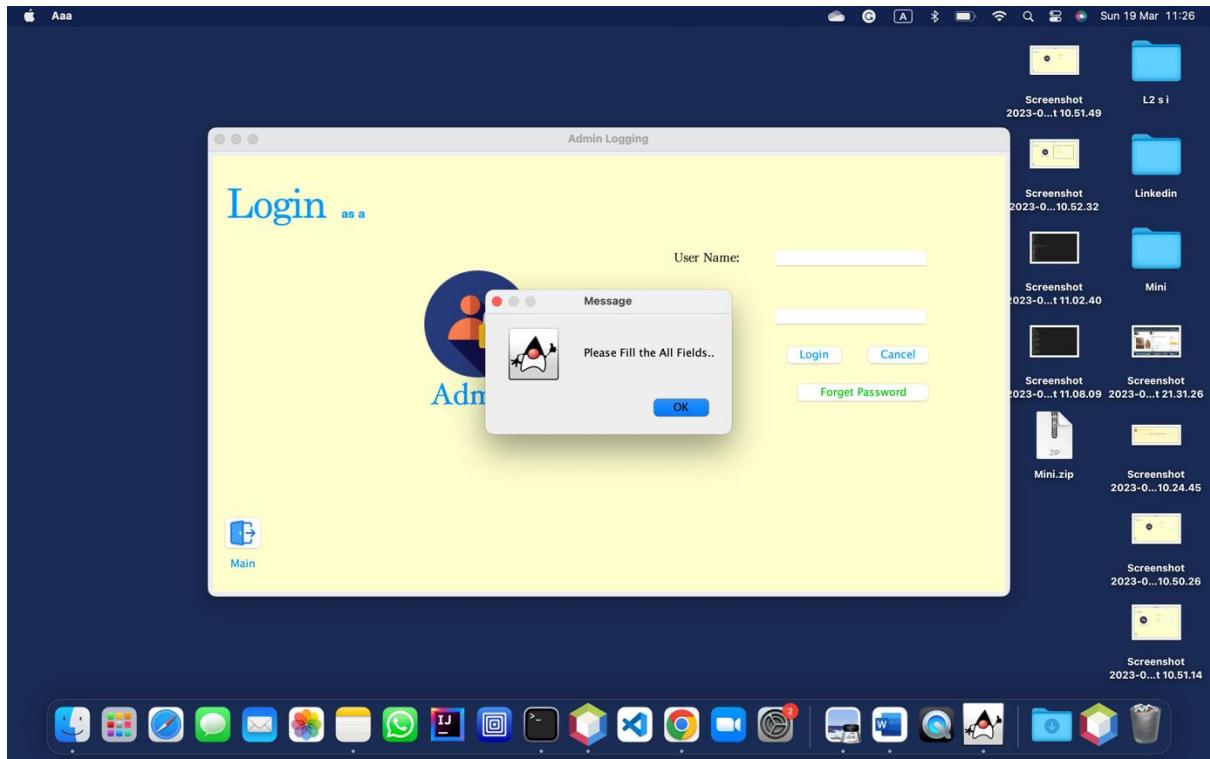
mysql> select * from tecoff_log;
+-----+-----+-----+
| tecoff_id | username | password |
+-----+-----+-----+
| TECOFF001 | TECOFF001 | tecoff123 |
| TECOFF123 |           |           |
| TECOFF301 | a       | a          |
+-----+
3 rows in set (0.01 sec)

mysql> 

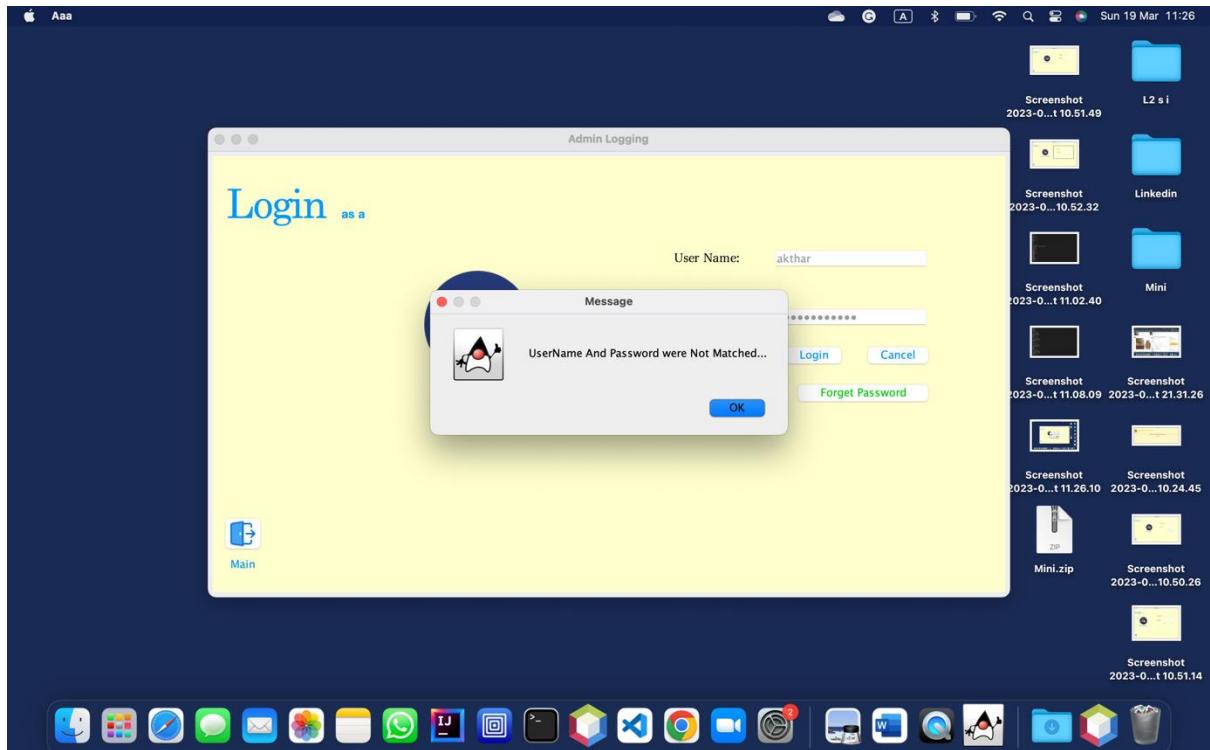
```

(References: Our Project which we made under OOP)

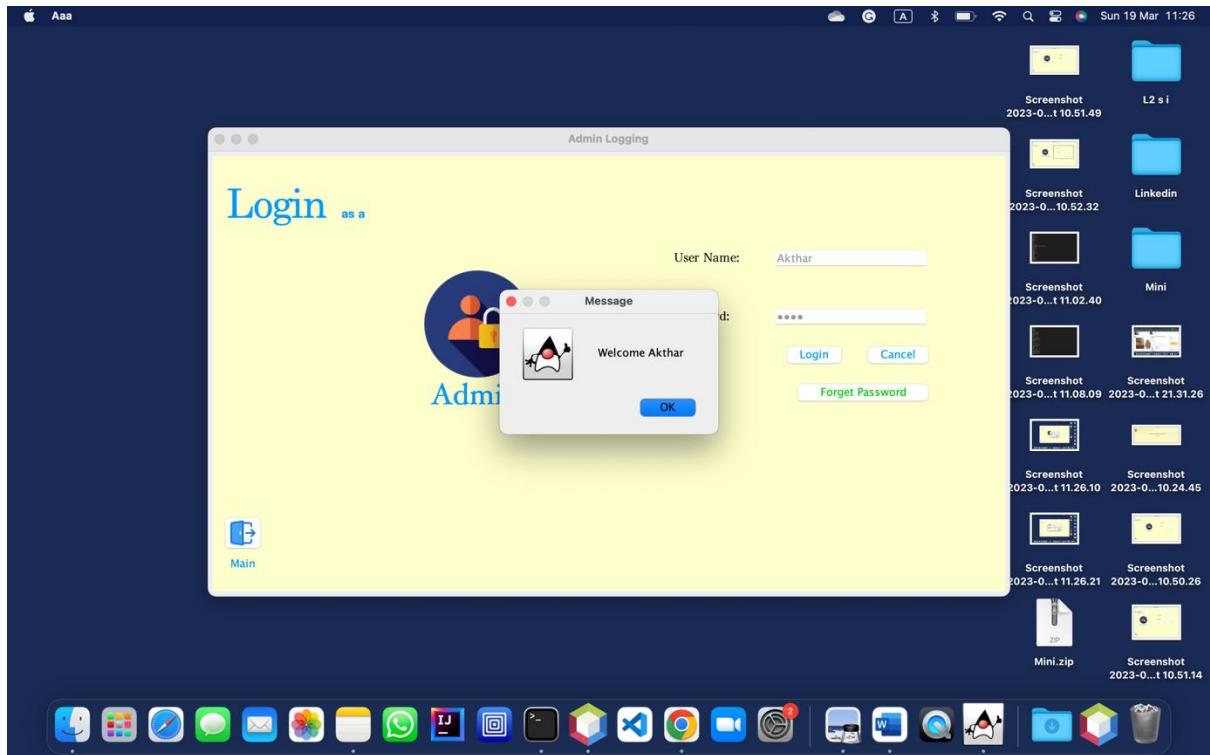
These are the tables that I used to check and store the Log details in the system. In the Admin UI, there are two text fields for the Getter those two will get the User Name and Password from the User. At the same time, just I included some extra things to make sure this field is for the specialized for this data for that here I used (Place holder) to verify the content. After you entered User Name and password u must want to Click the submit button to enter the Dashboard in the System. After your submission the system will check if there is a name and password in the system then it will show a Greeting massage with the user's Username like "WELCOME username TO THE SYSTEM". If you submit the empty textfiles it will show an error like "PLEASE FILL THE FIELDS FIRST". If the Password or User name is wrong then also it will show an error like "USER NAME OR PASSWORD WERE NOT MATCHED ".



(References: Our Project which we made under OOP)



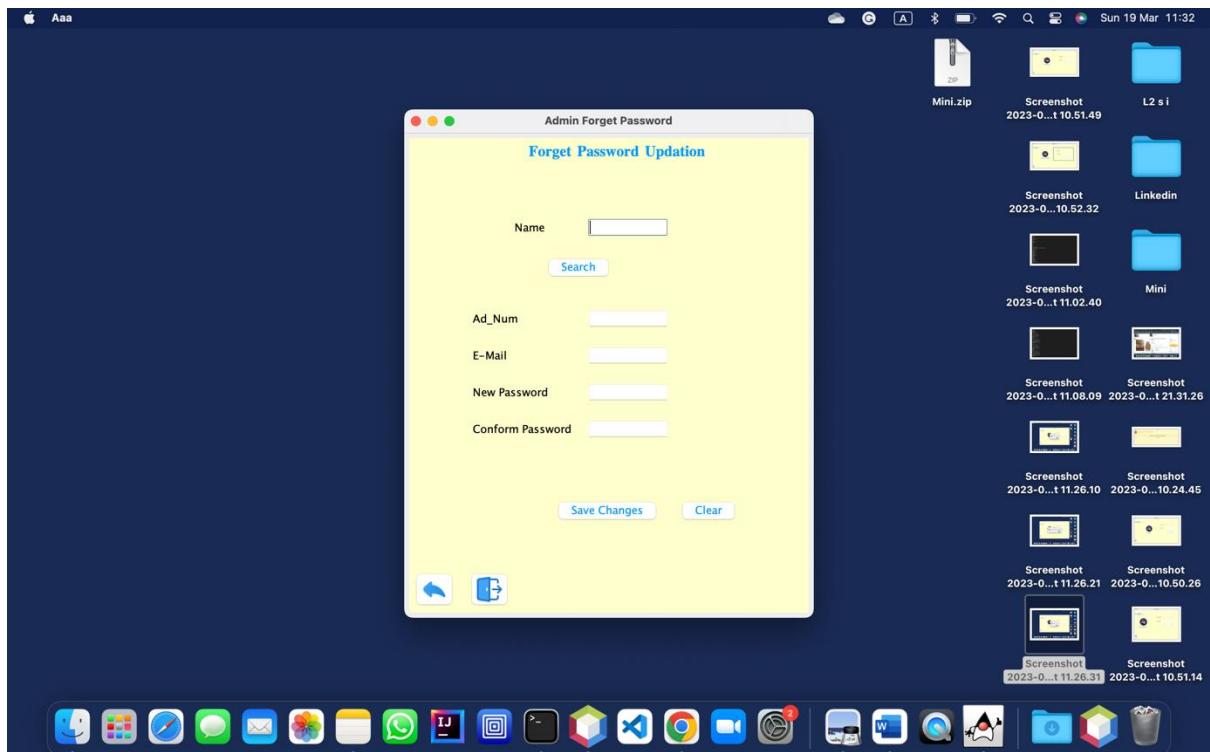
(References: Our Project which we made under OOP)



(References: Our Project which we made under OOP)

There is another option called “forget password” according to the System requirements, we put this portion only for the Admin, otherwise, you want to contact the admin and you want to change the Password or Username,

If you are an admin and you forget the Username or Password then you can change the password or username in the system for that I created an extra form for that if you clicked the “Forget password” then you can access a form called “forget password”. On there you can Update your password and other things using this form.



(References: Our Project which we made under OOP)

In the forgotten password first, we want to include the Name and it will check if it is in the table then only we can do some edits otherwise we can't do anything in the system. If there is a name in the system then u can update and click "SAVE CHANGES" and then it will update the New password.

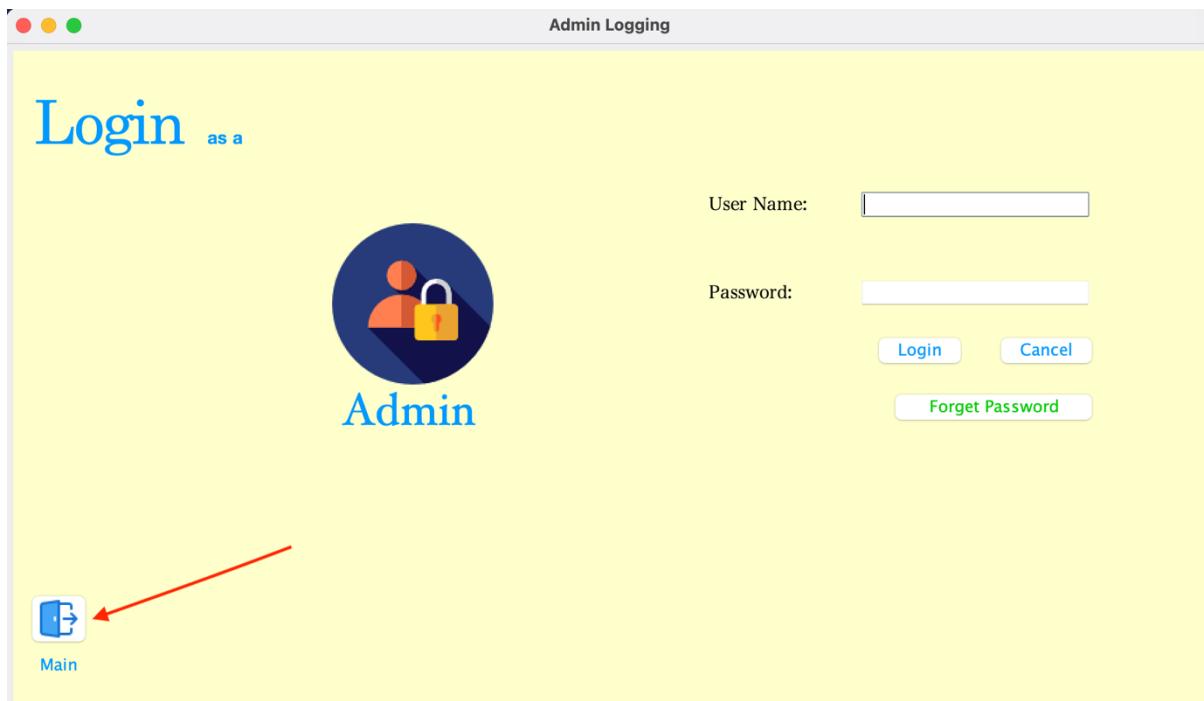
In the System, you can not update the "USERNAME" (According to the System Requirements).

If you click the clear button the entire text fields will clear.
There are two buttons in the bottom of the left corner,
The first is from left to right, if you click that button then you can be backward.
The second is from left to right, if you click that button then you can go to the Home Page.

Same as the Dashboard,

There is a button in the bottom of the left corner,
If you click that button then you can Go to the Home page.

Admin



(References: Our Project which we made under OOP)

(Before and after forget password)

```
| st_id | username | password |
| TG/2020/981 | TG001 | stu123
| TG/2020/710 | Zaeem | 12334
| TG/2020/798 | Itheriya | asd
| TG/2020/800 | a | a
| TG/2020/840 | a | 1
7 rows in set (0.00 sec)

mysql> select * from lec_log;
+ lec_id | username | password |
| LEC001 | LEC001 | lecturer123
| LEC009 | Subash | 1234
| LEC001 | a | 1234
| LEC001 | a | 1234
| LEC012 | a | a
| LEC090 | q | q
| LEC070 | a | 1
| Lec301 | a | a
8 rows in set (0.01 sec)

mysql> select * from tecoff_log;
+ tecoff_id | username | password |
| TECOFF001 | TECOFF001 | tecofff123
| TECOFF123 | a | 1
| TECOFF301 | a | a
3 rows in set (0.01 sec)

mysql> select * from admin_log;
+ ad_id | username | password |
| AD001 | AN001 | admin123
| AD710 | Akthar | 1234
| AD108 | z | z
| AD518 | a | a
| Ad398 | a | a
5 rows in set (0.00 sec)

mysql> select * from admin_log;
+ ad_id | username | password |
| AD001 | AN001 | admin123
| AD710 | Akthar | 0000
| AD108 | z | z
| AD518 | a | a
| Ad398 | a | a
5 rows in set (0.00 sec)

mysql>
```

(References: Our Project which we made under OOP)

Admin Dashboard

- Course, Notice, Time Table Handling

in the dashboard, we can see there are four main options which Admin can do in the system such as,

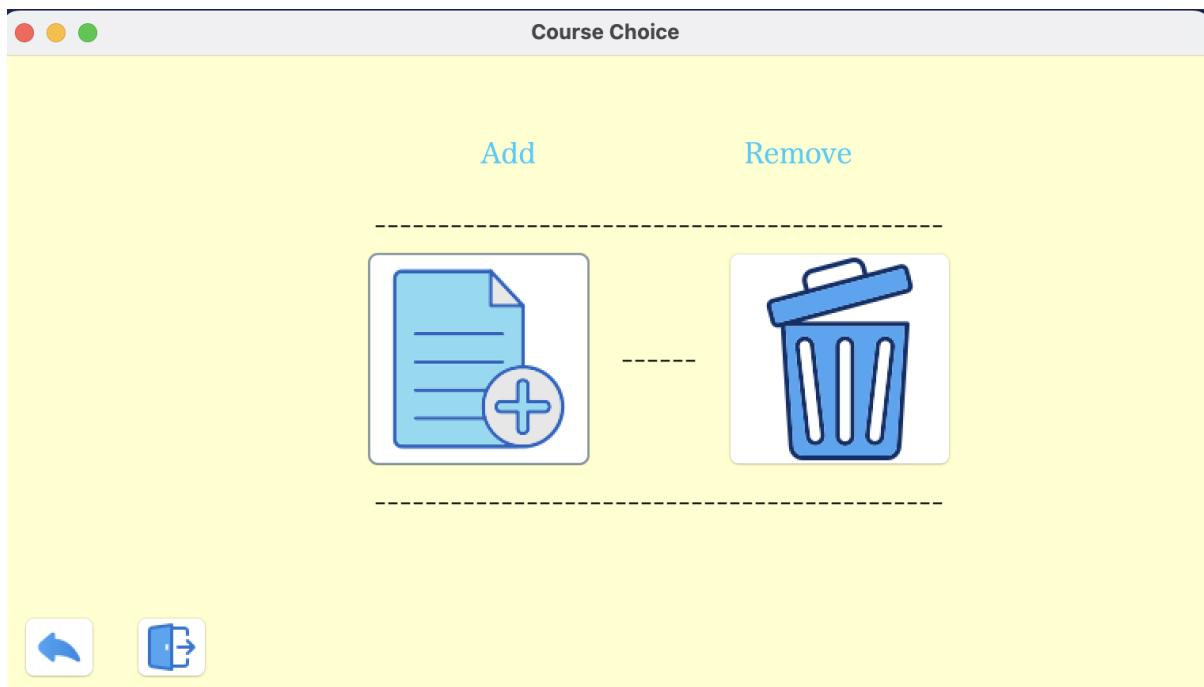
- User Handling
- Notice Handling
- Timetable Handling
- Course Handling

Course Handling

In the Course handling if Admin will click the Course Handling button then Admin can contact the course choice form, and there Admin can see two buttons that are,

- Add Course
- Remove Course
-

(There are another two buttons back word and Home they work as previous I mentioned one for Backward and another for Home)



(References: Our Project which we made under OOP)

Here if you click the Add button then U can see some Text fields that will satisfy the Table which is in the Database.

FullFill The Fields Given Below to Add To The Course Table

Course Id	<input type="text"/>	Current Sem	<input type="text"/>
Course Name	<input type="text"/>	Course Type	<input type="text"/>
Course Credit	<input type="text"/>	No of Quizes	<input type="text"/>
Course Depart. Id	<input type="text"/>	No of Assignments	<input type="text"/>
Course Lec Id	<input type="text"/>		
Current Level	<input type="text"/>		

(References: Our Project which we made under OOP)

