

**Hong Kong Institute of Vocational Education  
(Tsing Yi)**

**Department of Information Technology**

**Higher Diploma in Software Engineering**

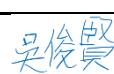
**ITP4506 HCI & GUI Programming**

**(2021/2022)**

**Group 9**

**System Documentation**

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## **Abstract**

An innovative Secondary school is going to provide a new service called "Attendance Online " to the teachers and students.

The aims of the system are

- 1) to allow teachers to upload students' attendance records,
- 2) to allow students to search and view the attendance records,
- 3) to allow school admin and teachers to generate students' attendance reports

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## 2 User Analysis

### 2.1 User characteristics

We will carry out the User Analysis process before you start coding our system.

#### 2.1.1 User Roles

There are 3 roles in our system, which is school admin, class teacher and student.

**School Admin:** Admin have the highest authority, can do many managements action, and see more things than other roles.

**Class Teacher:** Class teacher can manage their classes and students.

**Student:** Student can check their status (class, attendance). Parents are also considered to use the system with this role.

We will briefly explain the operations those roles below:

#### Account management

School Admin:

Admin can view and search all user information, create accounts for all the school members and enable/disable user accounts.

Class Teacher:

Teacher can search, edit and view students' information of their classes, view and edit their personal account information including change password

Student:

Student can view and edit their personal detail including change password

#### Class allocation

School Admin:

School admin can set the class archive to allow new classes creation and edit class information.

Class Teacher:

Class Teacher can create classes, and edit its information, then teacher can manage who students are in the classes. Also, teacher can view the class detail and student list of the class.

Student:

Student can view their class allocation status including current year and previous years.

### Searching and reporting

School Admin:

School admin can search students' attendance record as a school, class and an individual. Generate school report for the class and students' status (e.g., attendance record) for the current school year.

Class Teacher:

Class teacher can search students' attendance record as a class and an individual student in the current year. Also generating class reports for the for the class and students' status (e.g., attendance record).

Student:

Student can search their attendance records by year, month et cetera.

### Attendance Management

School Admin:

School admin and record students' sick record.

Class Teacher:

Class teacher can record the attendance status of students, endorse students' sick leave certificate and record students' personal leave.

Student:

Student can upload their sick leave certificate.

### Learning center

School Admin:

School admin can manage the “Learning Center” including the tests. Also manage learning materials of all classes and manage the useful online tools of the “Learning Center”.

Class Teacher:

Class teacher can make some test for students, manage, and give learning materials to students and use some useful online tools.

Student:

Student can do some test that arranged by their teacher, see the learning materials uploaded by teacher and use some useful online tools.

#### 2.1.2 Learning style

In this part, we will talk about the users’ habits of learning.

There are two styles of learning, do-then-read and read-then-do. For the do-then-read, user will like to act without reading the description or menu, using their instinct to do what they want. And the read-then-do, user will follow the procedure to act.

After consideration, we think our users (teacher, admin, student) have a lot of experience using website, especially for student, which will make them familiar with most of the online system, so that their learning style would be mostly do-then-read. As a result, our website should have an intuitive design, such as adding some graphic on the website to let user know what the function is about in one eye, there would be less instructions.

#### 2.1.3 Tool preferences

In this part, we will discuss about the knowledge of users using controls.

Considering our user is familiar with online system as we motioned, we will choose some common controls for the system. And the online system is PCs based, we will think user will use the online system with keyboard and mouse.

Based on the discussion above. Here are some common controls we think user knows how to use and we will use in our online system:

Control: buttons

Selection: check box, radio buttons, drop down list

Data input: slide bar, textbox, date picker

Focus current action: dialog

The reason we use dialog to focus users' current action is because it can let user continue to perform their action in the same page without opening other page, it avoids too much pages is opened, it avoids making user confused and lost themselves in the system.

As we are using mouse to control the system, the buttons can be smaller, since mouse can have a more precise control, unlike touch screen user.

#### 2.1.4 Physical differences

In this part, we will discuss about the knowledge of users using controls.

The abilities among different people may be different.

#### Ages

For the age of the user, there are different needs. Some teachers and admins' age are old, it means that their eyes may not functions normally, so that the font sizes of the website should be bigger. As for the student, they are teenagers, their eyes should function normally, which means that they can see things clearly, and teenagers loves the font sizes to be smaller, they can see more things at the same time and see the information quickly, so the font sizes of the website should be smaller.

As a conclusion, for the school admin and class teacher role, they need a bigger font size, and for student small font size is preferred.

## Sex

As a mixed-sex education school, there would be nearly same number of man/boy and woman/girl using the system. Considering this, we think our online system should be neutral, the UI, color and words font should be both suitable for both sexes.

### 2.1.5 Cultural differences

In this part, we will discuss about the cultural differences of user.

