

KIT506 Software Design and Development

Assignment 3 - System Implementation

Human Resource Information System (HRIS)

HRIS System URL:

<https://ictteach-www.its.utas.edu.au/cylam0/HRIS/public/index.php/>

The default location of index.php:

HRIS/public/index.php

Github URL:

<https://github.com/cherish1515/KIT506-Assignment---HRIS--Group15>

Chun Yat Lam 629797

Parul Bhagat 585812

Naeelabbas Gani 585952

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1. HRIS System Prototype

1.1 Overview

The HRIS system is designed for students or staff members of any institution to store the information about the various daily requirements like the consultation and classes etc. This system grants access to search and view all the user-required facilities depending on the type of user. The workflow and working environment of this software are discussed in detail as:

- Both students and staff can access the system with their unique id and check for their classes, consultations, etc after logging into the system. Users are provided privileged access depending on the authority level. Dedicated login credentials are provided to prevent providing privileged access to a dedicated person.
- The database is holding all the necessary information including “unit”, “staff”, “class”, and “consultation”. The verification from the database is done on the bases of “id”.
- In the unit database “code”, “title”, and “coordinator” are included.
- In the staff database “id”, “given_name”, “family_name”, “campus”, “title”, “room”, “email”, “phone”, and “category” are included.
- In the class, “staff”, “unit_code”, “campus”, “type”, “start”, “end”, “room”, and “day” are present.
- In the consultation, “staff_id”, “start”, “end”, and “day” are present.

1.2 Prototype Design

There are two types of users using this system so the working is different according to their access level authority. So the prototype is having two different functionality and layout for both the users. Our whole HRIS System will be designed under the MVC architectural pattern consisting of M: model, V: view, and C: controller (Svirca 2020).

1.3 Main Page

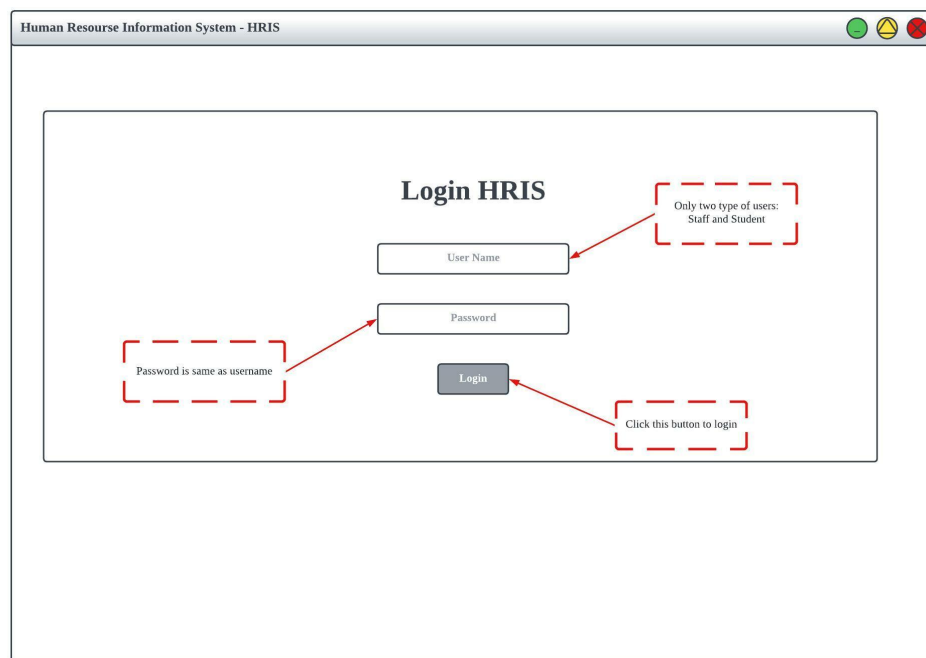


Figure 1: Login Page

The main page is by default the first-page user will meet whenever trying to access the software. Two options are displayed to get access to these options and ask for users to add their username and password to authenticate the user. And after entering the next button is for submitting ion. If the credentials are true, then only access to the next page will be given. Students are requested to put their username and password as students, students respectively. Once the credentials are authenticated then only the next page will appear otherwise an error will be displayed which will request users to enter it in the desired way.

The three buttons on the top right corner are present the red button will close the software or go to sleep. The yellow alongside is to extend the page and the last green button is for minimizing the tab.