```
7 rows in set (0.00 sec)

mysql> select * from lec_log;
+-----+-----+-----+
| lec_id | username | password |
+-----+-----+-----+
| LEC001 | LEC001 | lecturer123
| LEC009 | Subash | 1234
| LEC002 | a | 1234
| LEC001 | a | 1234
| LEC012 | a | 1234
| LEC090 | q | q
| LEC070 | a | 1
| LEC381 | a | a
+-----+-----+-----+
8 rows in set (0.01 sec)

mysql> select * from tecoff_log;
+-----+-----+-----+
| tecoff_id | username | password |
+-----+-----+-----+
| TECOFF001 | TECOFF001 | tecoff123
| TECOFF123 | a | a
| TECOFF301 | a | a
+-----+-----+-----+
3 rows in set (0.01 sec)

mysql> select * from admin_log;
+-----+-----+-----+
| ad_id | username | password |
+-----+-----+-----+
| AD001 | AD001 | admin123
| AD120 | Akther | 1234
| AD108 | a | a
| AD118 | a | a
| Ad396 | a | a
+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select * from admin_log;
+-----+-----+-----+
| ad_id | username | password |
+-----+-----+-----+
| AD001 | AD001 | admin123
| AD120 | Akther | 0000
| AD108 | a | a
| AD118 | a | a
| Ad396 | a | a
+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select * from cou_mod;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| cou_id | cou_name | cou_credit | cou_dep_id | cou_lec_id | current_level | current_sem | cou_type | No_of_quiz | No_of_ass |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| ICT005 | Management | 2 | DEPICT | LEC081 | 2 | 1 | T | 3 | 1
| ICT010 | E-commerce and Implementation | 2 | DEPICT | LEC081 | 2 | 1 | T | 3 | 0
| ICT023 | Object Oriented Programming | 1 | DEPICT | LEC084 | 2 | 1 | T&P | 4 | 2
| ICT03 | DataStructures | 2 | DEPICT | LEC084 | 2 | 1 | T&P | 3 | 2
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.01 sec)

mysql>
```

(References: Our Project which we made under OOP)

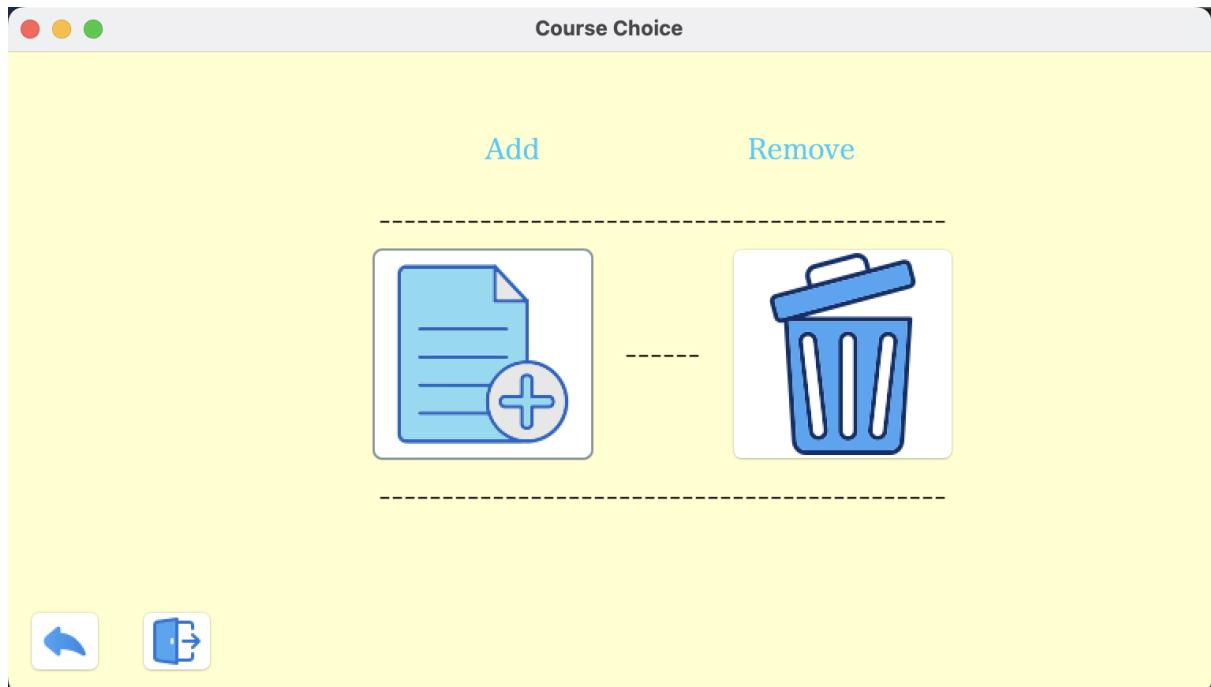
There are some buttons such as,

- Back
- Home
- Submit
- Clear

Those will work as the same concept which I already mentioned above.

In the Remove part in the course Choice if you click the Remove button it will be going to another form called “Course Remove”

In there if an Admin will enter the Course then it will check if the same id is in the Database if it is then it will remove it from the database and the message box will appear like “the data was successfully Removed”. After clicking ok then it will Dispose of and back to the Dashboard.



(References: Our Project which we made under OOP)

A screenshot of a Windows-style application window titled "Add Course to The Database". The title bar has a red, yellow, and green button. The main area contains a message "FullFill The Fields Given Below To Add To The Course Table" in red. Below this are several input fields: "Course Id" (ICT700), "Current Sem" (1); "Course Name" (Java), "Course Type" (P); "Course Credit" (2), "No of Quizes" (3); "Course Depart. Id" (DEPICT), "No of Assignments" (1); "Course Lec Id" (LEC001); and "Current Level" (2). At the bottom right are "Submit" and "Clear" buttons, and at the bottom left are "Back" and "Forward" navigation icons.

(References: Our Project which we made under OOP)

Add Course to The Database

FullFill The Fields Given Below to Add To The Course Table

Course Id	ICT700	Current Sem	1
Course Name	Java	Course Type	P
Course Credit	2	No of Quizes	3
Course Depart. Id	DEPICT	No of Assignments	1
Course Lec Id	LEC001		
Current Level	2		

The Java Course was Successfully Added

OK

(References: Our Project which we made under OOP)

```

| LEC070 | a      | 1
| LEC381 | a      | a
+-----+
8 rows in set (0.01 sec)

mysql> select * from tecoff_log;
+-----+
| tecoff_id | username | password |
+-----+
| TECOFFF001 | tecoffF001 | tecofff123
| TECOFFF123 | a        | 1
| TECOFFF301 | a        | a
+-----+
3 rows in set (0.01 sec)

mysql> select * from admin_log;
+-----+
| ad_id | username | password |
+-----+
| AD001 | AD001   | admin123
| AD710 | Akther   | 1234
| AD718 | z        | z
| AD518 | a        | a
| Ad398 | a        | a
+-----+
5 rows in set (0.00 sec)

mysql> select * from admin_log;
+-----+
| ad_id | username | password |
+-----+
| AD001 | AD001   | admin123
| AD710 | Akther   | 0000
| AD718 | z        | z
| AD518 | a        | a
| Ad398 | a        | a
+-----+
5 rows in set (0.00 sec)

mysql> select * from cou_mod;
+-----+
| cou_id | cou_name          | cou_credit | cou_dep_id | cou_lec_id | current_level | current_sem | cou_type | No_of_quiz | No_of_ass |
+-----+
| ICT005 | Management       | 2           | DEPICT    | LEC081    | 2            | 1           | T         | 3          | 1
| ICT01 | E-commerce and Implementation | 2           | DEPICT    | LEC081    | 2            | 1           | T         | 3          | 0
| ICT02 | Object Oriented Programming | 2           | DEPICT    | LEC084    | 2            | 1           | T&P      | 4          | 2
| ICT03 | DataStructures     | 2           | DEPICT    | LEC084    | 2            | 1           | T&P      | 3          | 2
+-----+
4 rows in set (0.01 sec)

mysql> select * from cou_mod;
+-----+
| cou_id | cou_name          | cou_credit | cou_dep_id | cou_lec_id | current_level | current_sem | cou_type | No_of_quiz | No_of_ass |
+-----+
| ICT005 | Management       | 2           | DEPICT    | LEC081    | 2            | 1           | T         | 3          | 1
| ICT01 | E-commerce and Implementation | 2           | DEPICT    | LEC081    | 2            | 1           | T         | 3          | 0
| ICT02 | Object Oriented Programming | 2           | DEPICT    | LEC084    | 2            | 1           | T&P      | 4          | 2
| ICT03 | DataStructures     | 2           | DEPICT    | LEC084    | 2            | 1           | T&P      | 3          | 2
| ICT700 | Java              | 2           | DEPICT    | LEC001    | 2            | 1           | P         | 3          | 1
+-----+
5 rows in set (0.00 sec)

mysql>

```

(References: Our Project which we made under OOP)

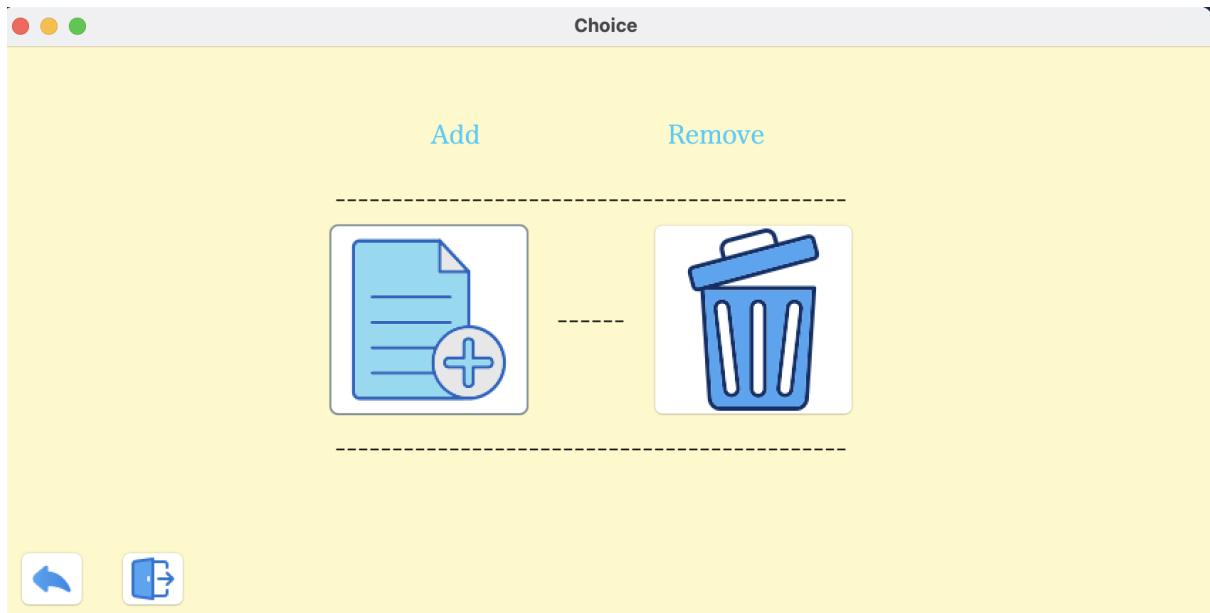
Note: [IN THE SAME THEORY I WILL BUILT FOR THE STUDENT, LECTURER, TECH.OFFICER]

- **User Handling**

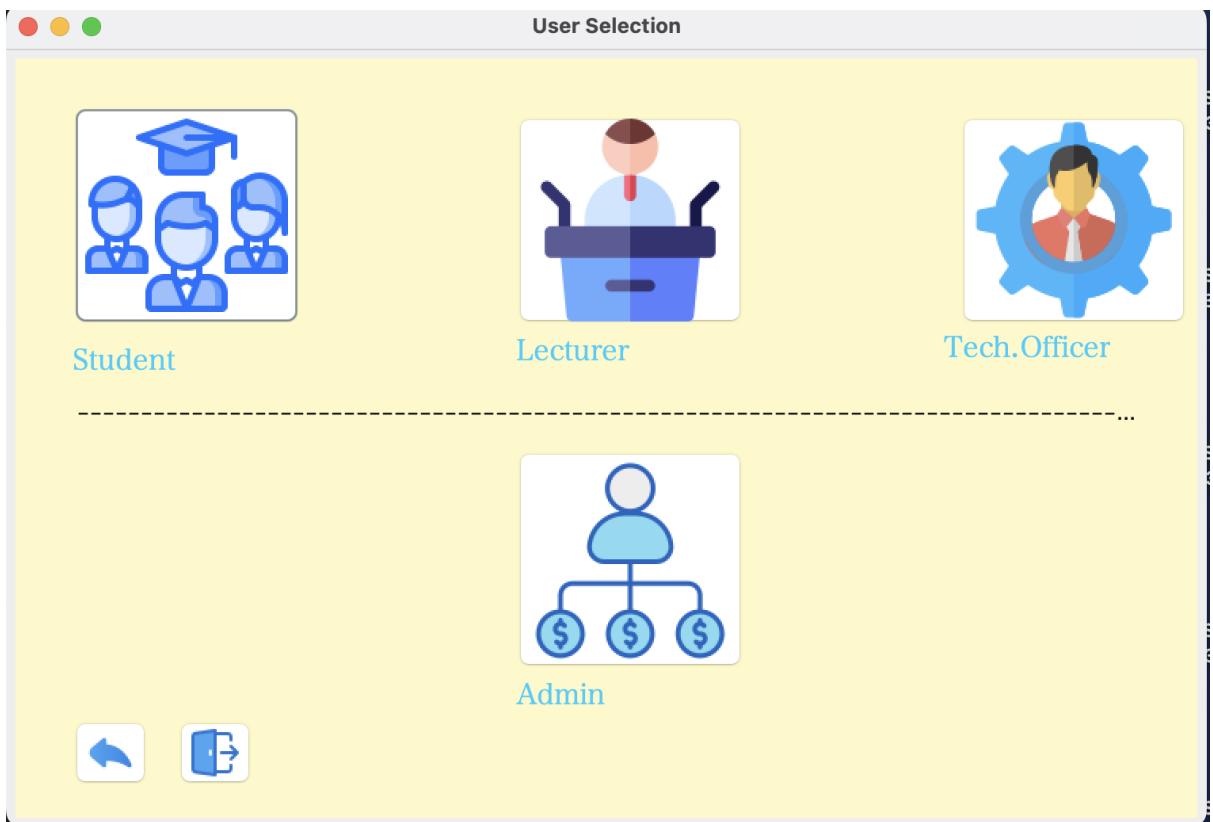
In the dashboard, There is a Button called User handling, if an Admin clicks the button there also will occur a choice from the same as I mentioned above that Course choice.

if you click Add or Remove, there we can see four buttons for Four kinds of people who are involved in the system (Admin, lecturer, Student, Tech. Officer).

For that, there are four Database tables assigned for four types of users.



(References: Our Project which we made under OOP)



(References: Our Project which we made under OOP)

If you select Add, then There a form will occur to Add Data to the System. Else, If you select Remove, then There a form will occur to remove Data from the System.

The image shows a window titled "User Student" with a subtitle "FillAll The Fields Given Below to Add To The Student Table". The form contains the following fields:

Stu_Id	<input type="text"/>	DOB	<input type="text"/>
FName	<input type="text"/>	Email	<input type="text"/>
LName	<input type="text"/>	Phone.	<input type="text"/>
Address	<input type="text"/>	Dep Id	<input type="text"/>
Gender	<input type="text"/>	Current Level	<input type="text"/>
Password	<input type="text"/>	Current Sem	<input type="text"/>

At the bottom are two navigation buttons: a left arrow and a right arrow, and two action buttons: "Submit" and "Clear".

(References: Our Project which we made under OOP)



(References: Our Project which we made under OOP)

There are some buttons such as,

- Back
- Home
- Submit
- Clear

Those will work as the same concept which I already mentioned above.