#### **Education and Profession** (reading level and specialized vocabularies)

##### Class teacher and School Admin

Class teacher and school admin are both professional, have a higher education background, they must have at least held a bachelor degree, so that their English reading level must not be bad and they should know a lots of specialized vocabularies, also, their English level should be good, we can use some hard specialized vocabularies in their pages in the system.

##### Student

Student have lower education background, they are still learning and practicing their reading skill, so that their reading level are limited. And are still student, not supposed to know a lots of specialized vocabularies, we need to use simple words in the pages for student, for them to more easily understand the operation of the website. Also, our secondary school is an international secondary school, we assumed that all students have basic English education but their Chinese is weak.

As a conclusion, the website should be English based. For student, the usage of words in their pages should be simple and easy to understand for them. As for the school admin and class teachers, their pages can use some specialized vocabularies.

### 2.1.6 Knowledge of job

Both three roles use computer frequently and mainly for work.

School Admin are considered to visit the website system five days a week, to take some sick leave record, and some time review on some report.

Class Teacher are considered to visit the website system five days a week, at least for taking attendance.

Student is considered to visit the website system at least one time a week to check some status or visit “Learning Center”.

#### 2.1.7 Application familiarity

There are two types of users in here, novice and expert. Novice may face a frightening unknown, timid, nervous and in no mood to explore the website, also, they are impatient to learn how to use the website. And for the expert, they can diagnose simple problems and perform a much more complex tasks than the novice, they can also diagnose complex problem and has a mental model of the web system.

##### Novice

Class teacher should be a novice, because most of the teacher are old, they have less experience to use new technology or using a website.

##### Expert

School admin should be an expert, because of their profession, they should know how to use most of the website system, even they are new to the system.

Student are also considered as an expert, the teenager nowadays nearly all of them have an electronics device, they should have a lot of experience of using online system, such as Facebook.

## 2.2 Techniques used for observing and listening to users

In this part, we will observe the school operation and listening to the future users before we implement the system.

### 2.2.1 Think aloud

School principal are invited to express their views of functions of the system. Considering a principal of school knows the operations of the school very well, and principal have an office where the principal will stay there a long time which is easy to meet him, we decided to arrange an interview with the principal.

We asked that how an online attendance reporting function reduce workload, principal think that it is important to have an online attendance report function because every evening principal have to review the attendance status of that day, principal will receive the attendance paper (fill up by teacher) of each class (24 total) and need to check them one by one, it is very inconvenience, a quick overview is preferred. Also, principal also mention that if there is a yearly school attendance report can help him to manage the school more efficiently.

As a conclusion, principal think that online attendance reporting can help him reduce workload, and we should add a yearly school attendance report function to help principal to manage the school.

### 2.2.2 Talk right after

We have gone to the classroom in one morning, to look at how teacher tick attendance every morning, since it is better not to stop teachers' work, we will ask her questions after her job is finished.

At every morning 8:00am, class teacher has to take out a paper with all the name of students, teacher will write down an English letter to present the students' attendance status.

Here is the status we have seen teacher filling:

Letter	Status
P	Present
L	Late
E	Early Leave
P	Personal Leave

A	Absent without reason
---	-----------------------

After filling up the paper, a student come out from his seat and hand a written notice (Leave Letter) to the teacher for a personal leave tomorrow.

We notice that the sick leave status is missing, so we asked she who will mark the sick leave status. She said that the sick leave record is recorded by the school admin in the school secretary after he received a phone call from the student or his/her parents, she will endorse the sick leave certificate afterward.

Later on, at 8:10, we see a school helper walking around all classrooms to collect the attendance paper and hand it to the school secretary.

As a conclusion, we see that attendance record have many statuses, and some of the statuses are recorded by school admin. Also, sometimes, teacher need to handle leave letter and sick leave certificate.

#### 2.2.3 Cueing recall with videotape

We have asked a school admin that if we can stay at office to watch her daily work, but considered that the office is small, we decided to record her daily work in the office. With her permission, we had recorded her daily work at her office.

After reviewing the video tape, we see that there are many papers works when school admin preparing the school report. And there are many files and folders about the student attendance status.

As a conclusion, if school admin can view all classes/student's attendance records easily, it very definitely improves the efficiently of making the school report.

#### 2.2.4 Focus groups

2 Software Engineering Student are invited to see a videotape of a user using an existing system. They can express their opinion freely.

Object	Task	Opinion	Action
Software Engineering Student	They watch a video of a user using admin role to add a new class	<p>Student 1: When mouse hover on clickable item, it is better to have some effect.</p> <p>Student 2: Date table is better to have some sorting</p>	<p>We can add some effect on the button when user hover on some button, the button color will change, so user will clearly know that is a button.</p> <p>Also, when user click the table head, there will be a sorting function, it will bring convivence for user to see the data they want.</p>

#### 2.2.5 Mailed/Online surveys

All teacher, school admin and student of the secondary school are invited to do an online survey about the new online system.