1.4 Staff Index Page

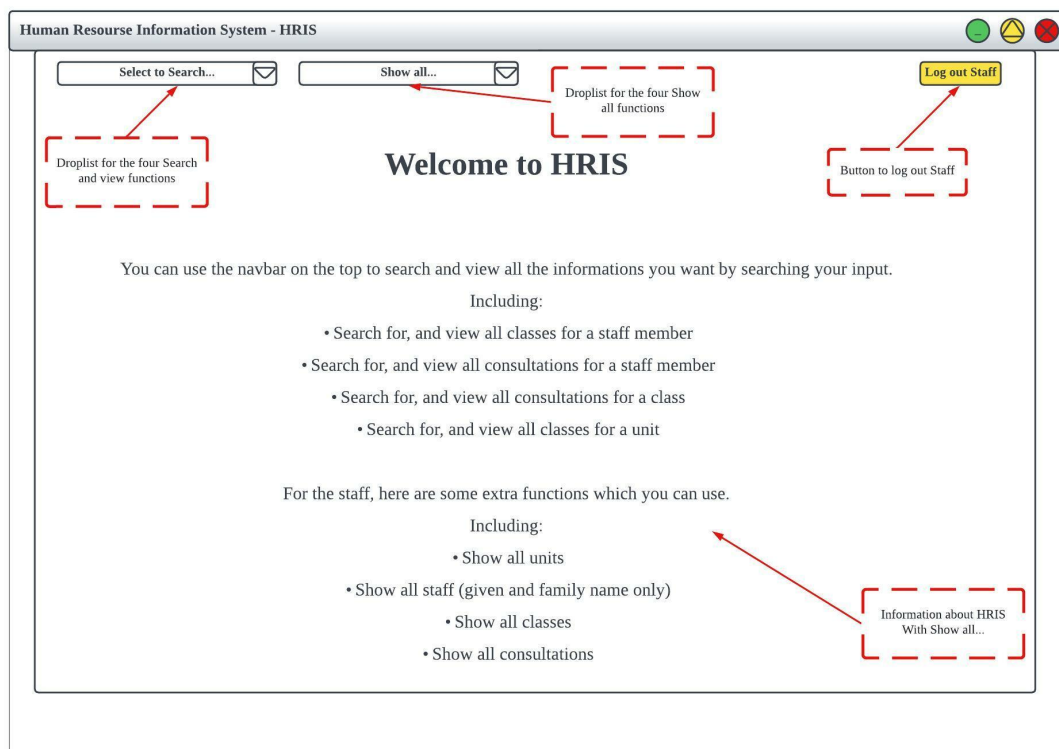


Figure 2: Staff Index Page

If the Login credentials belong to staff, then the different index page will be triggered and displayed with additional access. The default username and password for students have been set as staff, staff respectively. On the index page, the top left corner of the previous block column is now visible and accessible on clicking the down arrow pop-up will show the additional functions which include displaying all the units, staff members, classes, and consultations. The staff is allowed to use both the columns available on the top left while the student is not.

1.5 Result of Show all staff

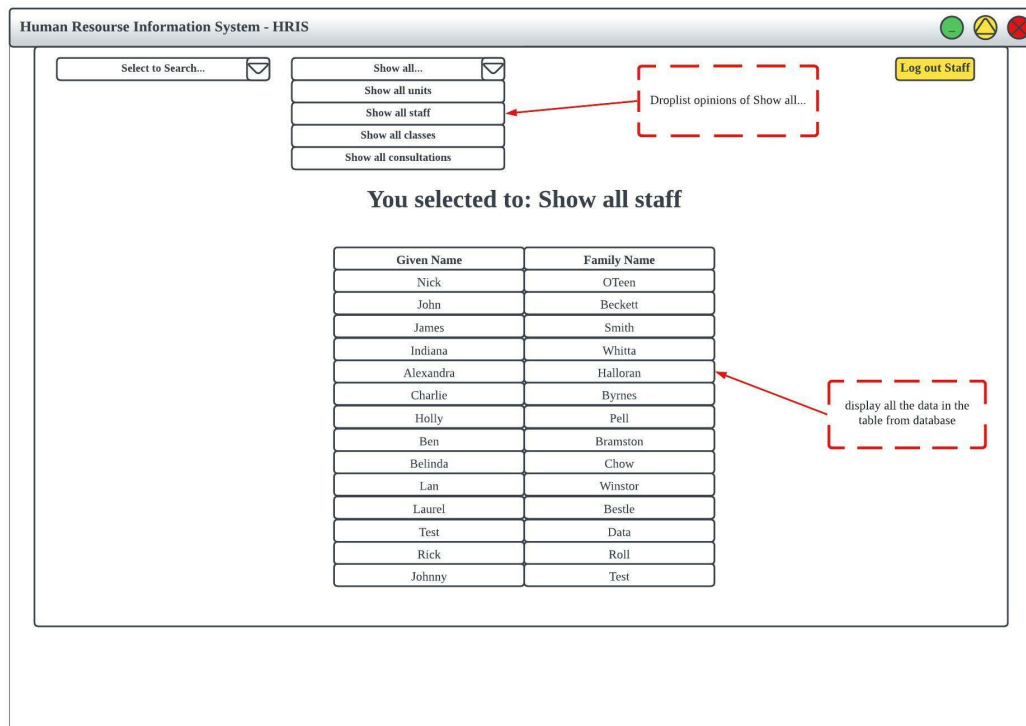


Figure 3: Showing all staff and advanced access for staff

If the user decides to display all the classes, staff, etc on one page the result will be displayed on this page; the following page is a prototype displaying how all the staff members are going to be displayed. In the center, a table is designed which takes data from the database according to the desired or entered requirement of the users

The top right button as discussed earlier will stay there in case of any new requirement and the logout button is also there. The given name and family names of all the staff are displayed similarly to all the classes and consultations and also are displayed in the form of a table where the user will be able to see all the available staff members, classes, or consultations.