```

| ICT700 | Java           |      2 | DEPICT | LEC001 |      2 |      1 | P   |      3 |      1 |
+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select * from admin;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| ad_id | f_name | l_name | address | gender | dob    | email | role | picture_path |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| AD010 | hi    | hili   | sari    | Female  | 2000-06-14 | no    | no   | no          |
| AD100 | z     | t      | m      | Male   | 2000-06-14 | z     | z    | z           |
| AD118 | k     | t      | m      | Male   | 2000-06-14 | t     | s    | q           |
| Ad396 | a     | a      | a      | Male   | 2300-08-09 | a     | a    | a           |
| AD710 | Akther | Zarzam | kahatowita | Male  | 2000-06-14 | illa | Prof. | No          |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

mysql> select * from lecturer;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| lec_id | f_name | l_name | address | gender | dob    | email | designation | dep_id | picture_path |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| LEC001 | Piyumi | Thaksala | No 265, Thengalle road, Matara | Female | 1999-05-02 | piyumithaksala@gmail.com | Lecturer | DEPICT | |
| LEC003 | Dilshan | Bandara | No 125/7, Matara             | Male   | 1991-02-03 | dilshanbandara@gmail.com | Lecturer | DEPET  |
| LEC004 | Ranadiv | Chandraseena | No 461, Thebiwana, Kalutara | Male   | 1991-06-03 | ranadive@gmail.com       | Lecturer | DEPICT |
| LEC070 | a     | as    | d      | Female | 2000-09-09 | as    | sdf  | DEPICT | no        |
| LEC090 | q     | q     | q      | Female | 2000-09-09 | a     | a    | DEPICT | a         |
| LEC301 | s     | a     | a      | Female | 2000-09-09 | illa | e    | DEPICT | e         |
| LEC710 | Mohamed | Akther | kahatowita               | Male  | 2000-06-14 | Akthar@gmail.com       | Theriya | DEPICT | NOPE    |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

mysql> select * from students;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| st_id | f_name | l_name | address | gender | dob    | email | dep_id | current_level | current_sem |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| T0/2020/982 | N.M. Asela | Gamage | 58,beach road, Matara | Male | 2000-06-05 | asela@gmail.com | DEPICT | 2 | 1 |
| T0/2020/983 | A.G. Kelum | Bandara | 45,Cristal lane, Gampaha | Male | 2000-04-02 | kelum@gmail.com | DEPICT | 2 | 1 |
| T0/2020/984 | H.M. Kumara | Dilruk | 36,Main road, Colombo | Male | 1999-04-04 | kumaraDilruk@gmail.com | DEPICT | 2 | 1 |
| T0/2020/985 | Y.M. Sandun | Dasanayaka | 12,1st Avenue, Jaffna | Male | 1999-07-01 | sandun@gmail.com | DEPICT | 2 | 1 |
| T0/2020/986 | S.M. Samithi | Perera | 48,2nd Avenue, Kotte Eliya | Female | 2000-03-07 | samithi@gmail.com | DEPICT | 2 | 1 |
| T0/2020/987 | D.W. Karuna | Dissanayake | 88, 2nd floor, Colombo | Female | 2000-07-07 | dkaruna@gmail.com | DEPICT | 1 | 1 |
| T0/2020/988 | T.M. Priyadarshan | Udugama | 45,Kasul lane, Negombo | Female | 2000-04-03 | priyadarshan@gmail.com | DEPICT | 2 | 1 |
| T0/2020/989 | H.M. Nadarea | Wihanga | 46,5th lane, Kandy | Male | 1998-07-02 | nadarea@gmail.com | DEPICT | 2 | 1 |
| T0/2020/910 | A.A. Praveen | Hewage | 25,6th lane, Kandy | Male | 2000-03-07 | praveen@gmail.com | DEPICT | 2 | 1 |
| T0/2020/798 | Mohamed | Jamzly | Kalminai | Male | 2000-06-14 | Vj | DEPICT | 2 | 1 |
| T0/2020/848 | Mohamed | Akther | Kahatowita | Male | 2000-06-14 | Akther@gmail.com | DEPICT | 2 | 1 |
| T0/2020/799 | Theriya | asd | sdf | Female | 2000-09-09 | jjj | DEPICT | 1 | 2 |
| T0/2020/800 | s     | a     | a     | Female | 2000-09-09 | ll | DEPICT | 2 | 1 |
| T0/2020/840 | a     | s     | d     | Female | 2000-09-09 | s | DEPICT | 2 | 3 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
14 rows in set (0.00 sec)

mysql> select * from technicalOfficers;
+-----+-----+-----+-----+-----+-----+-----+-----+
| tecoff_id | f_name | l_name | address | gender | dob    | email | job_title | dep_id |
+-----+-----+-----+-----+-----+-----+-----+-----+
| TECOFF002 | Wasantha | Adhikari | NO.25, kelediwulwewa, Eppawala | Male | 1979-05-25 | wasanthaAdhikari@gmail.com | Technicalofficers | DEPET |
| TECOFF003 | Samudra | Ahelepola | NO.25/100, main road, Kandy | Female | 1965-10-02 | samudra@gmail.com | Technicalofficers | DEPBST |
| TECOFF101 | s     | a     | d     | Female | 2000-09-09 | asd | DEPICT | 2 |
| TECOFF301 | s     | a     | a     | Female | 2000-07-07 | s | DEPICT | 2 |
+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)

mysql>

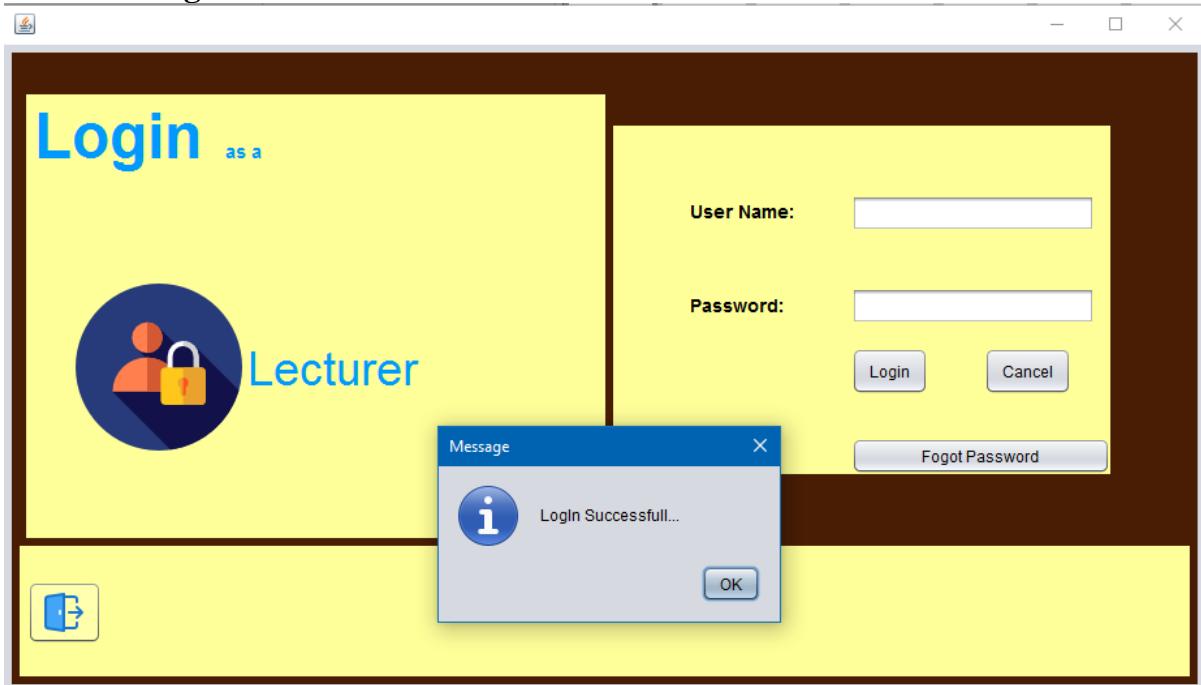
```

(References: Our Project which we made under OOP)

Here also admin can Add and Remove the Data as previous mentioned in the Course Handling.

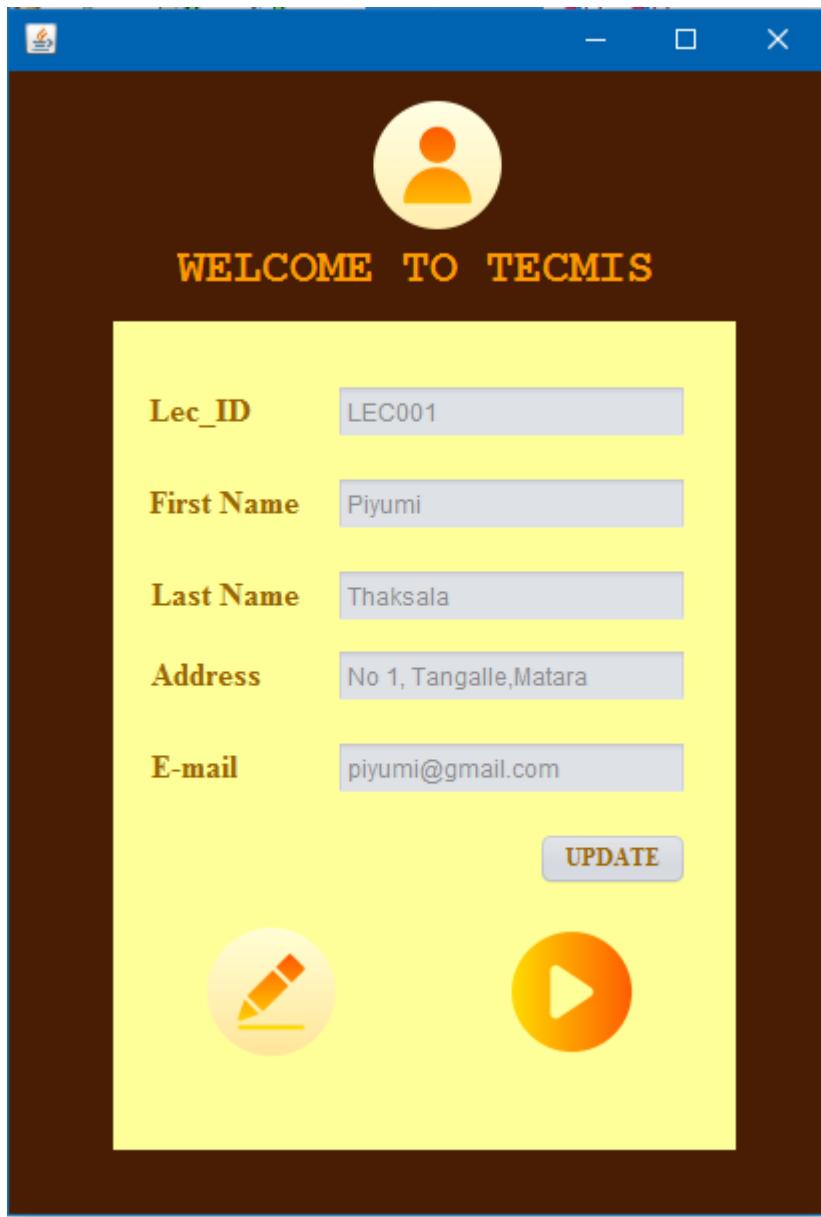
LECTURER

Lecturer Login



As said above about login pages, here is the lecturer log in page. When lecturer Click login button he/she will login to the system. If the login function there is a small message box shows 'Login Successful'.

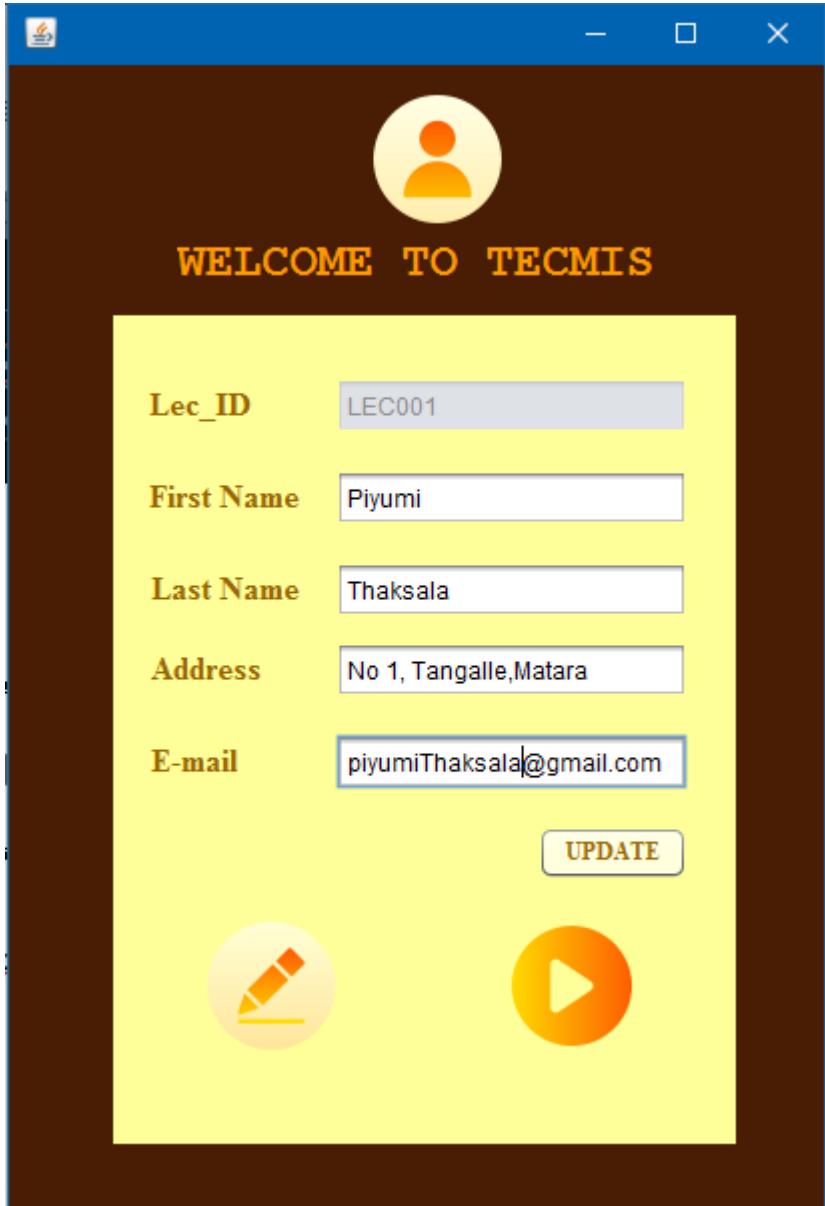
Welcome Page



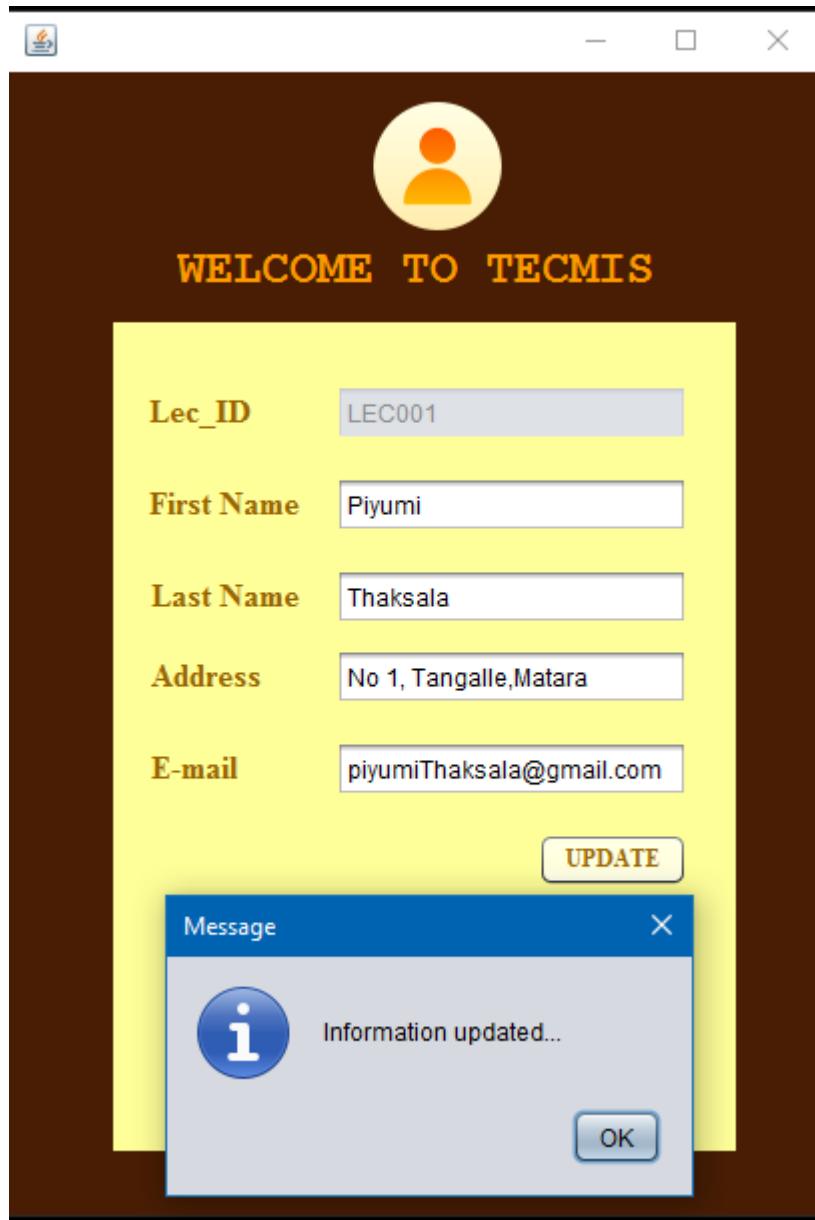
After the login success, the UI called Welcome Page will show. It has common details of the logged lecturer such as lecture id, first name, last name, address, and email. There are some buttons such update , edit and continue. If the lecturer want to update his/her above detail he/she want to click the edit button. The text field does not enable until the logged lecturer click the edit button.

```
mysql> use tecmis_db;
Database changed
mysql> select * from lecturer;
+-----+-----+-----+-----+-----+-----+-----+-----+
| lec_id | f_name | l_name | address | gender | dob   | email    | designation | dep_id |
+-----+-----+-----+-----+-----+-----+-----+-----+
| LEC001 | Piyumi | Thaksala | No 1, Tangalle, Matara | Female | 1990-05-02 | piyumi@gmail.com | Lecturer | DEPICT |
| LEC002 | Tirasha | Senawiratne | No 1, Wellawatha, Colombo | Female | 1989-12-04 | tirasha@gmail.com | Lecturer | DEPBST |
| LEC003 | Dilshan | Bandara | No 123/7, Matara | Male   | 1991-02-03 | dilshambandara@gmail.com | Lecturer | DEPET |
| LEC004 | Ranadiv | Chandrasena | No 401, Thebewana, Kalutara | Male   | 1991-06-03 | ranadiv@gmail.com | Lecturer | DEPICT |
+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.05 sec)
```

After click the edit button the text fields will enable to edit except lecturer id text field. The lecturer cannot edit the ID.



For an example, the logged lecturer want to edit her email address. So, she can edit the email address and click update button. After the click the button a message box shows like below.



If we check the database, the detail will be updated.

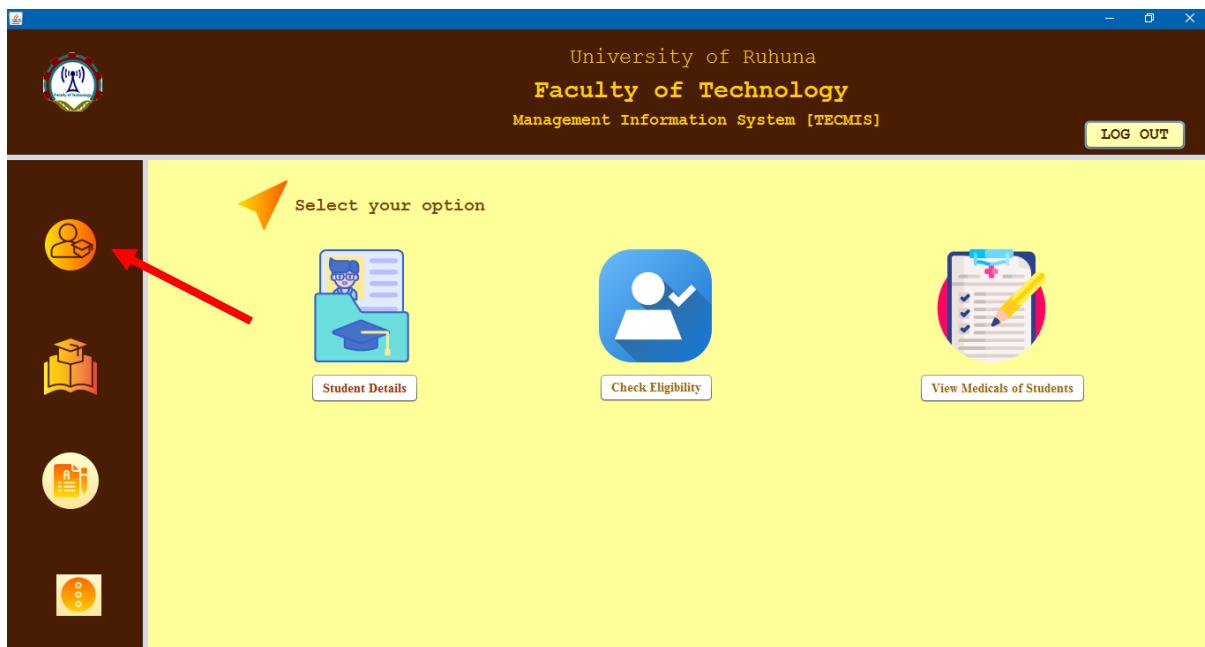
```
mysql> select * from lecturer;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| lec_id | f_name | l_name | address | gender | dob | email | designation | dep_id |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| LEC001 | Piyumi | Thaksala | No 1, Tangalle, Matara | Female | 1990-05-02 | piyumiThaksala@gmail.com | Lecturer | DEPICT |
| LEC002 | Tirasha | Senawirathna | No 1, Wellawatha, Colombo | Female | 1989-12-04 | tirasha@gmail.com | Lecturer | DEPBST |
| LEC003 | Dilshan | Bandara | No 123/7, Matara | Male | 1991-02-03 | dilshanbandara@gmail.com | Lecturer | DEPET |
| LEC004 | Ranadiv | Chandrasena | No 401, Thebuwana, Kalutara | Male | 1991-06-03 | ranadiv@gmail.com | Lecturer | DEPICT |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

Here we can see the change. After the lecturer can continue. Therefore the lecturer can continue button.