Here is the result of the online survey:

Questions	Average Result (marks 1-5, 5 marks mean very agreed)	Action
The website should better have an intuitive design.	5	Make less option for user to choose.
Having some icon can improve user control.	5	Add some small icon on some buttons.
The system should be colored but not too colorful	5	Add some color on tables and buttons.
The system should have some animation to tell user that action is performed.	5	Add some animation when some action is performed. Such as change the background color of a dialog.
Showing data with graph is better than just a table with words.	5	Add some bar chart and pie chart in some reporting.

## 2.3 Environment Analysis

We will now discuss about where our user will use the system.

### School admin

When school admin seeing some school report or managing classes at school, he is most likely at the school office. School office should have a desktop computer with a monitor and a mouse and keyboard, which is enough to use the system.

### Class teacher

When class teacher taking attendance, teacher is most likely in the classroom. And when class teacher is doing some class management, teacher is most likely in the teacher office. Office and classroom will provide a desktop computer with a monitor and a mouse and keyboard, which is enough to use the system.

### Student

When student upload their sick leave certificate or check some school status, they are most likely at home. Also, now every family should have at least one desktop computer or laptop computer at their home, which is enough to use the system.

### Conclusion

All role of user will use the system at indoor place with computer such as office or home, a comfortable environment for looking webpage.

## 2.4 Recruiting User

In this part we will talk about how to recruit user to use the system.

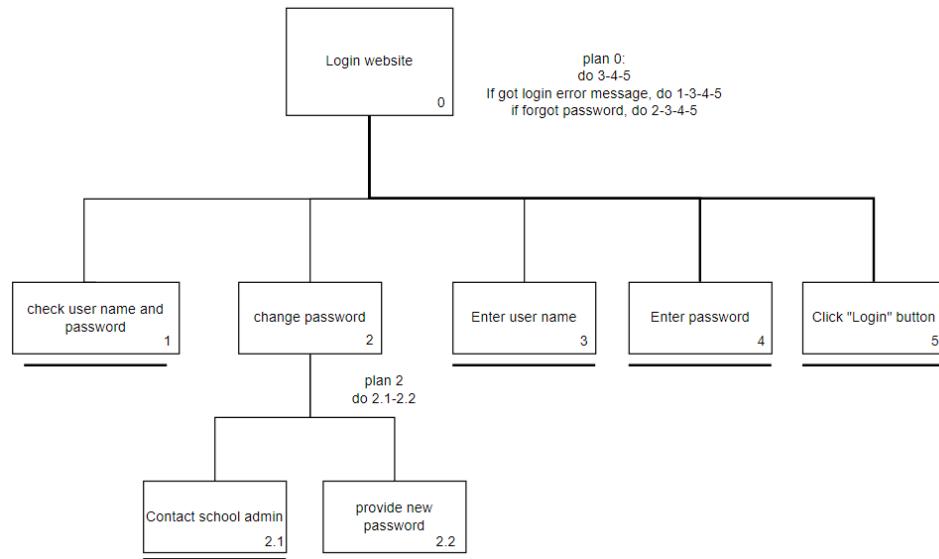
As we are building the system for the secondary school, we can invite the school admin, class teacher and students in the secondary school to use/test our system.

We will call the secondary school to spread the message in the morning announcement every day, so everyone in school will know there is a new online system so they will use it. Also, we can ask class teachers to announce that there is a new online system to use to students.

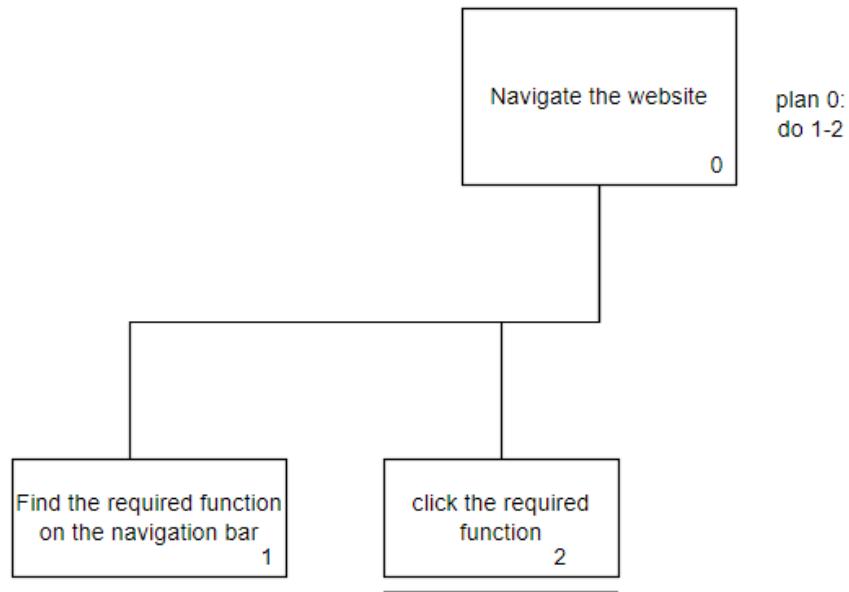
## 2.5 Task Analysis (HTA)