1.6 Student Index Page

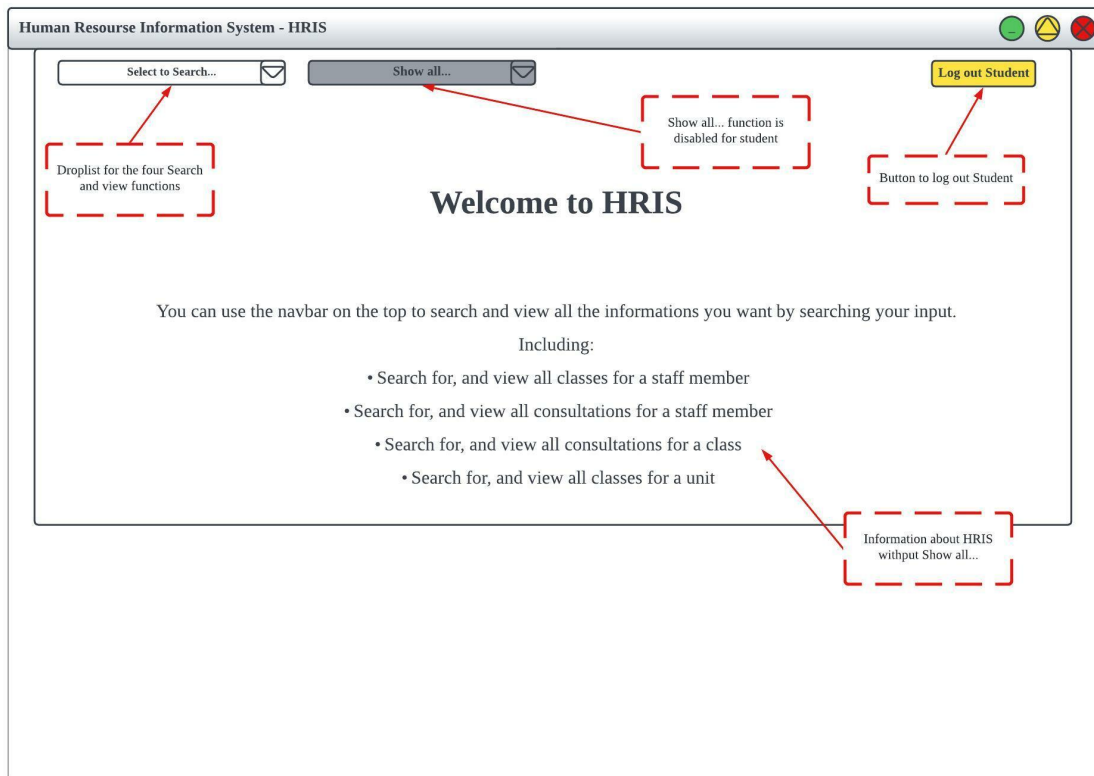


Figure 4: Student Index Page

If the Login credentials belong to a student then the index page for the student will be triggered and displayed. The default username and password for students have been settled as a student, student respectively. On the index page, the top left corner shows the filters or the types of functions users can choose from or filter their search upon clicking the arrow. Alongside this column, a pop-up menu will appear showing different options and asking for users to select the kind of work they would like to do.

The other column with this is blocked or nonusable because the access to this filtration box is granted to staff members only once a staff member login this box is automatically enabled. The main page welcomes the user and also highlights the type of work that can be done. On the top right below the minimizing button, a new yellow button is made which will allow the user to sign out from the software.

1.7 Result of Search, View all classes for a staff

The screenshot displays the 'Human Resource Information System - HRIS' window. At the top left, there is a 'Select to Search...' dropdown menu with four options: 'Search and view all classes for staff', 'Search and view all consultations for staff', 'Search and view all consultations for class', and 'Search and view all classes for unit'. A red dashed box labeled 'Droplist opinions of Search and view...' points to this menu. To the right of the dropdown is a 'Show all...' button. In the top right corner, there is a 'Log out Student' button. Below the dropdown menu, a message states: 'You selected to: Search for, and view all classes for a staff member'. Under this message, there is a 'Staff id:' label followed by an input box. A red dashed box labeled 'Input box for seraching' points to this input box. Below the input box is a 'Show' button. A red dashed box labeled 'Click button to search with input' points to the 'Show' button. Below the 'Show' button is a table with the following headers: 'Unit Code', 'Campus', 'Day', 'Start', 'End', 'Type', and 'Staff'. A red dashed box labeled 'Table does not display data from database before sorting by input' points to the 'Start' header. The table is currently empty.

Unit Code	Campus	Day	Start	End	Type	Staff
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Figure 5: Search, view all classes for a staff Page

If we want to look for a particular member's classes we will achieve that by using the unique member id. The Id is to be entered in the search box displayed in the center of the page and the show button will execute the command requesting the database to display all the classes of the member with this particular id. The result of searching will present on the next page.

Human Resource Information System - HRIS

Select to Search...

Show all...

Log out Student

You selected to: Search for, and view all classes for a staff member

Staff id:

Searching with this input

Unit Code	Campus	Day	Start	End	Type	Staff
KIT401	Hobart	Wednesday	00:00:00	00:00:00	Lecture	123456

Displays the result after sorting the data by the input

Figure 6: Result of Search, view all classes for a staff Page

Once the match is found in the database the table below will view the result which includes all the timings, dates, campuses, days, etc. Using the top-left dropdown box, the user can switch to other functions or look for any other desired result. While the top right corner logout box will take us back to the homepage(index Page).