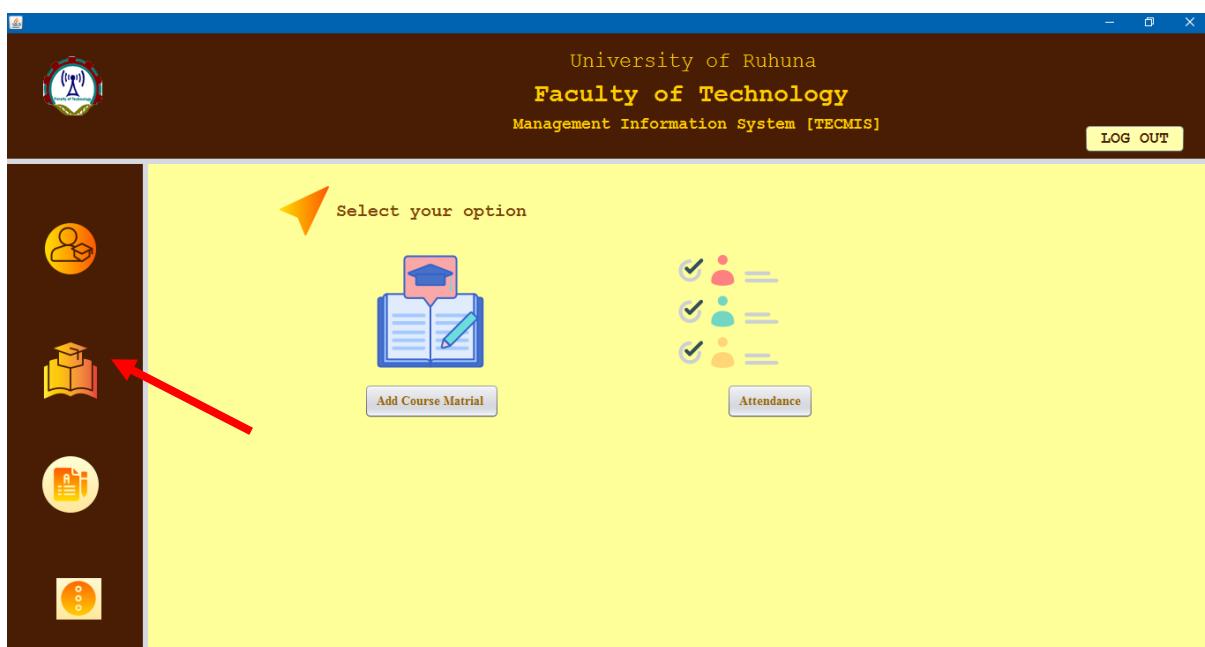
After clicking the continue button the following UI will be showed.

Lecturer Interface

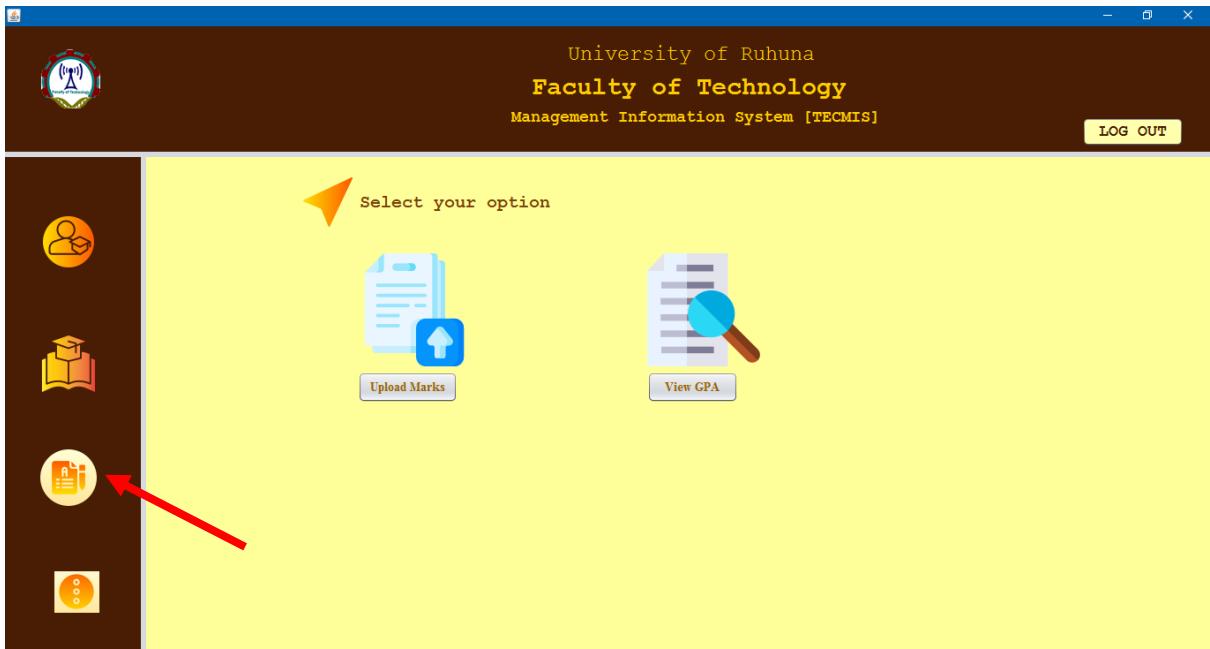
In left side of the UI, there are four buttons called Student, Course, Examination, and More; When clicking the Student button in the left side it will show the following interface.



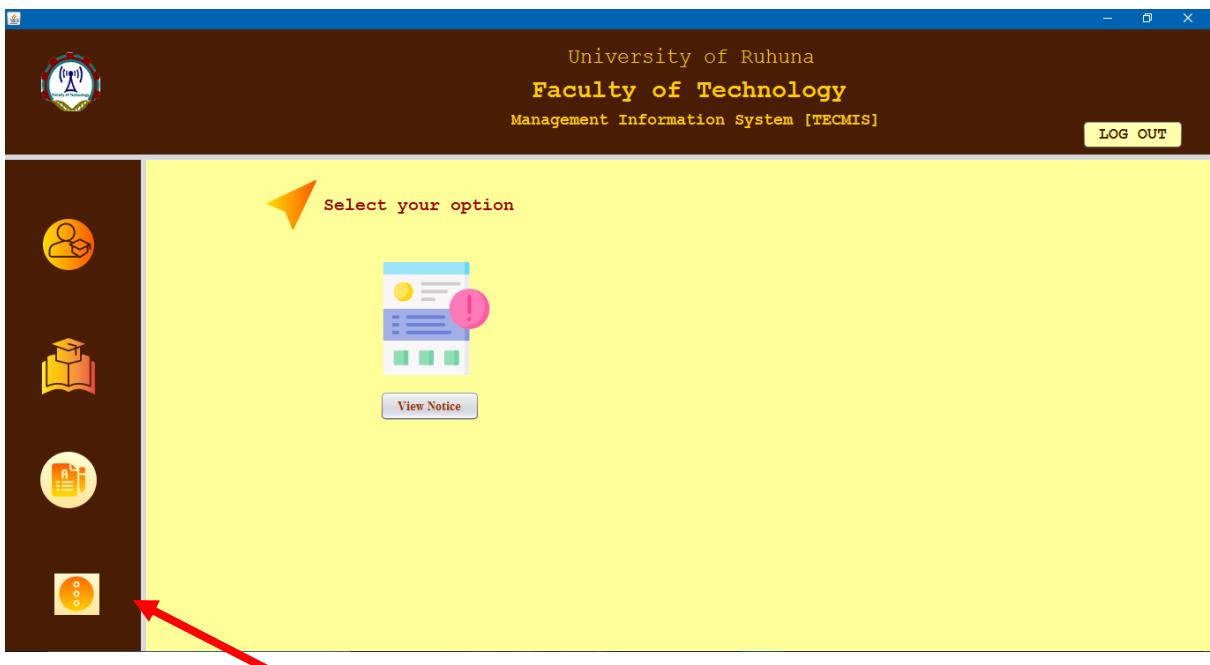
When clicking the Course button in the left side it will show the following interface.



When clicking the Examination button in the left side it will show the following interface.

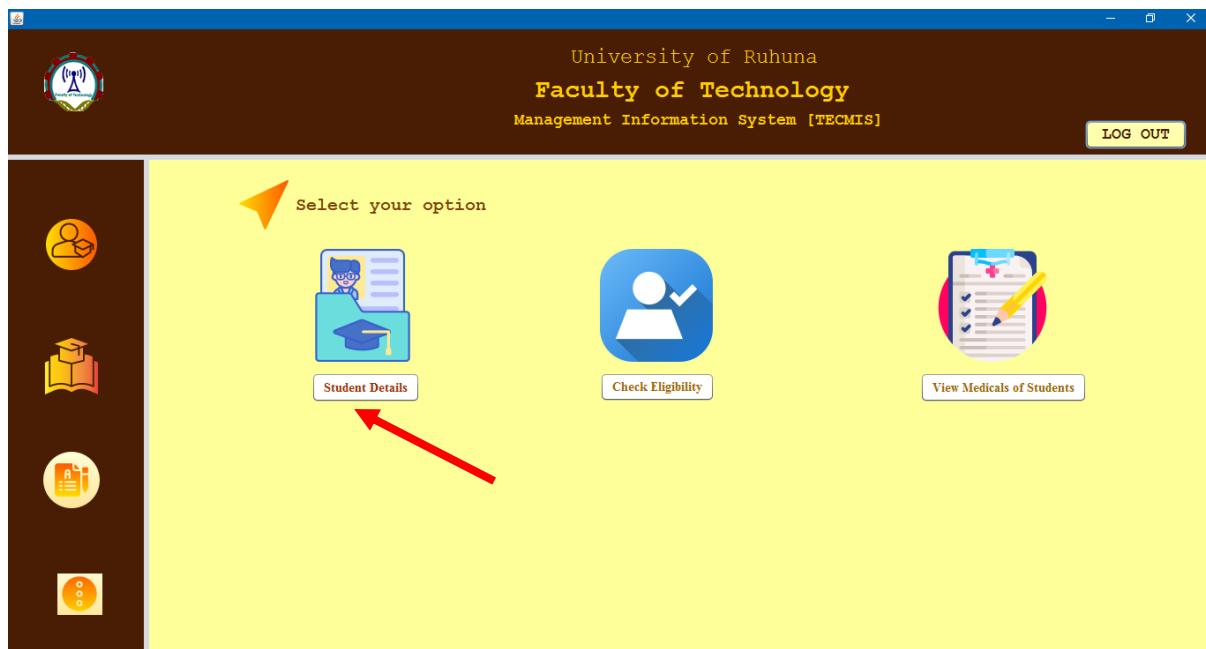


When clicking the More button in the left side it will show the following interface.



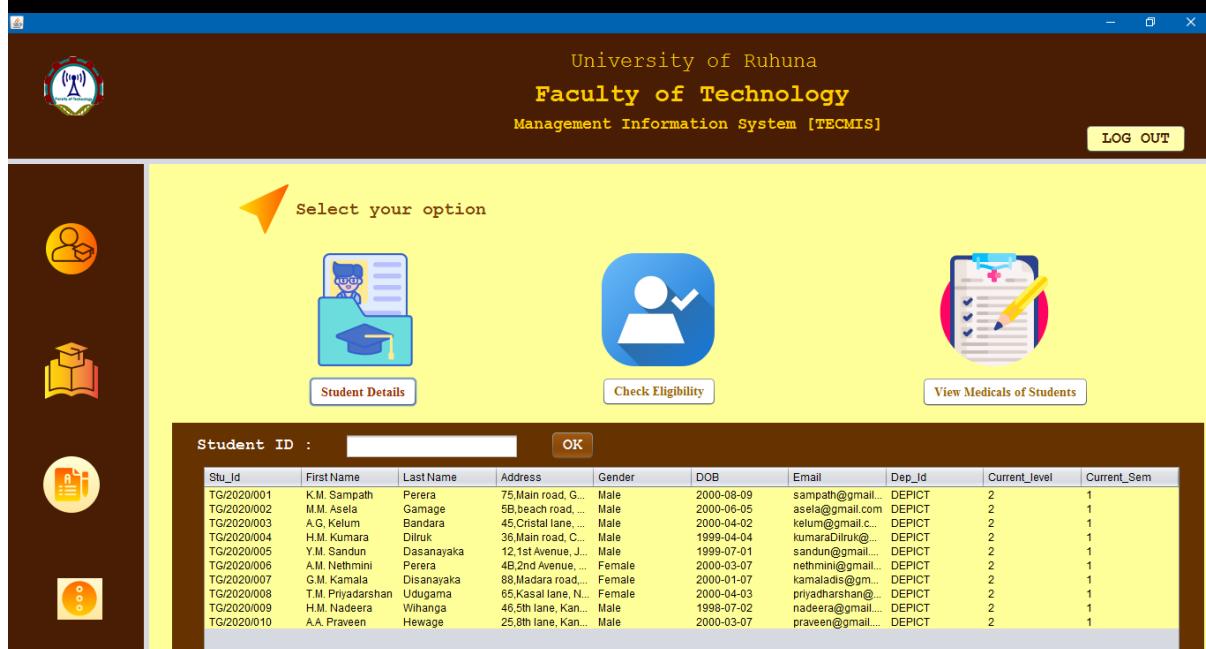
In the student panel, we can see student details, check eligibility and Medical view.

Student Details

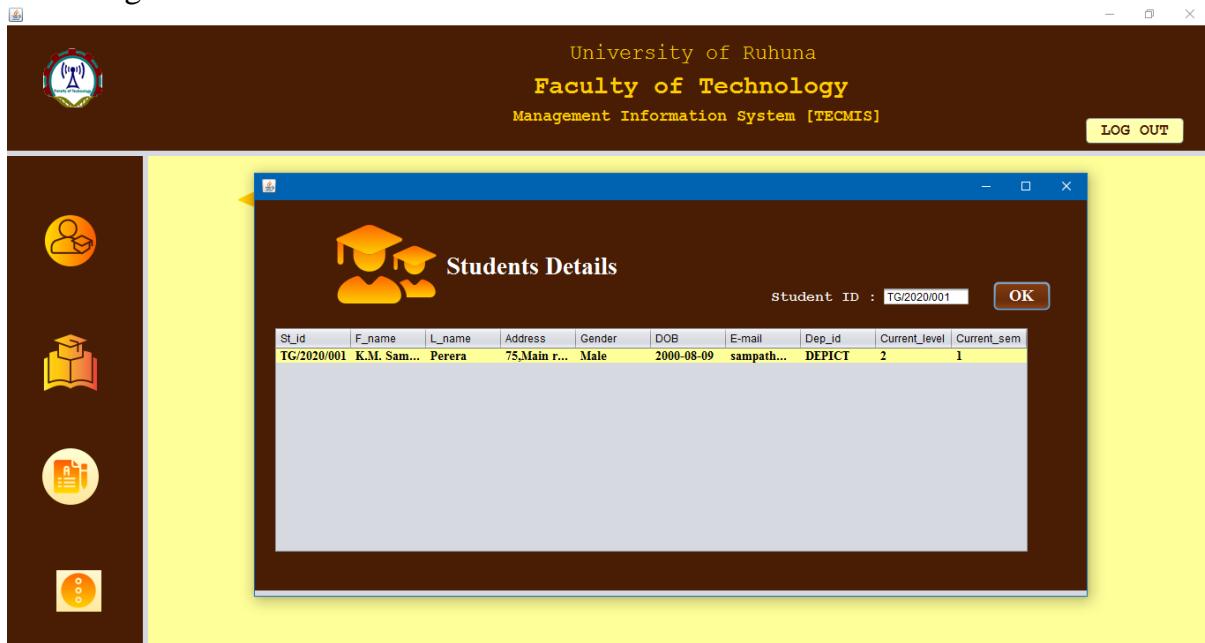


When lecture click the student detail button it will show the student table that the database.