Minor Functions of the System:

Login:



Navigate the website:

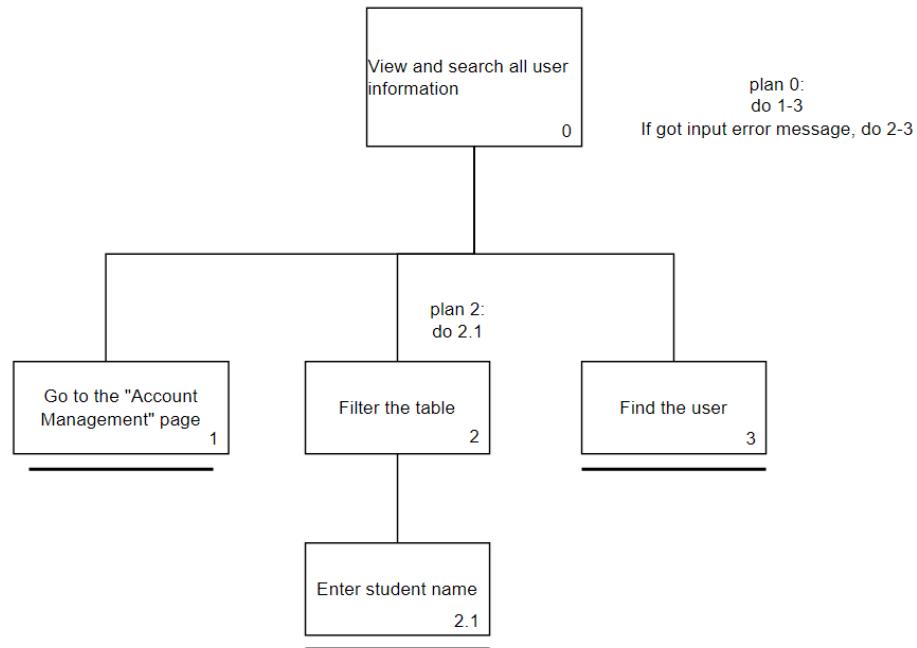


Major Functions of the System:

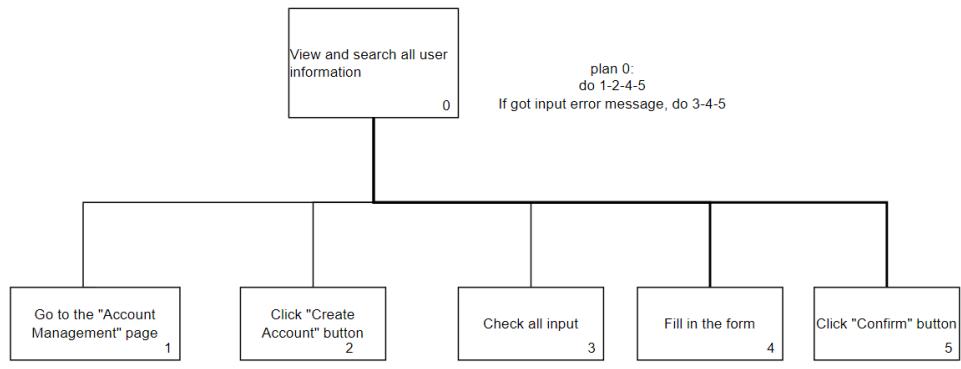
## 1. Account Management

### 1. School Admin

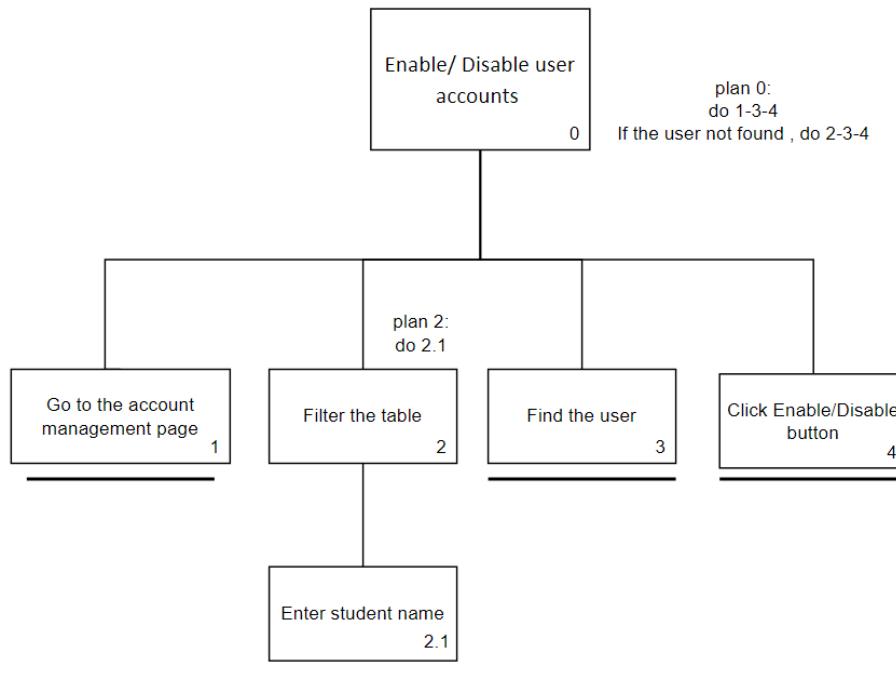
1. View and search **ALL** user information