2. HRIS system application

2.1 HRIS system main view implementation and introduction

2.1.1 Login Page

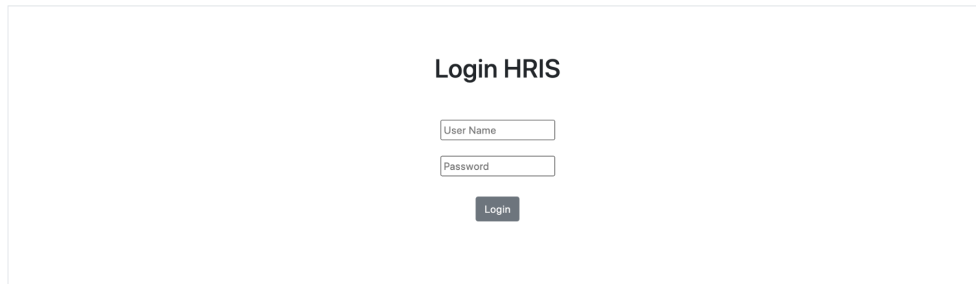
A screenshot of a web application's login page. The page has a light gray background. In the center, there is a white rectangular box with a thin gray border. Inside this box, the text "Login HRIS" is centered at the top. Below the text, there are two input fields: the first is labeled "User Name" and the second is labeled "Password". Both labels are in a small, light gray font. Below the "Password" field, there is a dark gray button with the word "Login" in white text.

Figure 7: HRIS Login Page

This is the main page of HRIS, a login page for access to the system. There are only two types of users which are " Staff " and " Student ". The different usernames would redirect to different indexes of the system. It is because the functions of staff and students are different that staff has an extra droplist to show all the data from the database.

2.1.2 Index Page of Staff

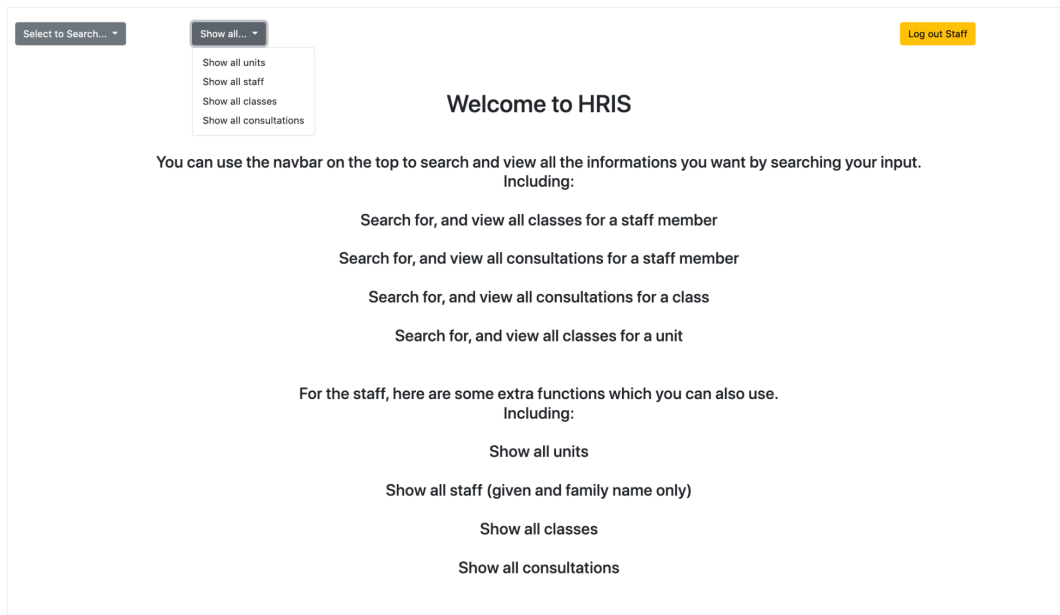


Figure 8: HRIS Staff Index Page

The image shows the index page after logging in with the username of the staff. The index page demonstrates the functions of HRIS. There are three different buttons at the top, which are Select to Search, Show all, and Logout Staff. The Select to Search and Show all buttons would guide the user to different functional pages, the logout button just simply logs out from the system and shows the username. The Show all button shows different opinions after the user clicks on it. The button of Select and show would be explained more in the student index section.

2.1.3 Index Page of Student

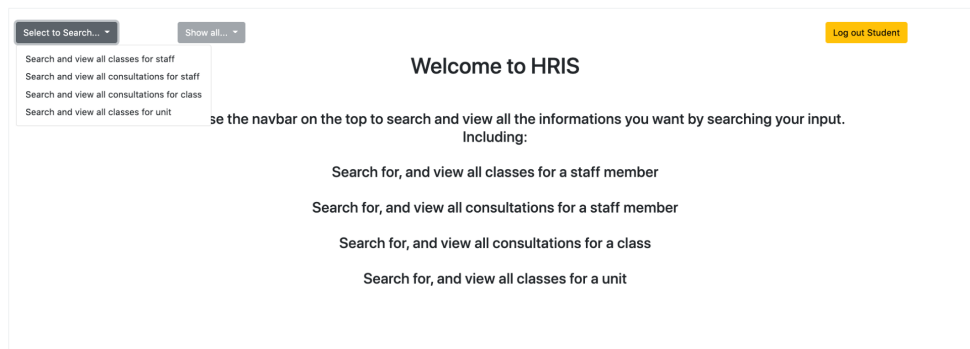


Figure 9: HRIS Student Index Page

This is the actual student main index page. It demonstrates the functions of HRIS as well but without the Show all... information, the Show all button cannot be clicked in the student accounts. It is because the user of the student cannot access the Show all... functions, they are only allowed to search and view in HRIS. Therefore, the Show all... button is disabled for the student users. The text on the logout button is different for staff users, it is changed to "Log out Student" for better recognition for the users to understand which username they are using.