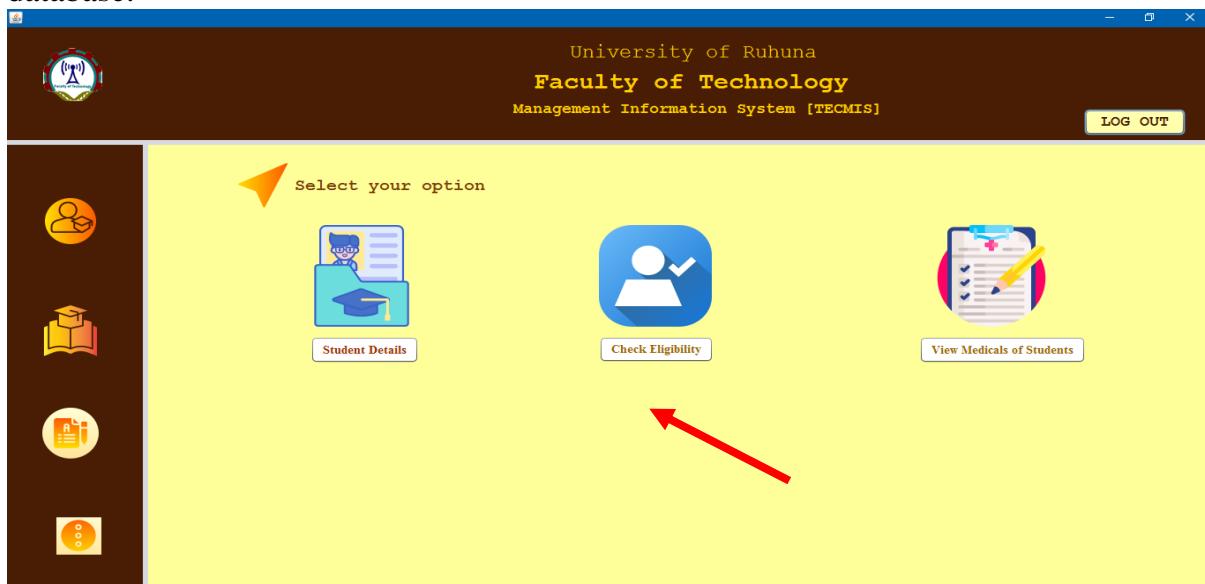
```
mysql> select * from students;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| st_id | f_name | l_name | address | gender | dob    | email   | dep_id | current_level | current_sem |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| TG/2020/001 | K.M. Sampath | Perera | 75,Main road, Galle | Male | 2000-08-09 | sampath@gmail.com | DEPICT | 2 | 1 |
| TG/2020/002 | M.M. Asela | Gamage | 58,beach road, Matara | Male | 2000-06-05 | asela@gmail.com | DEPICT | 2 | 1 |
| TG/2020/003 | A.G. Kelum | Bandara | 45,Cristal lane, Gampaha | Male | 2000-04-02 | kelum@gmail.com | DEPICT | 2 | 1 |
| TG/2020/004 | H.M. Kumara | Dilruk | 36,Main road, Colombo | Male | 1999-04-04 | kumaraDilruk@gmail.com | DEPICT | 2 | 1 |
| TG/2020/005 | Y.M. Sandun | Dasanayaka | 12,1st Avenue, Jaffna | Male | 1999-07-01 | sandun@gmail.com | DEPICT | 2 | 1 |
| TG/2020/006 | A.M. Nethmini | Perera | 48,2nd Avenue, Nuwara Eliya | Female | 2000-03-07 | nethmini@gmail.com | DEPICT | 2 | 1 |
| TG/2020/007 | G.M. Kamala | Disanayaka | 88,Madara road, Kaluthara | Female | 2000-01-07 | kamaladis@gmail.com | DEPICT | 2 | 1 |
| TG/2020/008 | T.M. Priyadarshan | Udugama | 65,Kasal lane, Negombo | Female | 2000-04-03 | priyadarshan@gmail.com | DEPICT | 2 | 1 |
| TG/2020/009 | H.M. Nadeera | Wihanga | 46,5th lane, Kandy | Male | 1998-07-02 | nadeera@gmail.com | DEPICT | 2 | 1 |
| TG/2020/010 | A.A. Praveen | Hewage | 25,8th lane, Kandy | Male | 2000-03-07 | praveen@gmail.com | DEPICT | 2 | 1 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
10 rows in set (0.03 sec)
```



If the lecturer want to see the detail of specific student, he/she can enter the student id as following:



When lecture click the check eligibility button it will show the eligibility table that the database.



```
mysql> select * from eligibility_checking;
```

st_id	cou_id	ca_average	attendance_percentage	eligibility_status
TG/2020/001	ICT01	70.0000	100	Eligible
TG/2020/001	ICT01	70.0000	100	Eligible
TG/2020/001	ICT01	70.0000	100	Eligible
TG/2020/001	ICT01	70.0000	100	Eligible
TG/2020/001	ICT01	70.0000	100	Eligible
TG/2020/001	ICT01	70.0000	100	Eligible
TG/2020/001	ICT01	70.0000	100	Eligible
TG/2020/001	ICT01	70.0000	100	Eligible
TG/2020/001	ICT01	70.0000	100	Eligible
TG/2020/001	ICT01	70.0000	100	Eligible
TG/2020/001	ICT01	70.0000	100	Eligible
TG/2020/001	ICT01	70.0000	100	Eligible
TG/2020/001	ICT01	70.0000	100	Eligible
TG/2020/001	ICT01	70.0000	100	Eligible
TG/2020/001	ICT01	70.0000	100	Eligible
TG/2020/001	ICT01	70.0000	100	Eligible
TG/2020/001	ICT01	70.0000	100	Eligible

University of Ruhuna
Faculty of Technology
Management Information System [TECMIS]
LOG OUT

Student Eligibility

See Not Eligible

Student ID	Course ID	CA_Average	Attendance Percentage	Status
TG/2020/001	ICT01	70.0	100	Eligible
TG/2020/001	ICT01	70.0	100	Eligible
TG/2020/001	ICT01	70.0	100	Eligible
TG/2020/001	ICT01	70.0	100	Eligible
TG/2020/001	ICT01	70.0	100	Eligible
TG/2020/001	ICT01	70.0	100	Eligible
TG/2020/001	ICT01	70.0	100	Eligible
TG/2020/001	ICT01	70.0	100	Eligible
TG/2020/001	ICT01	70.0	100	Eligible
TG/2020/001	ICT01	70.0	100	Eligible
TG/2020/001	ICT01	70.0	100	Eligible
TG/2020/001	ICT01	70.0	100	Eligible
TG/2020/001	ICT01	70.0	100	Eligible
TG/2020/001	ICT01	70.0	100	Eligible
TG/2020/001	ICT01	70.0	100	Eligible
TG/2020/001	ICT01	70.0	100	Eligible
TG/2020/001	ICT01	70.0	100	Eligible
TG/2020/001	ICT01	70.0	100	Eligible
TG/2020/001	ICT01	70.0	100	Eligible
TG/2020/001	ICT01	70.0	100	Eligible
TG/2020/001	ICT01	70.0	100	Eligible

The lecturer can also see the student those are not eligible for the final exam like following:

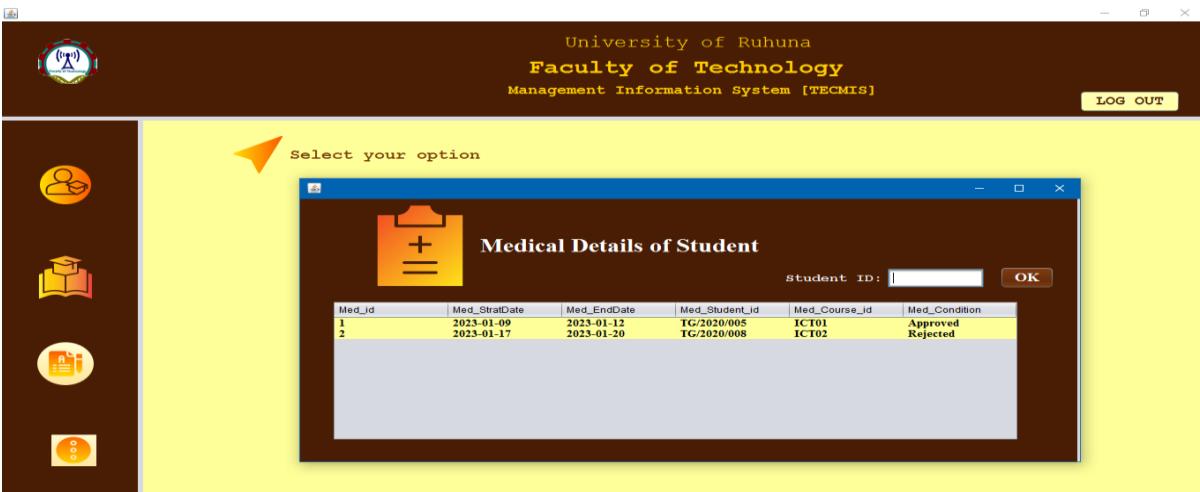
University of Ruhuna
Faculty of Technology
Management Information System [TECMIS]
LOG OUT

Student Eligibility

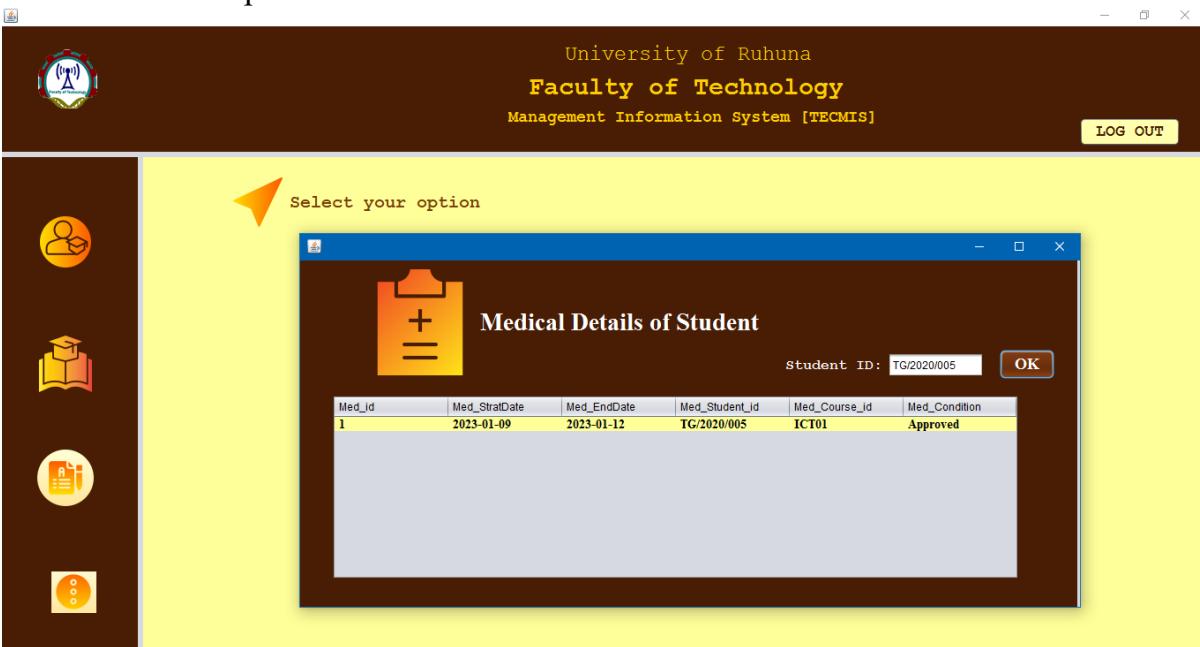
See Not Eligible

Student ID	Course ID	CA_Average	Attendance Percentage	Status
TG/2020/005	ICT01	86.6667	20	Not Eligible
TG/2020/005	ICT01	86.6667	20	Not Eligible
TG/2020/005	ICT01	86.6667	20	Not Eligible
TG/2020/005	ICT01	86.6667	20	Not Eligible
TG/2020/005	ICT01	86.6667	20	Not Eligible
TG/2020/005	ICT01	86.6667	20	Not Eligible
TG/2020/005	ICT01	86.6667	20	Not Eligible
TG/2020/005	ICT01	86.6667	20	Not Eligible
TG/2020/005	ICT01	86.6667	20	Not Eligible
TG/2020/005	ICT01	86.6667	20	Not Eligible
TG/2020/005	ICT01	86.6667	20	Not Eligible
TG/2020/005	ICT01	86.6667	20	Not Eligible
TG/2020/005	ICT01	86.6667	20	Not Eligible
TG/2020/005	ICT02	72.5	20	Not Eligible
TG/2020/005	ICT02	72.5	20	Not Eligible
TG/2020/005	ICT02	72.5	20	Not Eligible
TG/2020/005	ICT02	72.5	20	Not Eligible

Lecturer can see the medical details of the students as well.

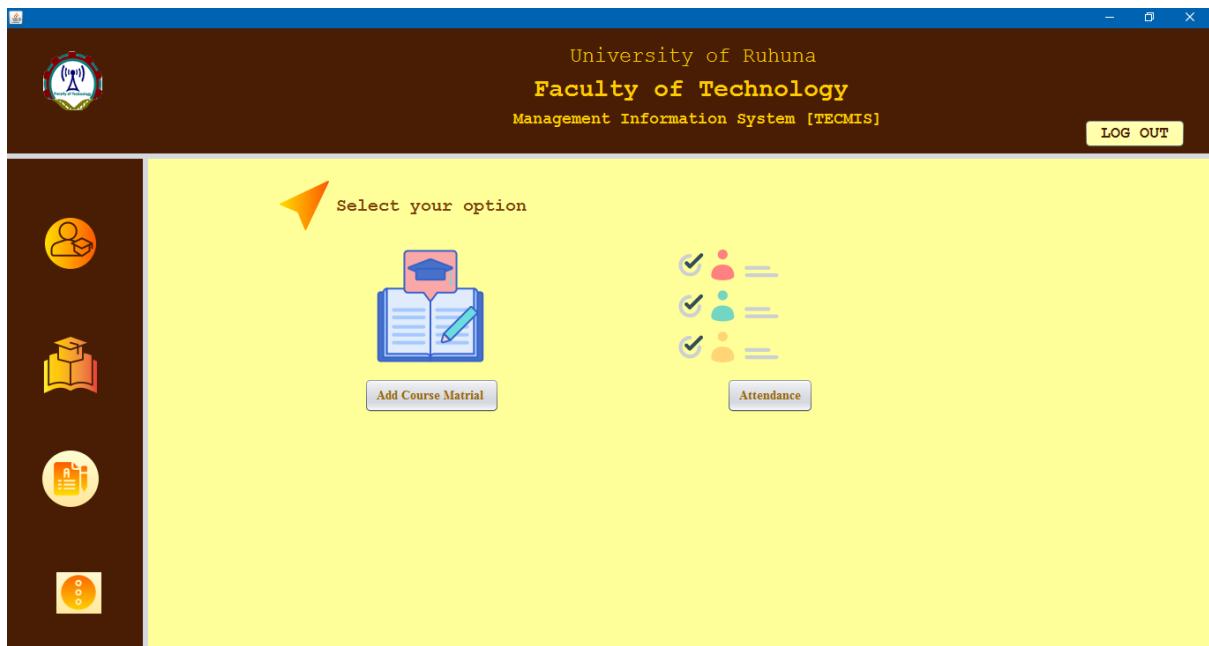


And can see the specific student's medical details.

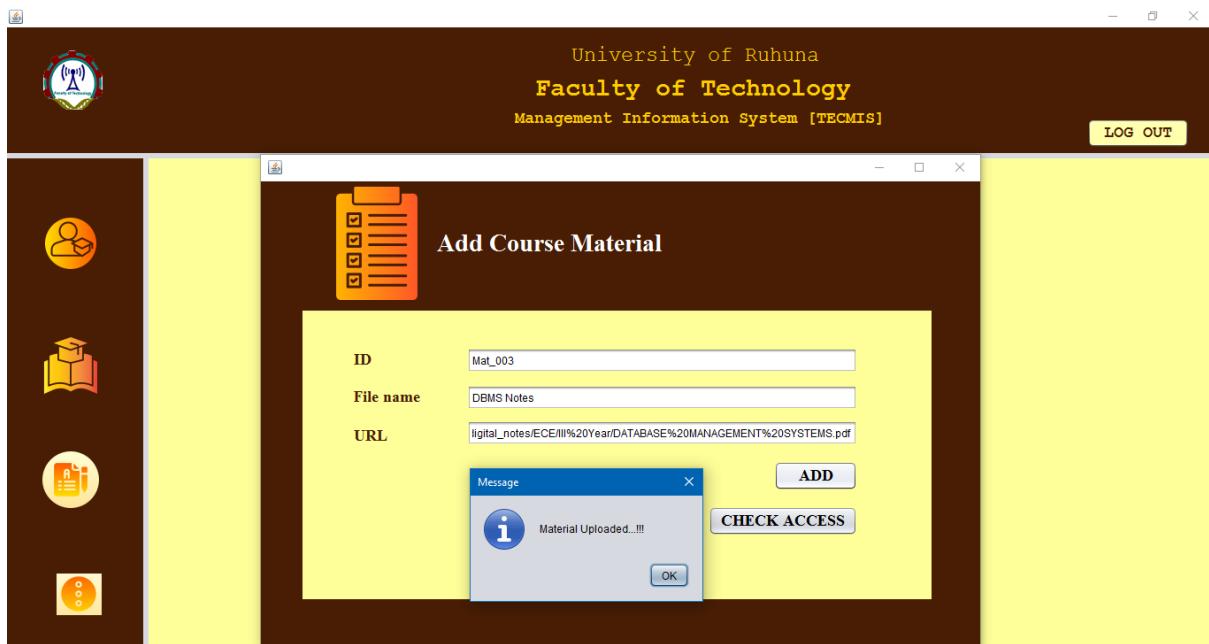


Course

When lecturer click the course show the following interface and click the Add course material button.



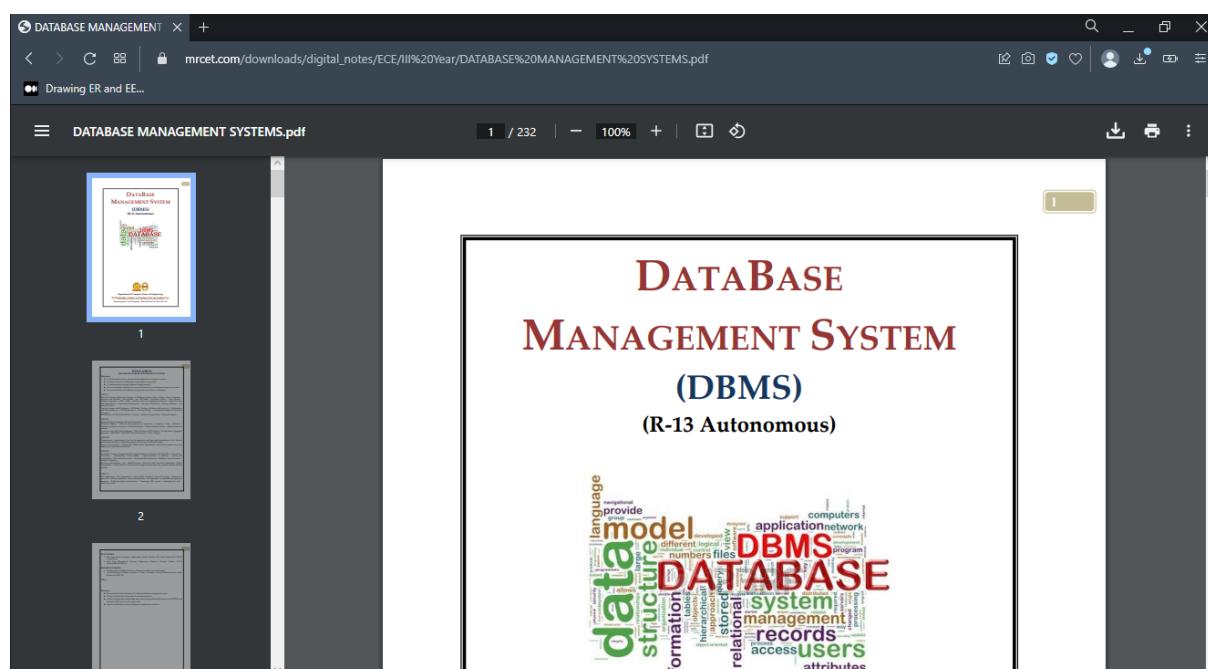
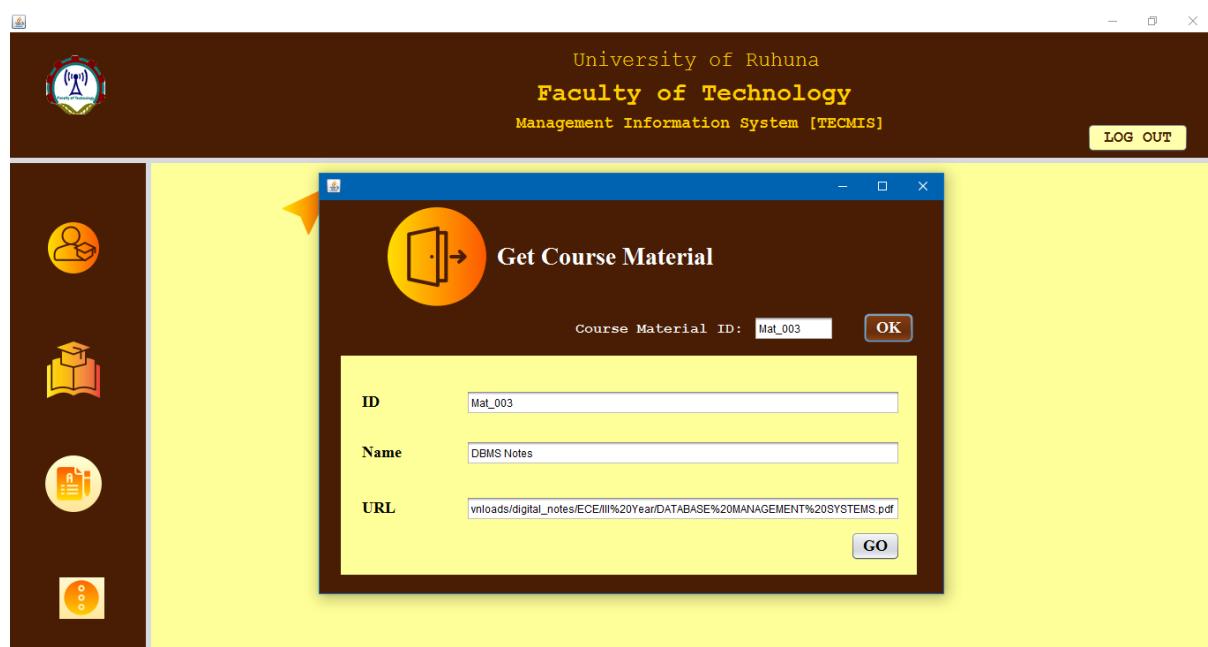
After the Add course material he/ she can add material link to the database like following.