2. Create accounts for all the school members

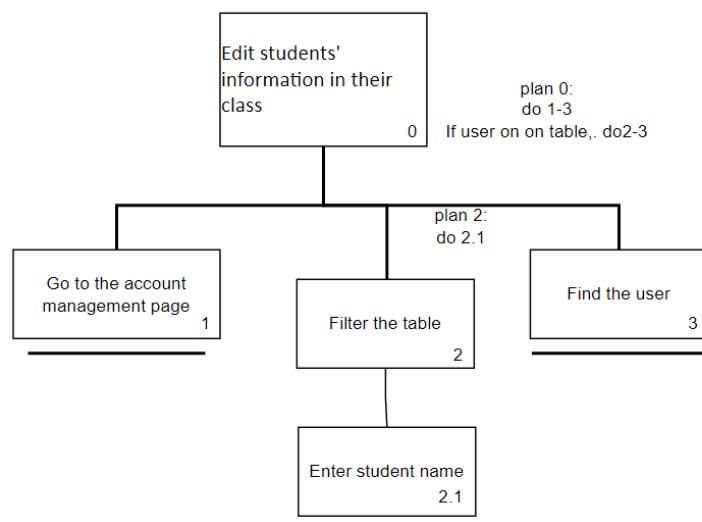


### 3. Enable/ Disable user accounts

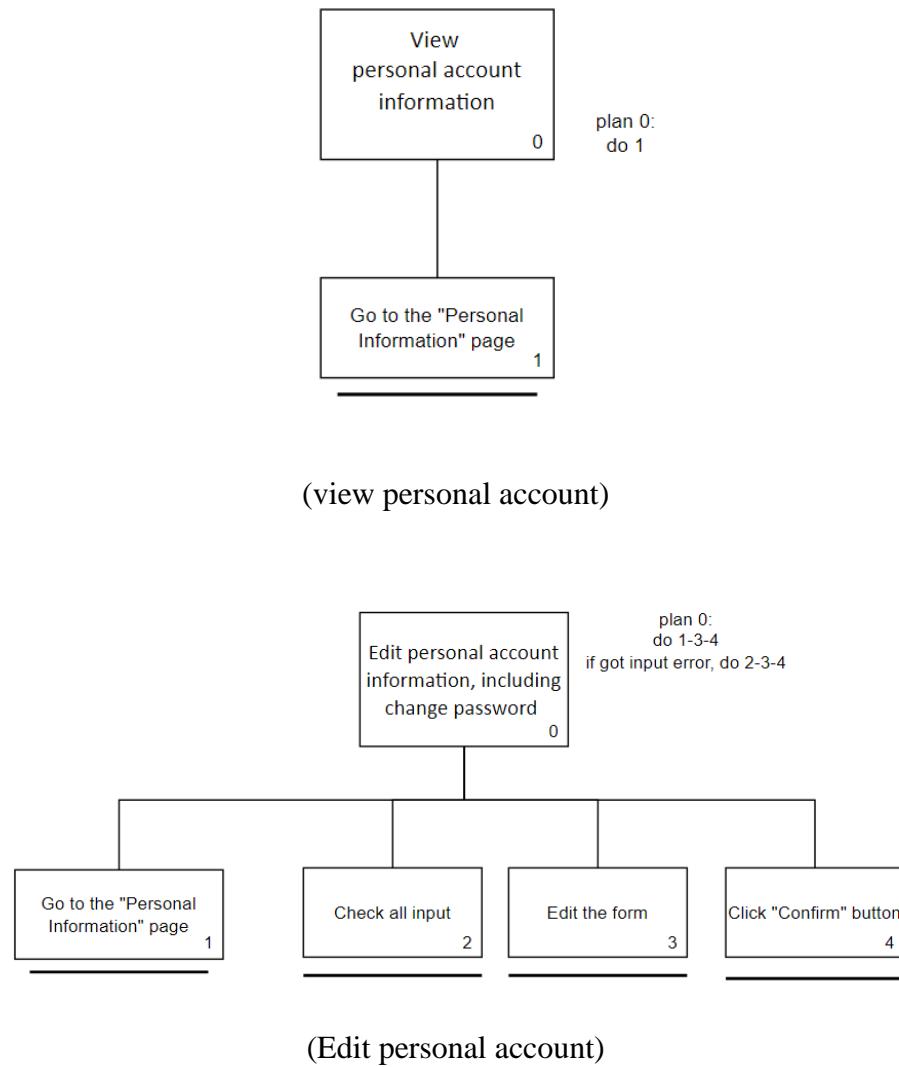


## 2. Class Teacher

1. Search, Edit, and View student information in their Class

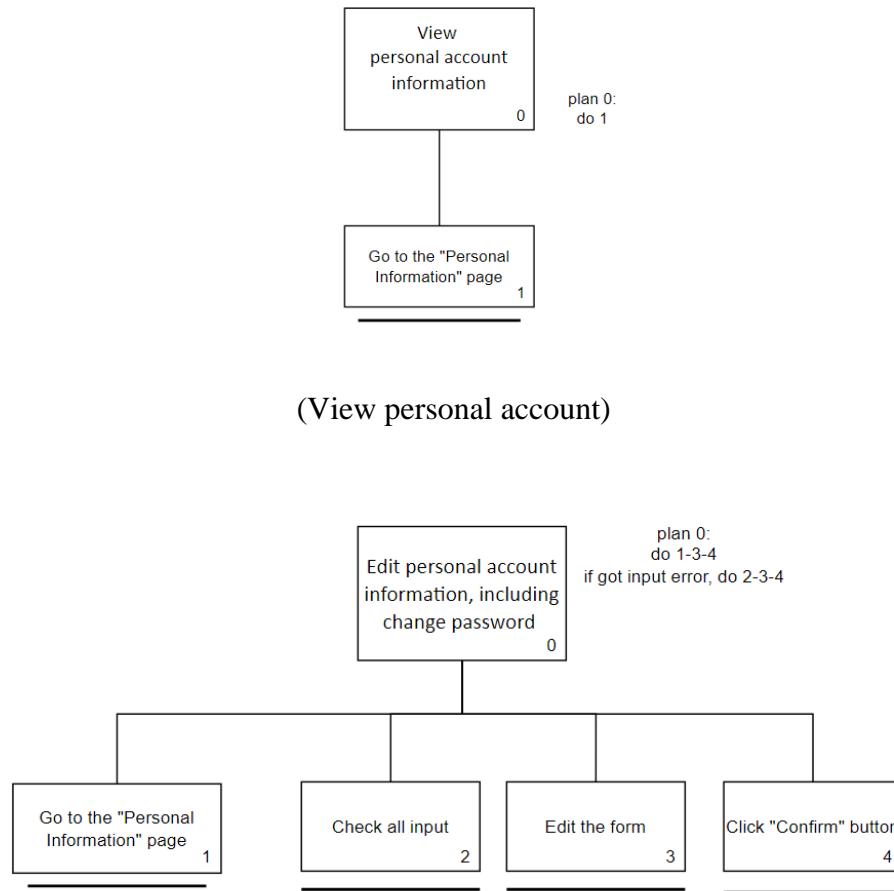