2.1.4 Log out Button

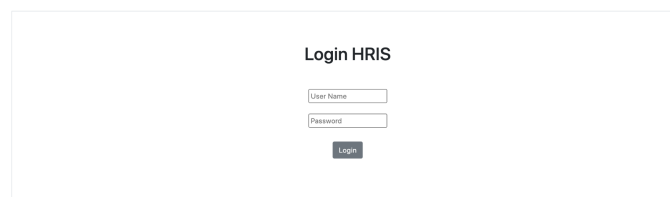


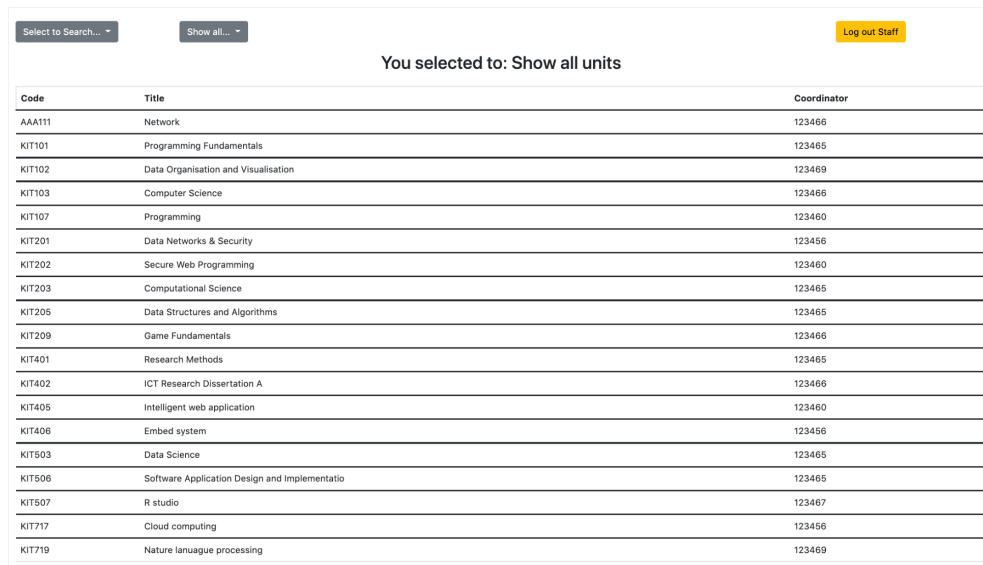
Figure 10: HRIS Logout Page

After the user clicked the logout button on the right corner, HRIS will redirect the user back to the login page and ask for the username and password if the users want to access HRIS again.

These are the main views of the HRIS, the operations would be explained more in the coming operation section.

2.2 Operation implementation and introduction

2.2.1 Show all units - Staff (585952 Naeelabbas Gan)



Code	Title	Coordinator
AAAT11	Network	123466
KIT101	Programming Fundamentals	123465
KIT102	Data Organisation and Visualisation	123469
KIT103	Computer Science	123466
KIT107	Programming	123460
KIT201	Data Networks & Security	123456
KIT202	Secure Web Programming	123460
KIT203	Computational Science	123465
KIT205	Data Structures and Algorithms	123465
KIT209	Game Fundamentals	123466
KIT401	Research Methods	123465
KIT402	ICT Research Dissertation A	123466
KIT405	Intelligent web application	123460
KIT406	Embed system	123456
KIT503	Data Science	123465
KIT506	Software Application Design and Implementatio	123465
KIT507	R studio	123467
KIT717	Cloud computing	123456
KIT719	Nature lanuage processing	123469

Figure 11: HRIS Show all units Page

HRIS would direct the staff to this page after it clicked on the Show all units on the Show all... button. Reminding again that only staff users are allowed to access to use Show all... functions.

Since the HRIS was connected with the database, the page would show the details of all units.

2.2.2 Show all staff - Staff (585952 Naeelabbas Gan)

Select to Search... ▾

Show all... ▾

Log out Staff

You selected to: Show all staff

Given Name	Family Name
Nick	OTeen
John	Beckett
James	Smith
Indiana	Whitta
Alexandra	Halloran
Charlie	Byrnes
Holly	Pell
Ben	Bramston
Belinda	Chow
Ian	Winstor
Laurel	Bestie
Test	Data
Rick	Roll
Johnny	Test

Figure 12: HRIS Show all staff Page

It displays the Show all staff details from HRIS after staff clicked the Show all staff from the Show all button. It only shows the given and family name of the staff and does not include other details.