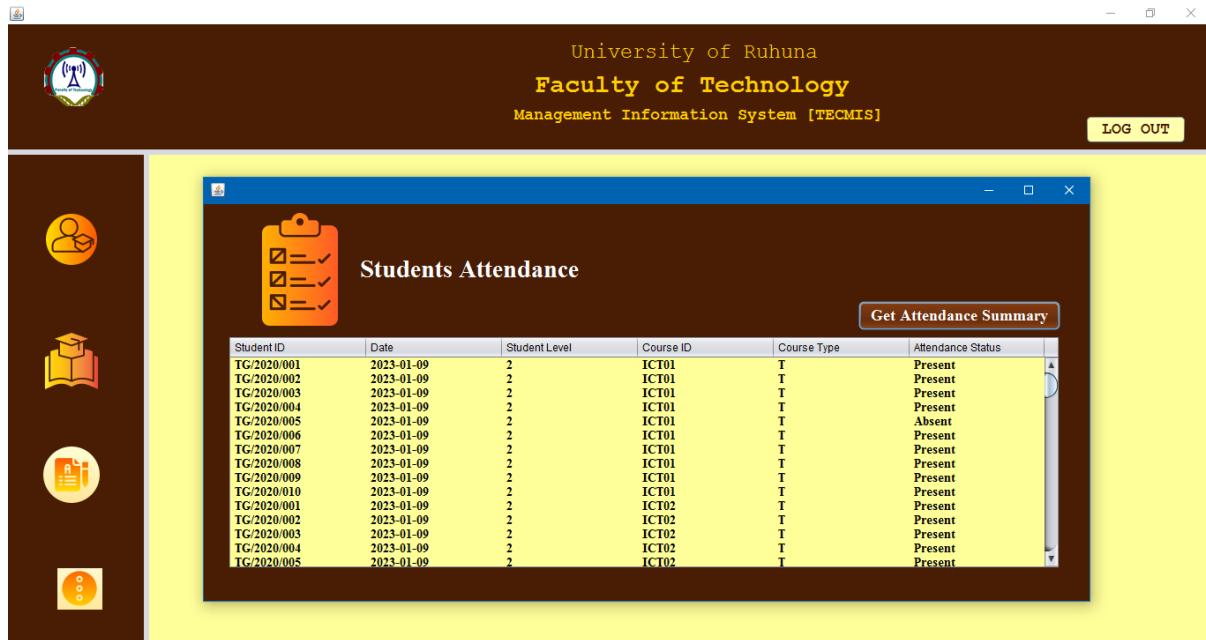
Here we can see the link that added to the database;

```
mysql> select * from cou_material;
+-----+-----+
| cou_mat_id | cou_mat_name | cou_mat_path |
+-----+-----+
| Mat_001 | Sample thesis report | https://clas.iusb.edu/math-compsci_prior-thesis/SKhodali_thesis.pdf |
| Mat_002 | Data Structure(Additional Notes) | https://www.cs.bham.ac.uk/~jxb/DSA/dsa.pdf |
| Mat_003 | DBMS Notes | https://mrcet.com/downloads/digital_notes/ECE/III%20Year/DATABASE%20MANAGEMENT%20SYSTEMS.pdf |
+-----+-----+
3 rows in set (0.03 sec)
```

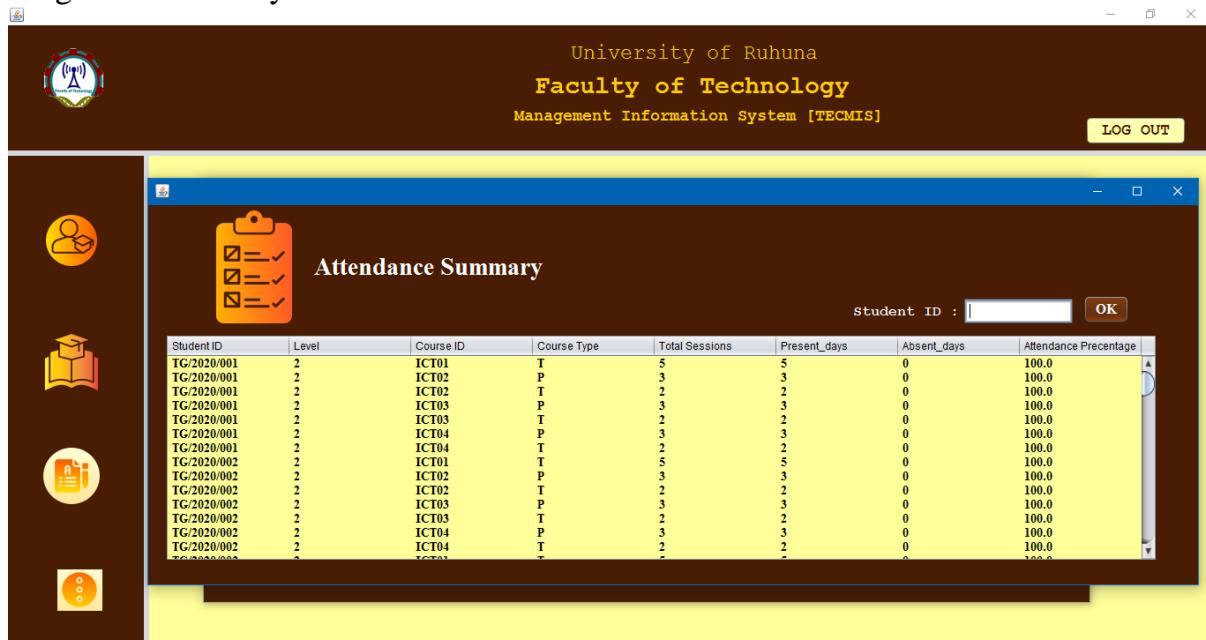
To check the link is working or not, the check access button created. Click the check access button following interface will be showed. And After click the GO button , we can get the course material through the URL;



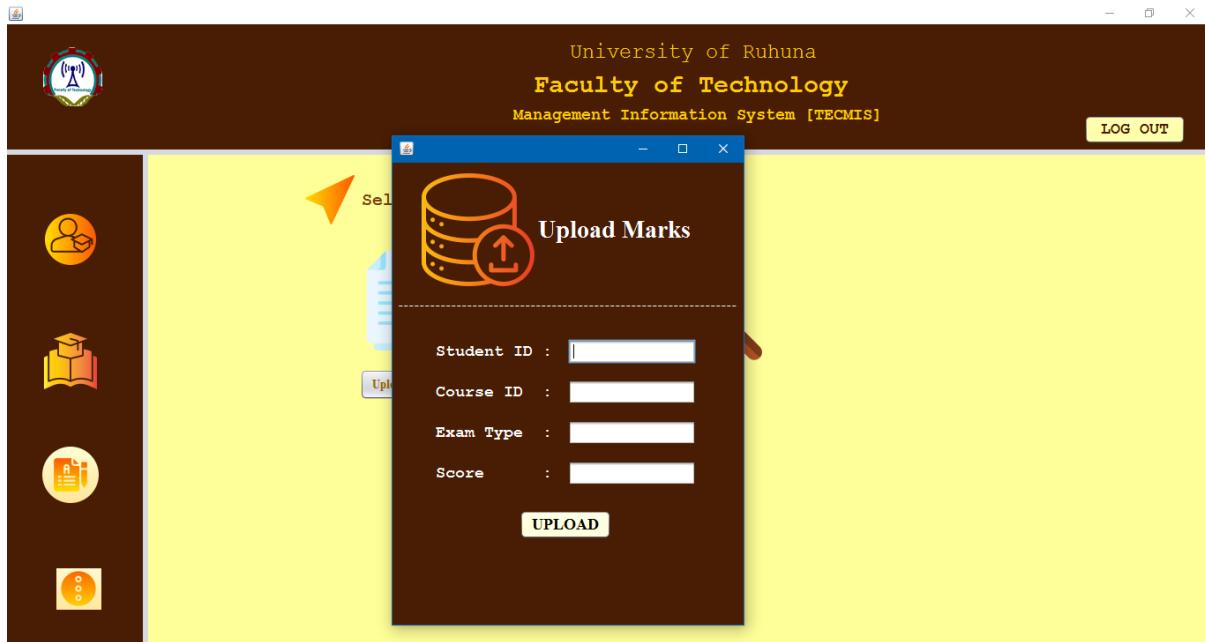
And there is button called attendance to get the attendance details of the all students.



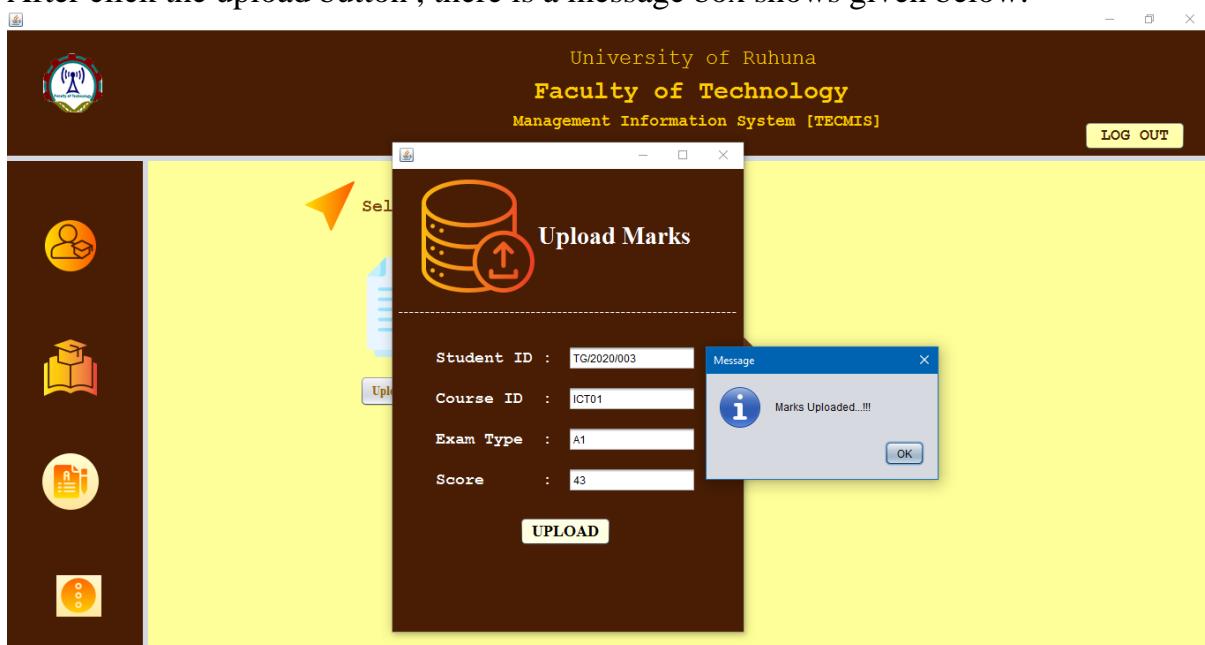
To get the summary of the attendance there is a button called Get Attendance Summary



Here the Lecture can upload the marks



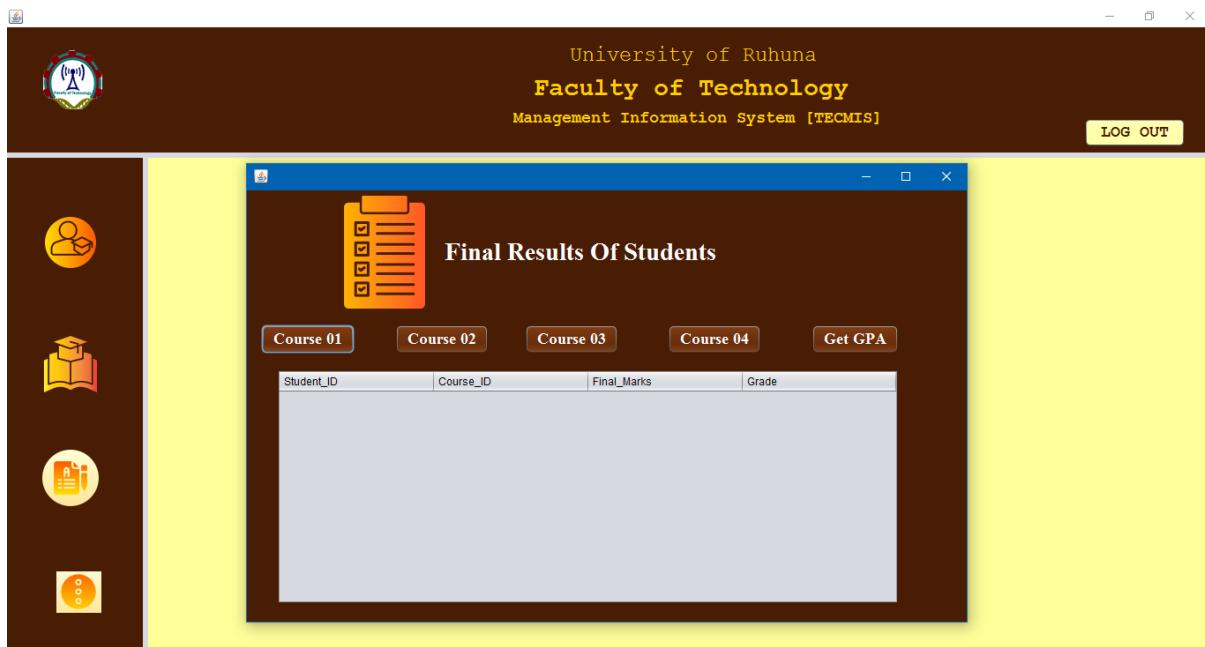
After click the upload button , there is a message box shows given below.



Here we can check the database;

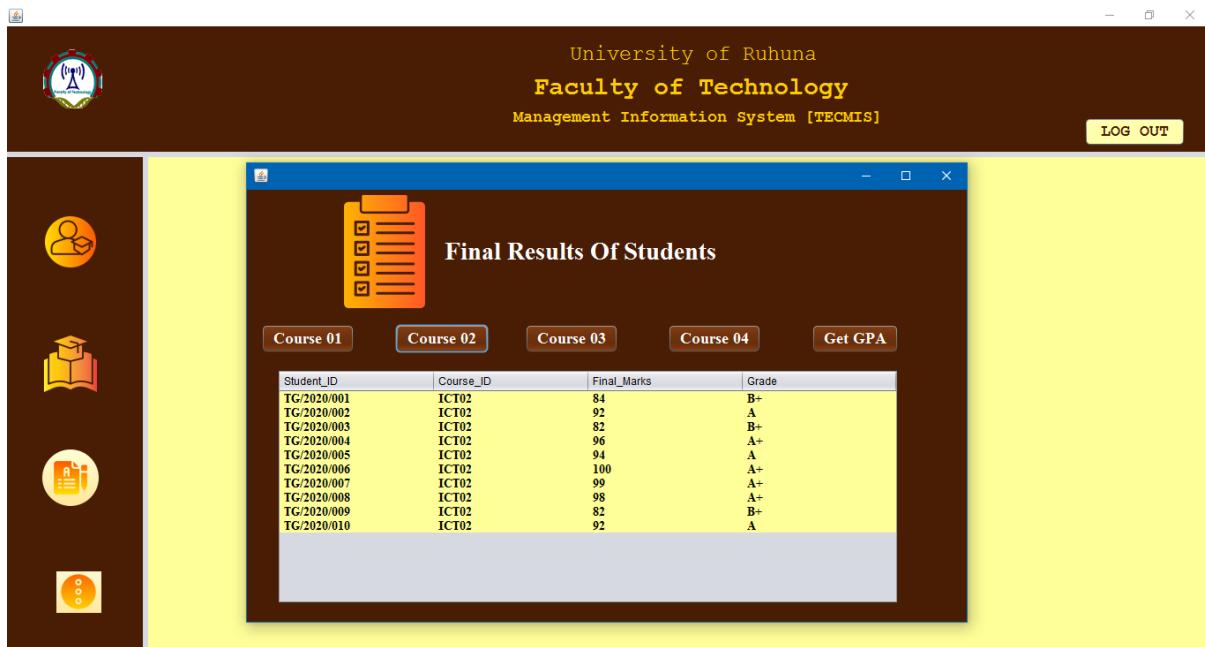
778	TG/2020/003	ICT01	A1	43
779	TG/2020/003	ICT01	A1	43

The following panel show the Final Marks of the students that they got the marks in each course module.