2. View and edit personal account information, including change password



## Student

1. View and edit personal detail, including change password



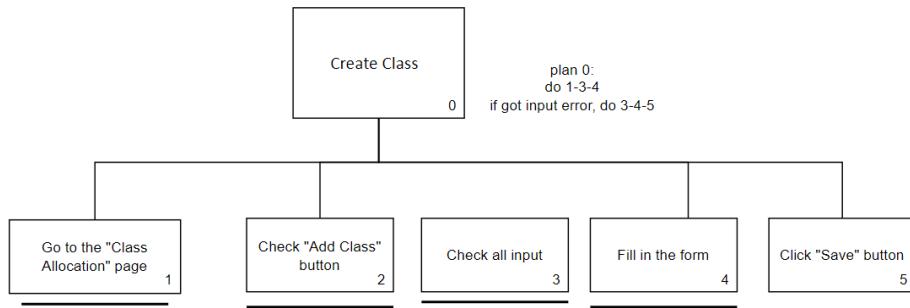
(View personal account)

(Edit personal account)

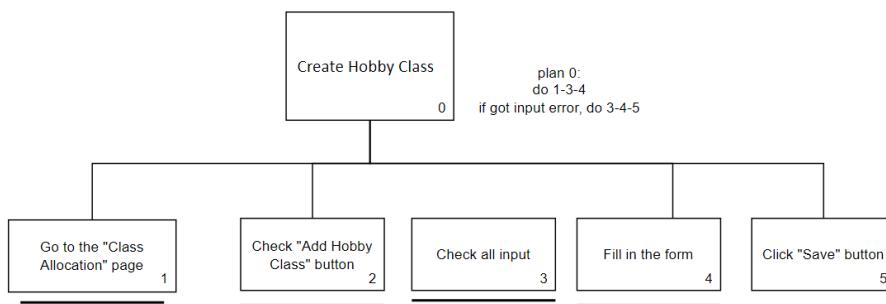
## 2. Class allocation:

### 1. Class Teacher

#### 1. Create Class

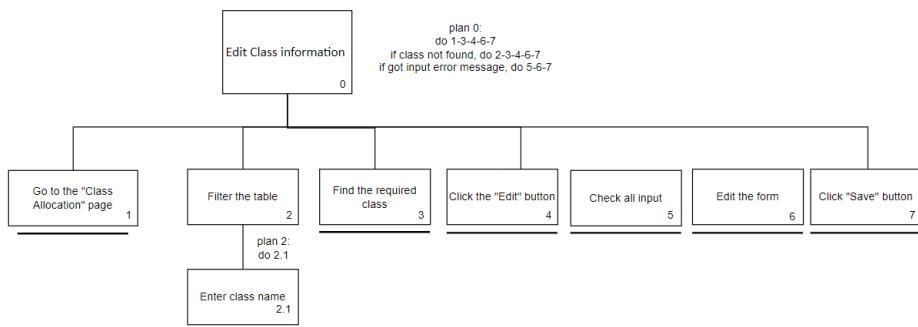


(Create class)

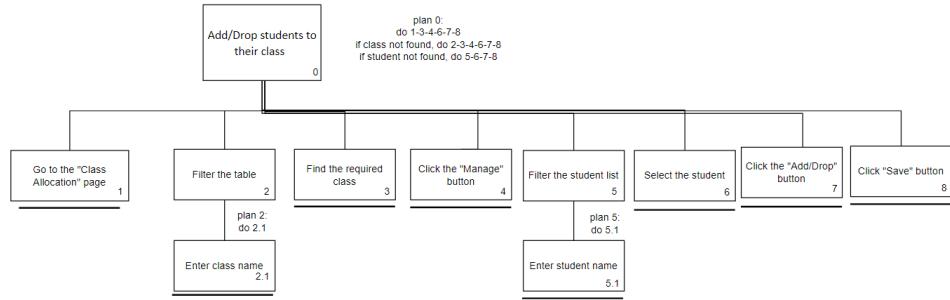


(Create hobby class)