2.2.3 Show all classes - Staff (585952 Naeelabbas Gan)

Select to Search... ▾

Show all... ▾

Log out Staff

You selected to: Show all classes

Unit Code	Campus	Day	Start	End	Type	Room	Staff
KIT101	Hobart	Thursday	12:00:00	14:00:00	Tutorial	C130	123469
KIT201	Hobart	Tuesday	12:00:00	12:00:00	Lecture	C0	123461
KIT401	Launceston	Monday	12:00:00	14:00:00	Lecture	C 125	123456
KIT506	Hobart	Thursday	11:00:00	11:00:00	Lecture	C0	123461

Figure 13: HRIS Show all classes Page

This is the page of Show all classes, it is not hard to see that all the details of all classes from the database are shown in the table

2.2.4 Show all consultations - Staff (585952 Naeelabbas Gan)

Select to Search... ▾

Show all... ▾

Log out Staff

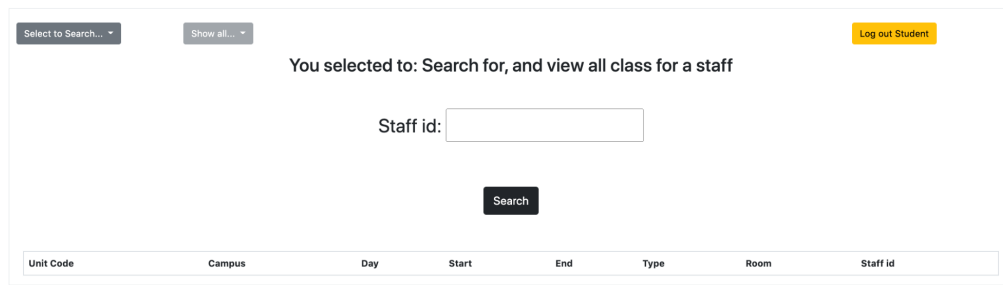
You selected to: Show all consultations

Staff id	Day	Start	End
123456	Monday	20:00:00	24:00:00
123456	Tuesday	11:00:00	13:00:00
123456	Wednesday	09:00:00	10:00:00
123460	Wednesday	12:00:00	14:00:00
123465	Tuesday	09:00:00	11:00:00
123465	Wednesday	13:00:00	14:00:00
123465	Thursday	10:00:00	16:00:00
123465	Friday	09:00:00	11:00:00
123466	Friday	10:00:00	12:00:00
123466	Friday	12:00:00	14:00:00
123468	Tuesday	00:10:00	00:00:00
123469	Monday	11:00:00	12:00:00
123469	Tuesday	11:00:00	13:00:00
486597	Wednesday	12:30:00	15:30:00
987654	Monday	09:00:00	11:30:00

Figure 14: HRIS Show all consultations Page

This is the last Show all... function in HRIS which is Show all consultations. Since there are only four rows for consultations, HRIS would show all the details of it.

2.2.5 Search and view all classes for a staff (629797 Chun Yat Lam)

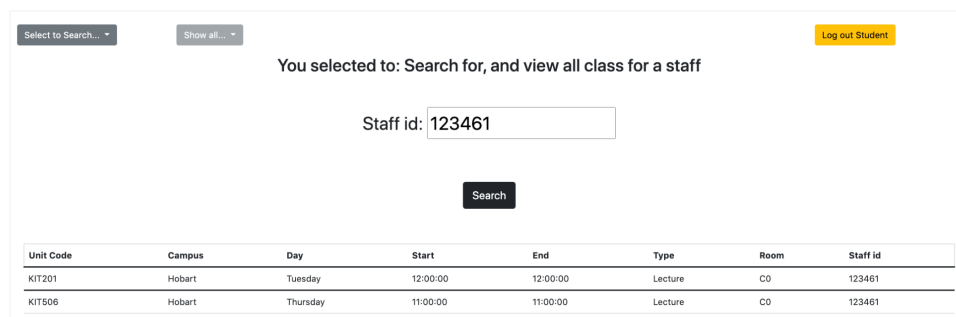


The screenshot shows a web interface for searching staff classes. At the top, there are two buttons: "Select to Search..." and "Show all...". A yellow button "Log out Student" is in the top right. Below these, a message says "You selected to: Search for, and view all class for a staff". In the center, there is a label "Staff id:" followed by an empty text input box. Below the input box is a black "Search" button. At the bottom, there is a table with the following headers: Unit Code, Campus, Day, Start, End, Type, Room, and Staff id.

Figure 15: HRIS Seach and view all classes for a staff Page

The image shows the actual user interface of Search for, and view all classes for staff in the HRIS after the user clicked the Search and view classes for staff on the "Select to Search..." button on the top. Student users are allowed to use those search and view functions and staff users can do that as well.

There is an input box and search button between the page and the table that displays the empty before searching with the input. Once the users type in the staff id as the label said into the input box and click on the search button, it will get and sort all the classes for the staff base on the staff id they put.



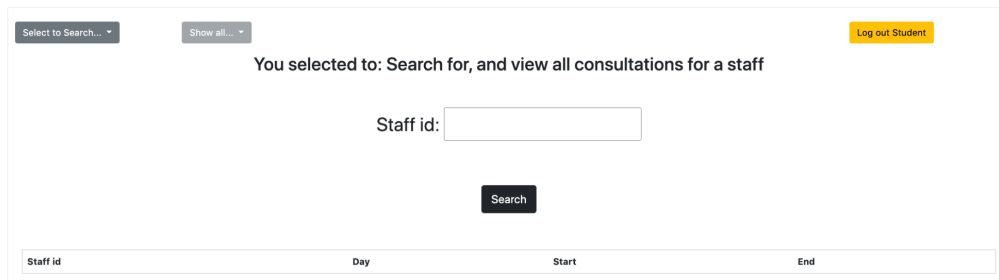
The screenshot shows the same interface as Figure 15, but now the "Staff id:" input box contains the value "123461". The "Search" button is still present. Below the input box, the table from Figure 15 is displayed with data rows.