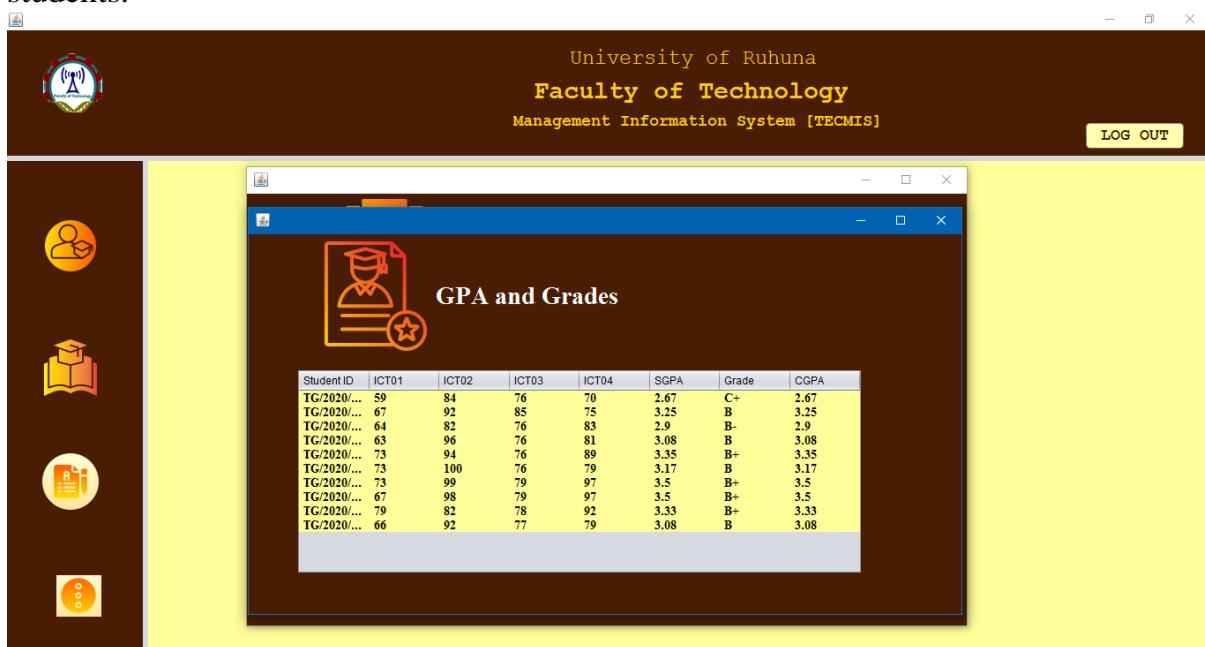
This screenshot shows the same 'Final Results Of Students' page as above, but now displaying data. The table rows are as follows:

Student_ID	Course_ID	Final_Marks	Grade
TG/2020/001	ICT01	59	C-
TG/2020/002	ICT01	67	C+
TG/2020/003	ICT01	64	C
TG/2020/004	ICT01	63	C
TG/2020/005	ICT01	73	B-
TG/2020/006	ICT01	73	B-
TG/2020/007	ICT01	73	B-
TG/2020/008	ICT01	67	C+
TG/2020/009	ICT01	79	B
TG/2020/010	ICT01	66	C+

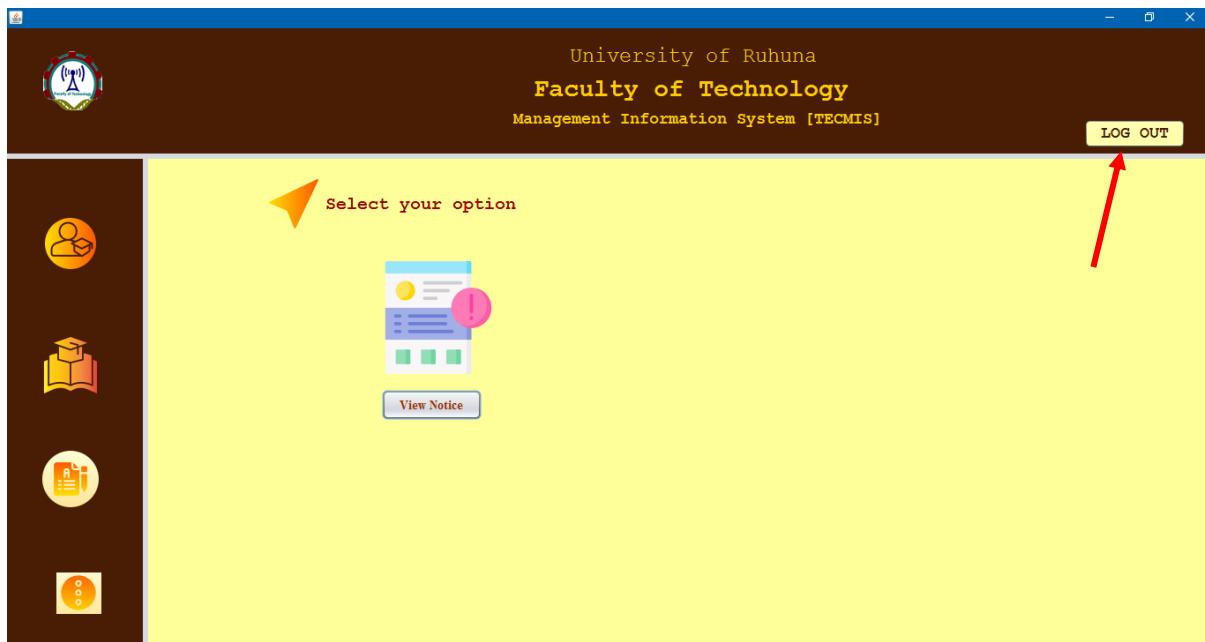
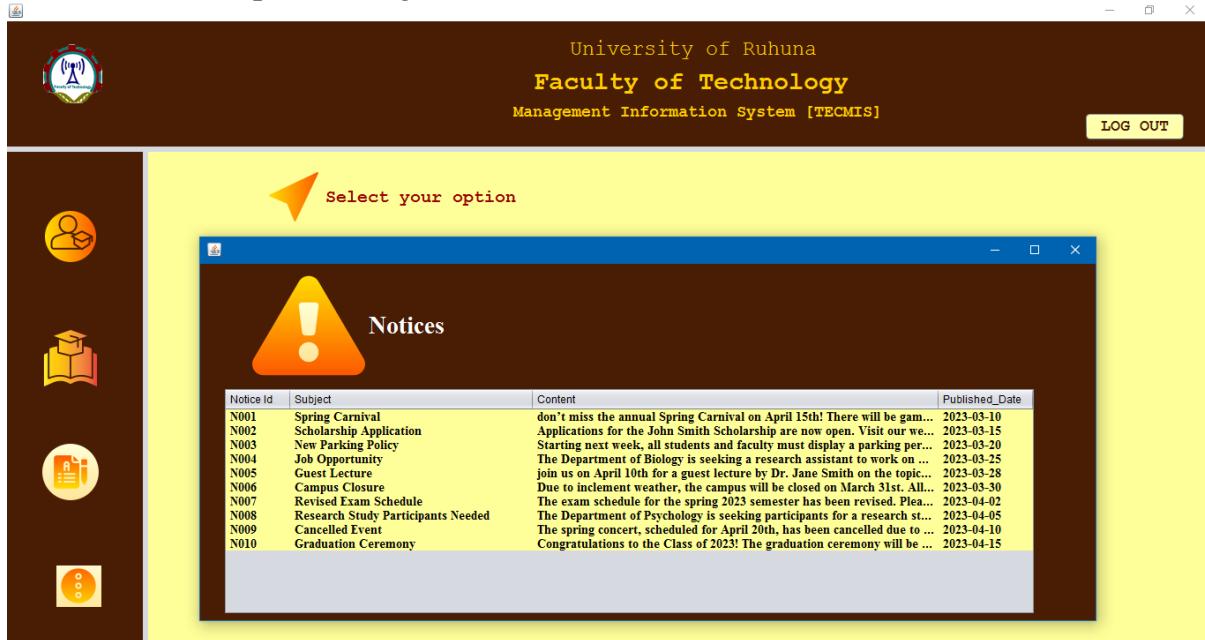


The above images shows the final marks of the course module ICT01 and ICT02 that can get by clicking the buttons called Course 01, Course 02, Course 03, and Course 04; Same process for the buttons.

Finally click the GPA button the lectures can see the SGPA, Grade and CGPA of the all students.



This is the notice panel that got from click the more button that in left side the UI.



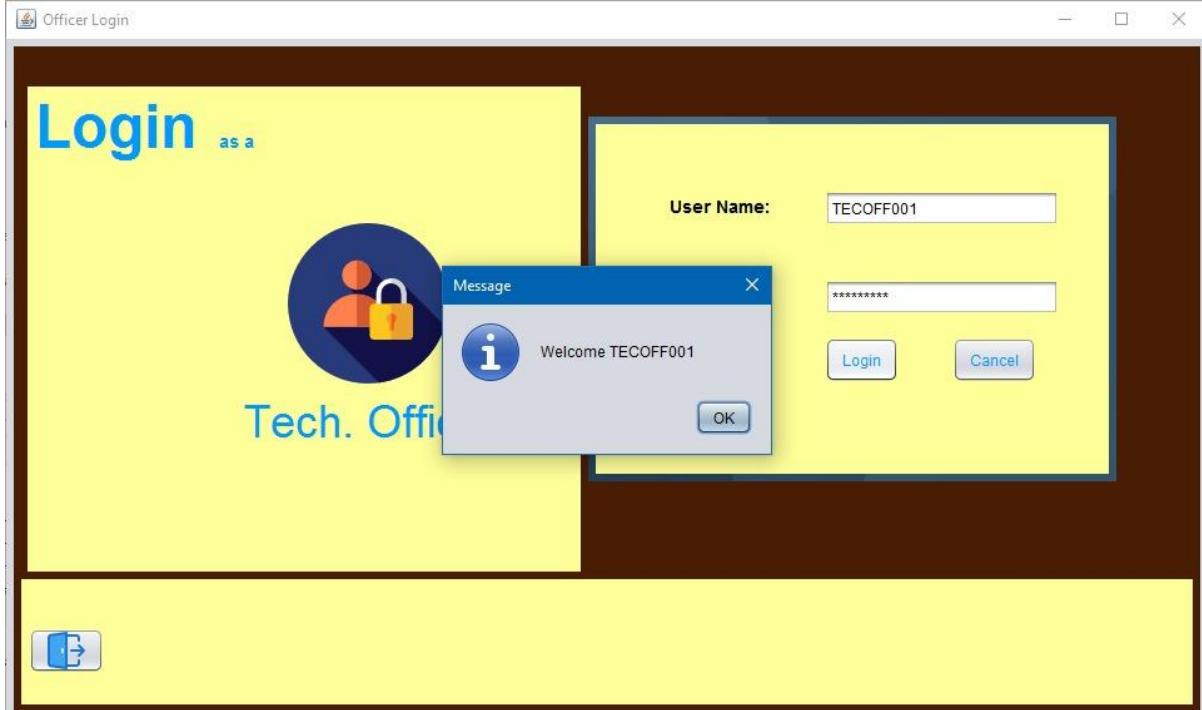
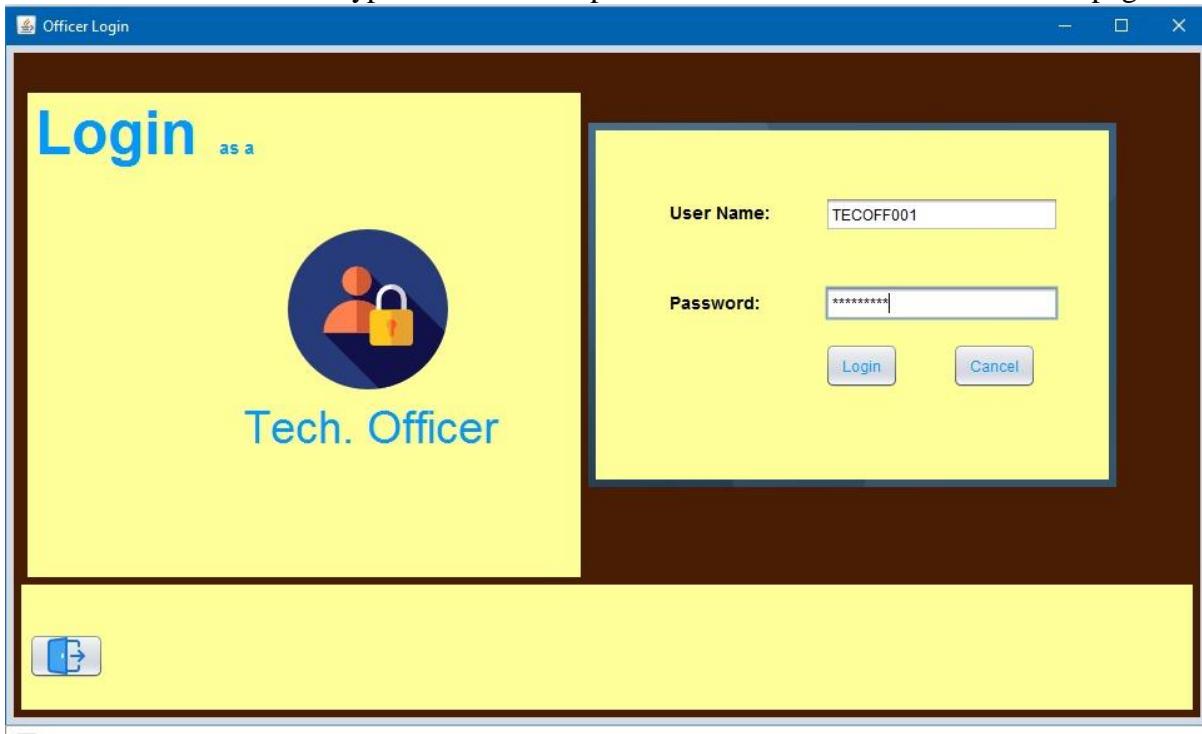
In here is the button called LOG OUT. When the lecturer click the Logout button the Lecturer UI will be disposed and will show the following dashboard.



Technical Officer Interface

Technical Officer Login Page

Technical Officer want to type username and password to enter our technical officer page.



Technical Officer Profile Page

Technical Officer can edit his/her profile in this page.

Tech. Officer
Profile

First Name:

Last Name:

Address:

Gender: Male

Date of Birth:

Email:

Job Title:

Department ID:

Back

Technical Officer Home Page

This is visible after Technical Officer login page. In this page user can edit profile, manage attendance, manage medical details, can see notices, and see timetables of their department.

Tech. Officer
HOME
Tech. Officer

ID

Edit Profile

Manage Attendance

Manage Medical Details

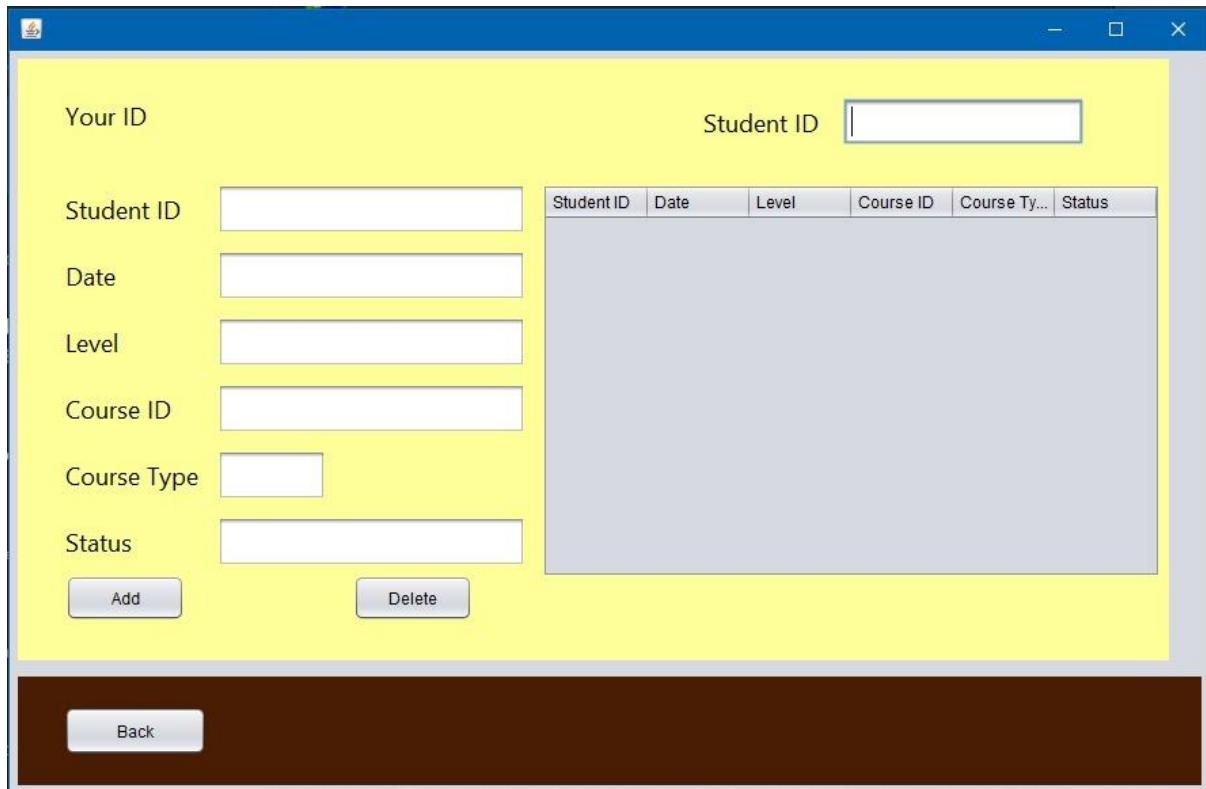
Notices

Time Tables

Logout

Manage Attendance Page

User can add student's attendances and search updated data by Student ID.

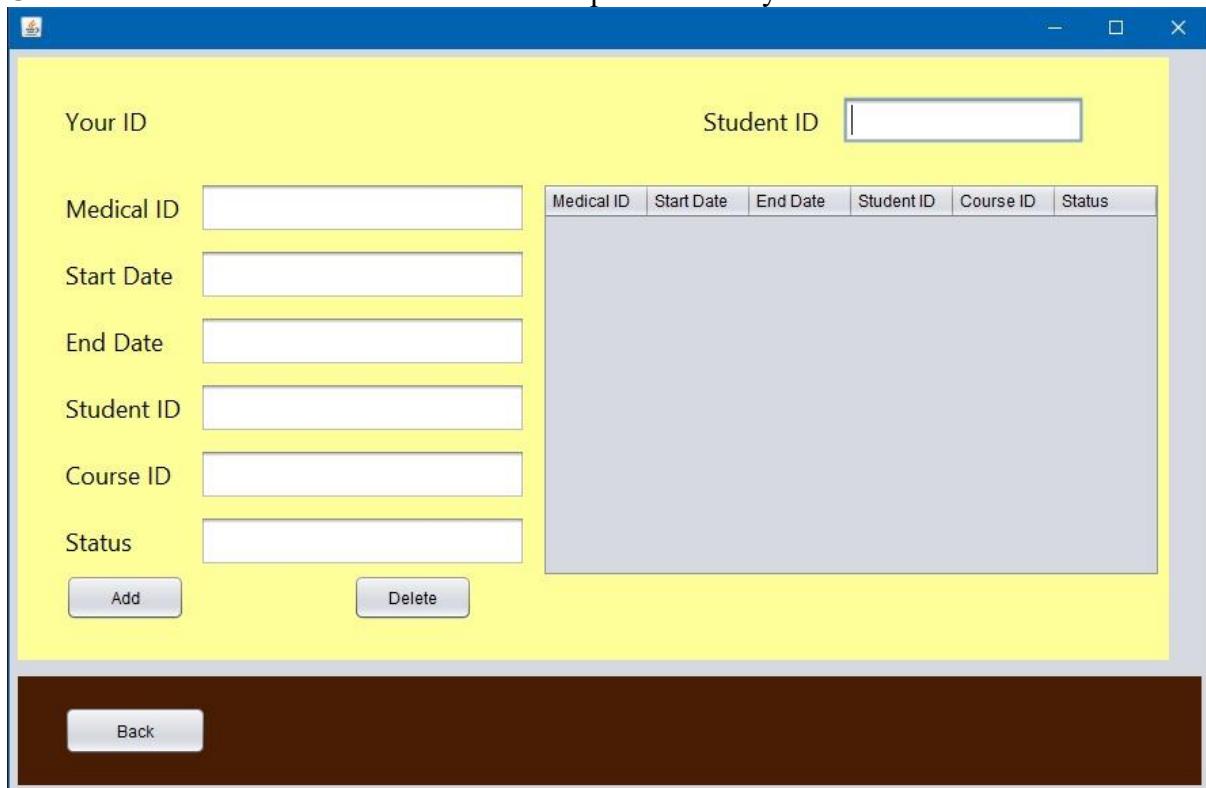


This screenshot shows a Windows application window titled "Student Record Management". The interface is divided into several sections:

- Top Left:** A yellow header area containing the text "Your ID" and a text input field for "Student ID".
- Left Side:** A vertical stack of text input fields for "Student ID", "Date", "Level", "Course ID", "Course Type", and "Status".
- Middle Right:** A grid table with columns labeled "Student ID", "Date", "Level", "Course ID", "Course Ty...", and "Status". The table currently contains no data.
- Bottom Buttons:** Two buttons labeled "Add" and "Delete".
- Bottom Bar:** A dark brown horizontal bar containing a "Back" button.

Manage Medical Page

User can add student's Medicals and search updated data by Student ID.



This screenshot shows a Windows application window titled "Manage Medical Page". The layout is similar to the previous page:

- Top Left:** A yellow header area containing the text "Your ID" and a text input field for "Student ID".
- Left Side:** A vertical stack of text input fields for "Medical ID", "Start Date", "End Date", "Student ID", "Course ID", and "Status".
- Middle Right:** A grid table with columns labeled "Medical ID", "Start Date", "End Date", "Student ID", "Course ID", and "Status". The table currently contains no data.
- Bottom Buttons:** Two buttons labeled "Add" and "Delete".
- Bottom Bar:** A dark brown horizontal bar containing a "Back" button.

Notice Page

User can view updated notice by Subject.

Your ID

Date:

Subject:

Message:

Search Subject

Date	Subject	Message

Back

Timetable Page

User can search updated data by Course ID.