Unit Code	Campus	Day	Start	End	Type	Room	Staff id
KIT201	Hobart	Tuesday	12:00:00	12:00:00	Lecture	C0	123461
KIT506	Hobart	Thursday	11:00:00	11:00:00	Lecture	C0	123461

Figure 16: HRIS Result of Seach and view all classes for a staff Page

Here is the result after sorting by the staff id: 123461. It displays the details of all the classes by the staff id. The sorting result will change once the users re-put another staff id in the input box and click search.

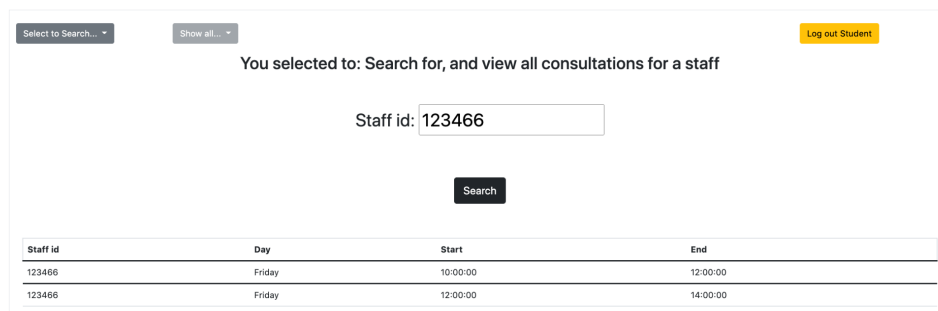
2.2.6 Search and view all consultations for a staff (585812 Parul Bhagat)



The screenshot shows a web interface for searching staff consultations. At the top, there are two dropdown menus: 'Select to Search...' and 'Show all...'. To the right is a 'Log out Student' button. Below these, a message states 'You selected to: Search for, and view all consultations for a staff'. A 'Staff id:' label is followed by an empty text input box. Below the input box is a 'Search' button. At the bottom, a table header is visible with columns: 'Staff id', 'Day', 'Start', and 'End'.

Figure 17: HRIS Search and view all consultations for a staff Page

Here is the Search for, and view all consultations for a staff page, it also has the input box and search button on the page. The table shows empty details about all consultations before searching with the input.



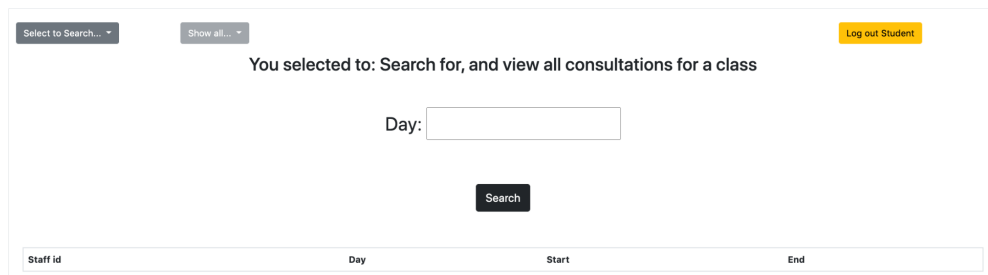
This screenshot shows the same interface as Figure 17, but with the 'Staff id' input box containing the value '123466'. The 'Search' button is still present. The table below now contains two rows of data:

Staff id	Day	Start	End
123466	Friday	10:00:00	12:00:00
123466	Friday	12:00:00	14:00:00

Figure 18: HRIS Result of Search and view all consultations for a staff Page

That's the result when searching with staff id: 123466 that shows the day, starting time, and ending time of all the consultations of the staff, it also has the staff id the user searched in the table.

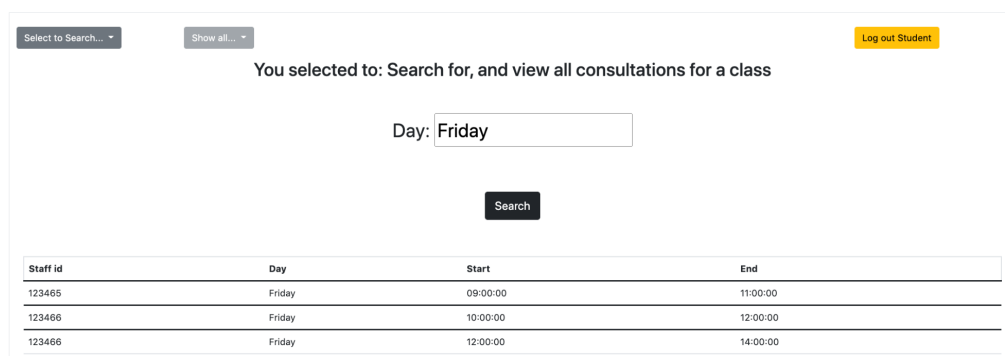
2.2.7 Search and view all consultations for a class (585812 Parul Bhagat)



The screenshot shows a web interface for searching consultations. At the top, there are two dropdown menus: 'Select to Search...' and 'Show all...'. To the right is a yellow button labeled 'Log out Student'. Below these is a message: 'You selected to: Search for, and view all consultations for a class'. In the center, there is a label 'Day:' followed by an empty text input field. Below the input field is a black button labeled 'Search'. At the bottom, there is a table with four columns: 'Staff id', 'Day', 'Start', and 'End'.