Your ID

Your Department: Tech. Officer

Course ID

Semester

Course ID

Level

Date

Start

End

Location

Type

Seme...	Cours...	Level	Date	Start	End	Location	Type

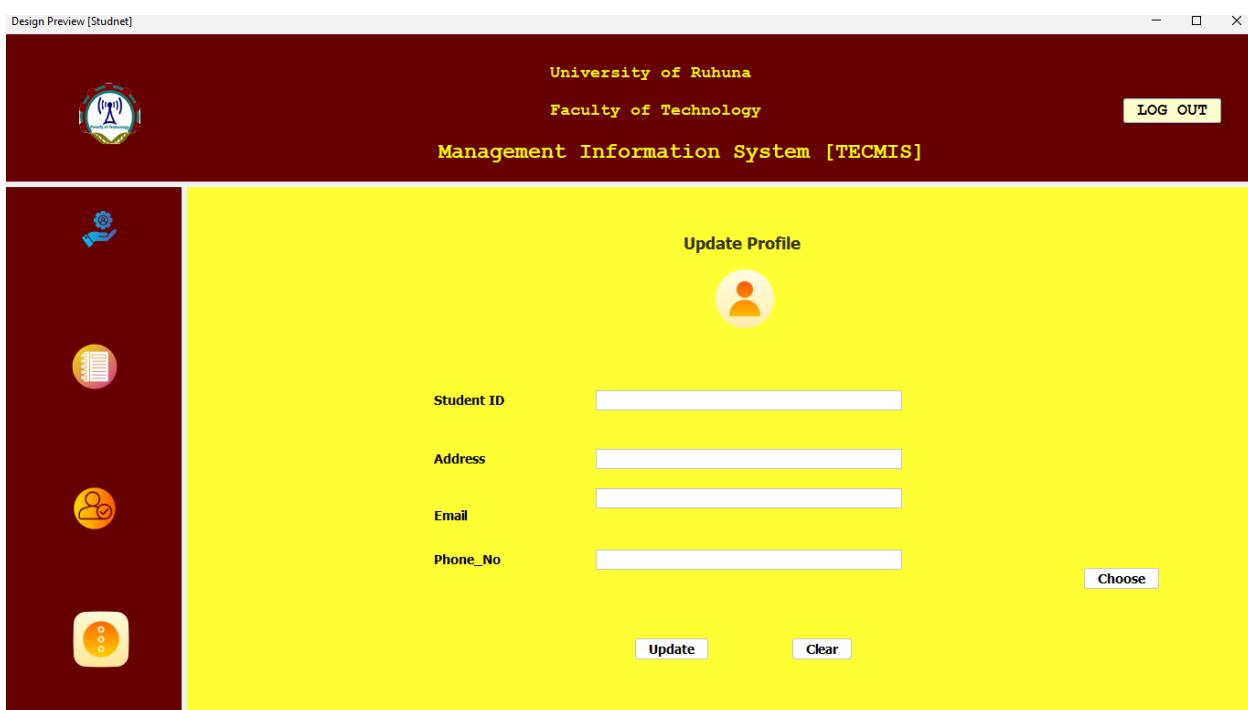
Back

Student Part

As a student, I was responsible for developing the user interface for the Management Information System. I used Java Swing to create a user-friendly interface.

Students are allowed to view various details, including course information, medical records, GPA and CA marks, notices, relevant timetables and attendance.

- Prepared Statement class: The Prepared Statement class is used to execute SQL statements. It is a more secure way to execute SQL statements than using the Statement class, because it prevents SQL injection attacks.
- ResultSet class: The ResultSet class is used to retrieve data from the database. It is a collection of rows and columns, where each row represents a record in the database.
- JDBC driver: The JDBC driver is a software component that allows Java applications to connect to a database. There are many different JDBC drivers available, each of which is designed to connect to a specific type of database.
- JTable class: The JTable class is used to display data in a table. It is a powerful and flexible class that allows you to customize the appearance of the table, as well as the way that data is displayed in the table.
- JButton class: The JButton class is used to create buttons. Buttons can be used to perform actions, such as submitting a form or opening a new window.
- JLabel class: The JLabel class is used to create labels. Labels can be used to display text or images.
- JTextField class: The JTextField class is used to create text fields. Text fields can be used to enter data into an application.
- JFrame class: The JFrame class is used to create a window. Windows are the basic unit of user interface in Java.



Design Preview [Studnet]

University of Ruhuna
Faculty of Technology
Management Information System [TECMIS]

LOG OUT

View course details
Show

c_id	c_name	c_credit	dep_id	lec_id	current_level	current_Sem	type	No_of_quiz	No_of_assessment
------	--------	----------	--------	--------	---------------	-------------	------	------------	------------------



Design Preview [Studnet]

University of Ruhuna
Faculty of Technology
Management Information System [TECMIS]

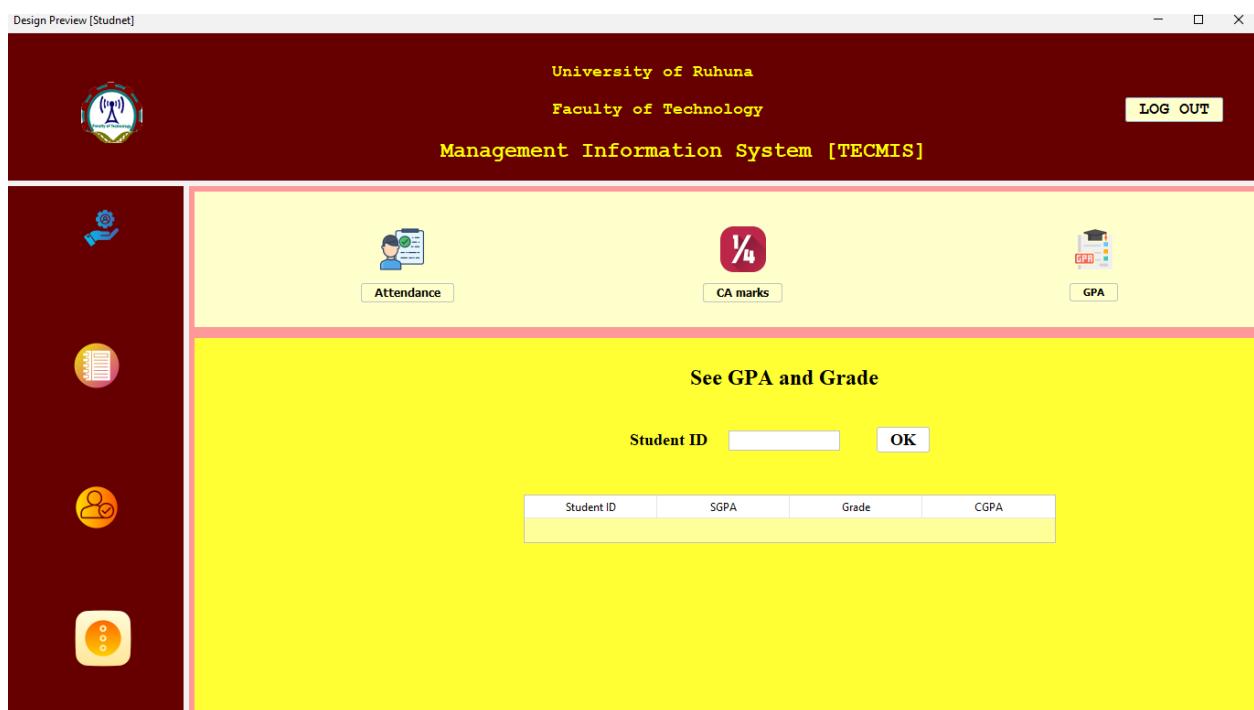
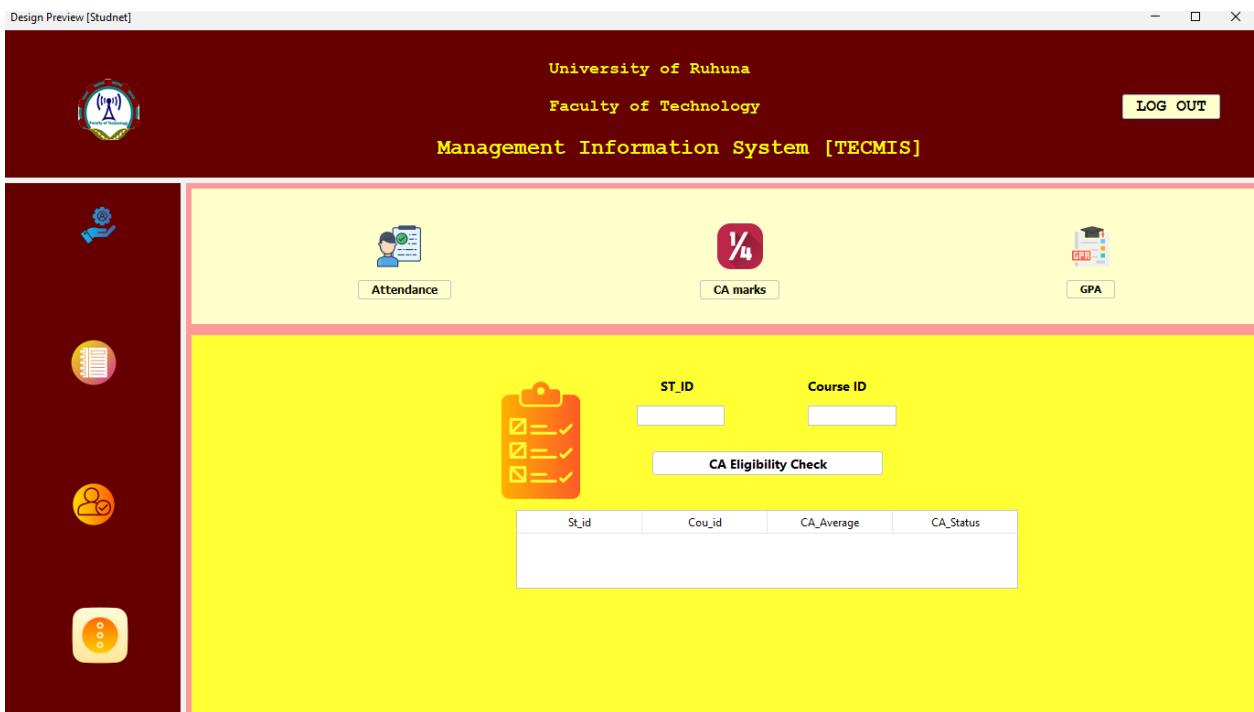
LOG OUT

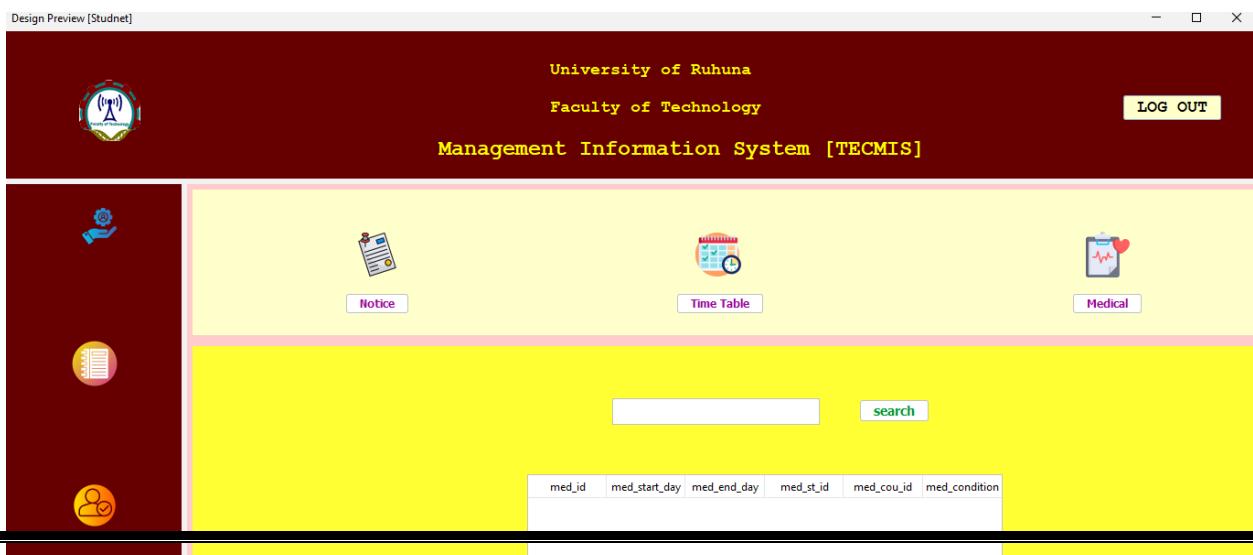
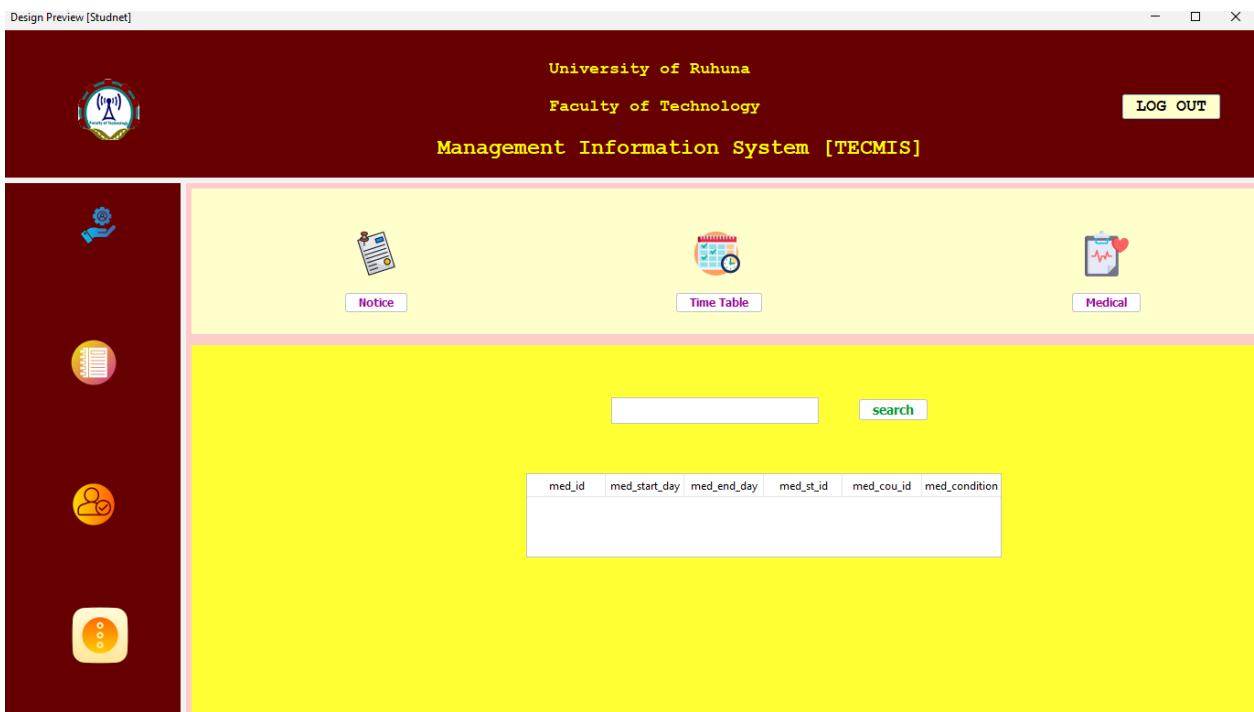
Attendance CA marks GPA

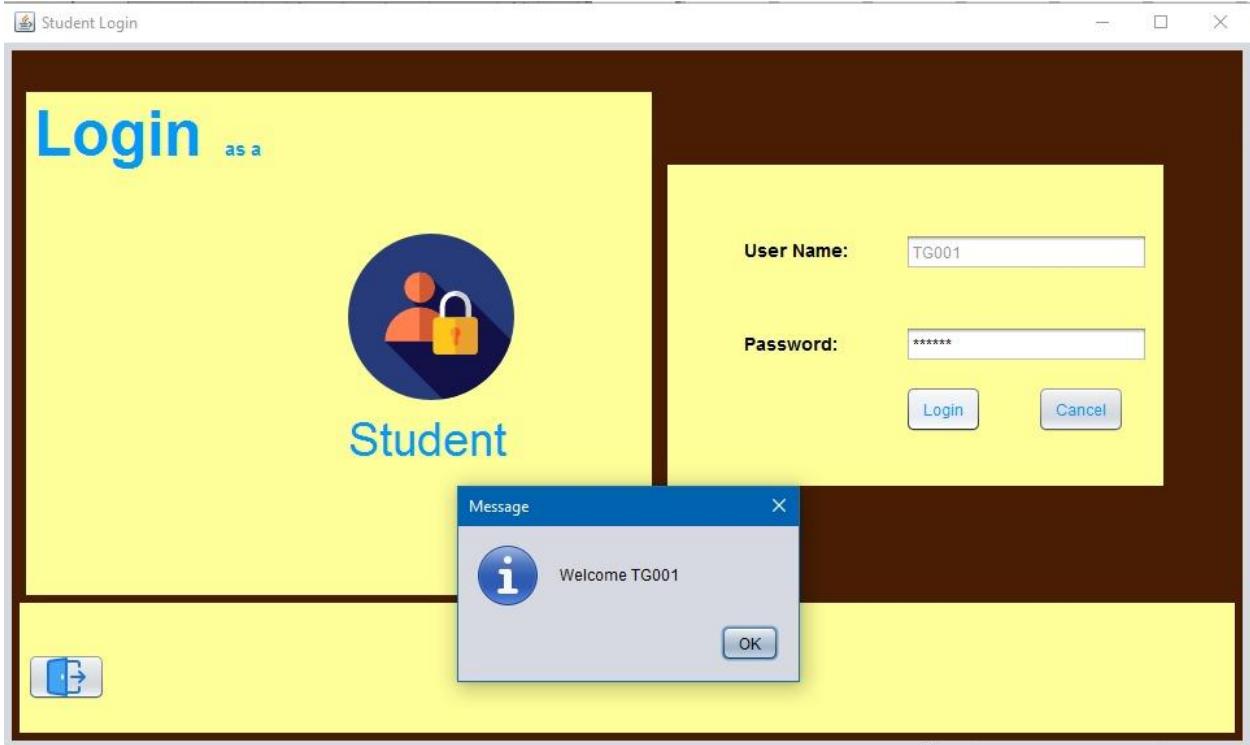
Select Course: ICT01

at_st_id	at_date	at_level	at_cou_id	at_cou_type	at_status
----------	---------	----------	-----------	-------------	-----------









Individual Contributions:

TG/2020/710 :-

- Class Diagram creation
- Home page and Login Prompts
- Admin requirements
 - Create and maintain all User Profiles
 - Create and maintain Courses
 - Create and maintain Notices
 - Create and maintain Timetables

TG/2020/704:-

- ER Diagram
- Whole Database creation and handle
- Lecturer
 - Welcome Page
 - Update Profile
 - Lecturer Dashboard
 - Student Handling
 - Student Details View
 - Student Eligibility Checking
 - Student Medical View
 - Courses
 - Add course material
 - Whole attendance view
 - Attendance summary view
 - Examination
 - Upload Marks
 - Students Marks view
 - Grade and GPA
 - More
 - Notice View

TG/2020/744:

- Technical Officers
 - Can update their profile except user name and password
 - Can add and maintain attendance details of students
 - Can add and maintain medical details of students
 - Can see notices
 - Can see timetables of their department

TG/2020/747

ER Diagram

- Students
 - Can update only contact details and profile picture of their profile
 - Can see attendance details
 - Can see medical details
 - Can see their course details
 - Can see their grades and GPA
 - Can see their timetables
 - Can see notice

Group Members

TG2020/704 -T. MADHUSHA

TG/2020/747 -H.TIRASHA DINUKI

TG/2020/710 -AKTHAR

TG/2020/744 -M.I.A.ASFQAQUE