Figure 19: HRIS Seach and view all consultations for a class Page

The coming functional page is Search for, and view all consultations for a class. Same as the two pages before, but this time is searching with the day.



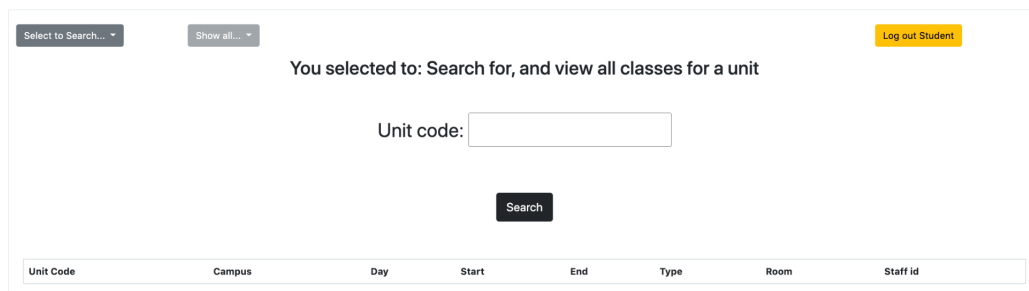
The screenshot shows the same web interface as Figure 19, but with the 'Day' input field filled with the text 'Friday'. The 'Search' button is still present. Below the input field, the table from Figure 19 is populated with data. The table has four columns: 'Staff id', 'Day', 'Start', and 'End'.

Staff id	Day	Start	End
123465	Friday	09:00:00	11:00:00
123466	Friday	10:00:00	12:00:00
123466	Friday	12:00:00	14:00:00

Figure 20: HRIS Result of Seach and view all consultations for a class Page

Here is the result of searching by Day: Friday, It displays the same type of details as the previous searching page. It is because this page and the last page are searching for the details of consultations, but searching with a different type of input.

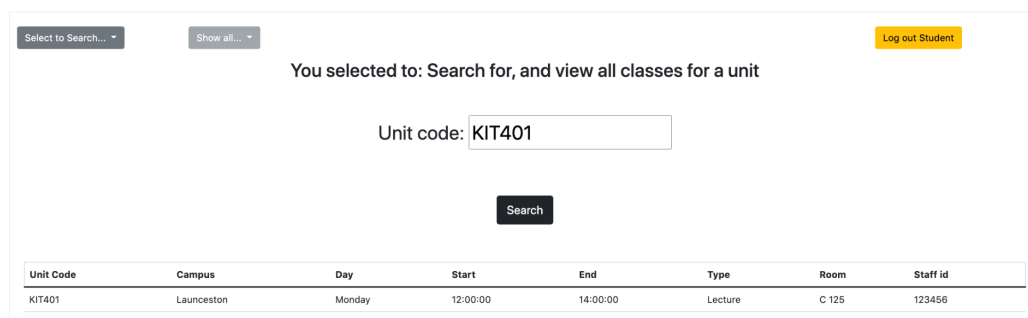
2.2.8 Search and view all classes for a unit (629797 Chun Yat Lam)



The screenshot shows a web interface for searching classes by unit. At the top left, there are two dropdown menus: 'Select to Search...' and 'Show all...'. On the top right is a yellow button labeled 'Log out Student'. Below these is a message: 'You selected to: Search for, and view all classes for a unit'. In the center, there is a label 'Unit code:' followed by an empty text input box. Below the input box is a dark grey button labeled 'Search'. At the bottom, there is a table with the following headers: 'Unit Code', 'Campus', 'Day', 'Start', 'End', 'Type', 'Room', and 'Staff id'.

Figure 21: HRIS Search and view all classes for a unit Page

Welcoming with the final searching page and also the last functional page in HRIS. It is about Search for, and view all classes for a unit. Unit code is the searching requirement in this function.



This screenshot shows the same interface as Figure 21, but with the 'Unit code' input box filled with the text 'KIT401'. The 'Search' button is still present. Below the input box, the table from Figure 21 is now populated with data. The table has one row of data.

Unit Code	Campus	Day	Start	End	Type	Room	Staff id
KIT401	Launceston	Monday	12:00:00	14:00:00	Lecture	C 125	123456

Figure 22: HRIS Result of Search and view all classes for a unit Page

The result displays in the table after the user type in Unit code: KIT401, we are not hard to see there is a class result that matches the unit code that the user typed in the input box. Again, the result is similar to the Search for, and view all classes for a staff. It is because they are both used for search and view the classes but for different types of input.

3. Reference

- Svirca, Z 2020, *Everything you need to know about MVC architecture*, Towards Data Science, viewed 10 May 2020, <https://towardsdatascience.com/everything-you-need-to-know-about-mvc-architecture-3c827930b4c1>.