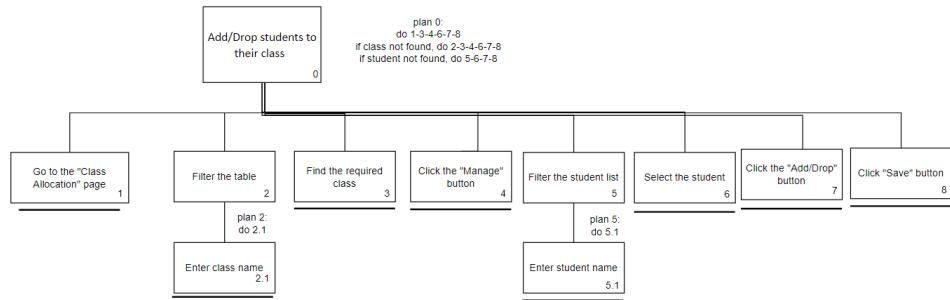
#### 2. Edit Class information



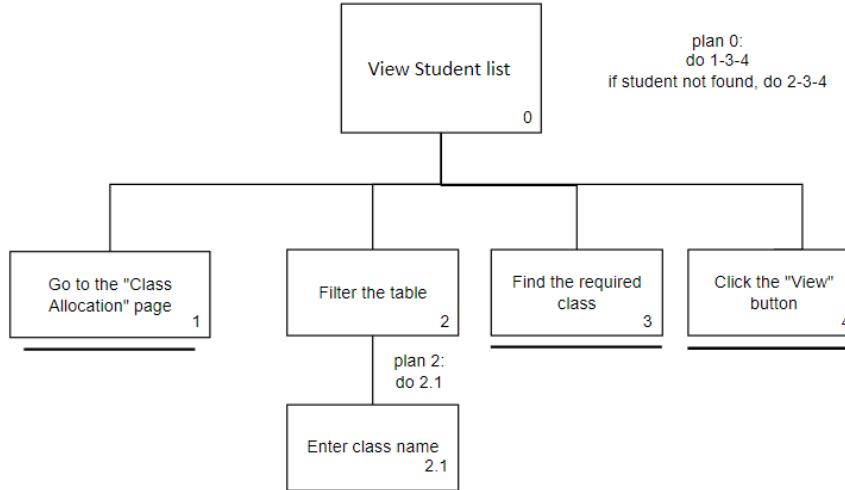
### 3. Add/Drop students to their class



### 4. View Class detail

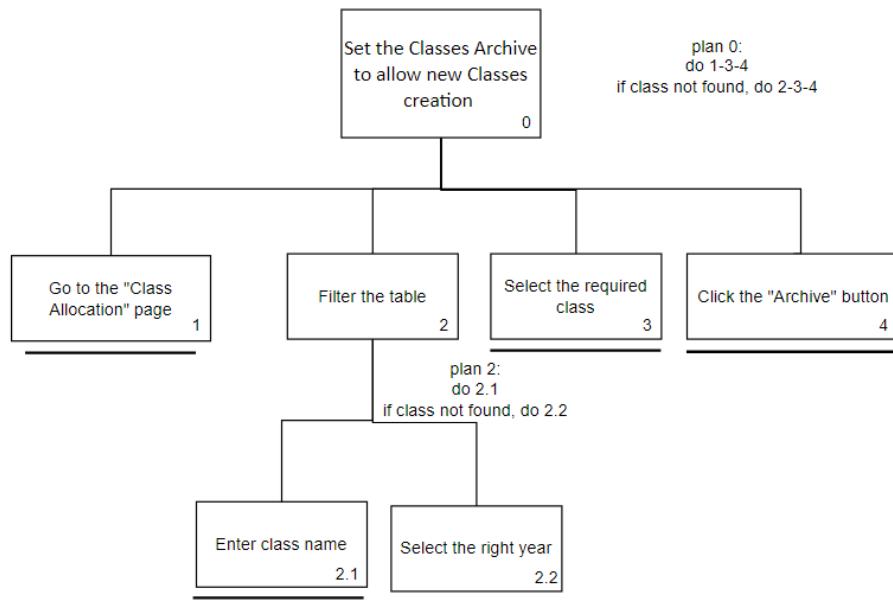


### 5. View Student list

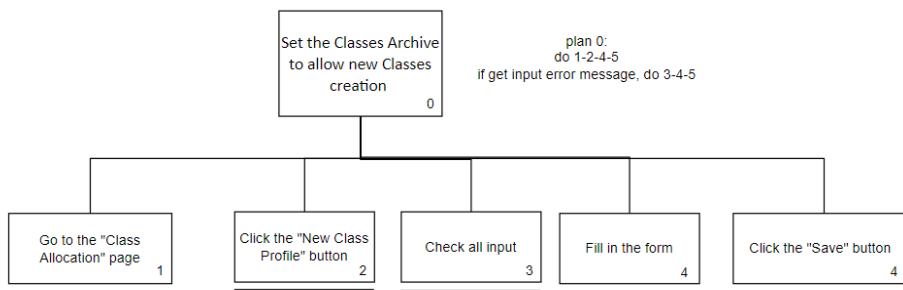


## 2. School Admin

### 1. Set the Classes Archive to allow new Classes creation

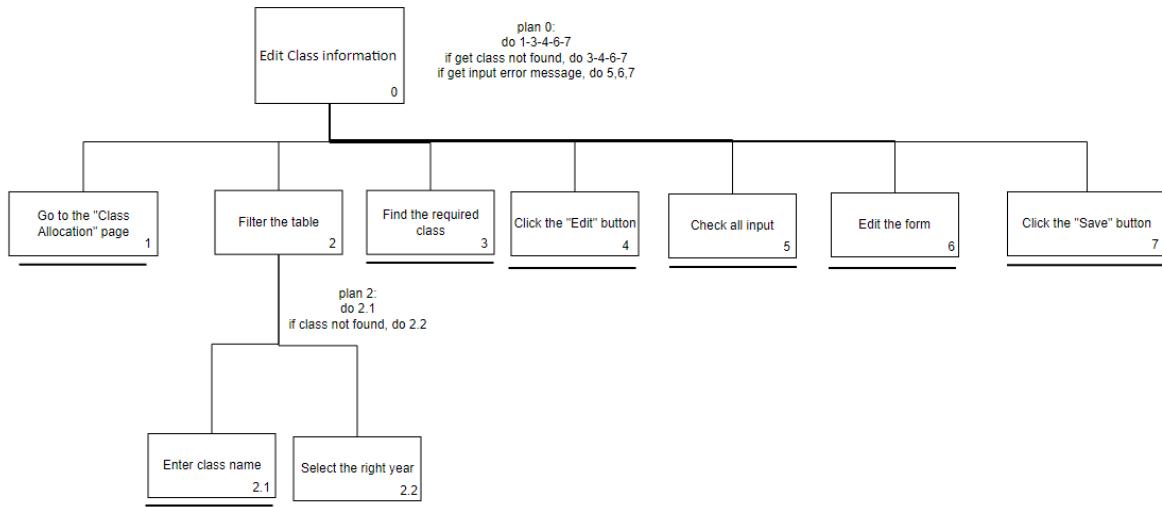


(Set class archive-style 1)



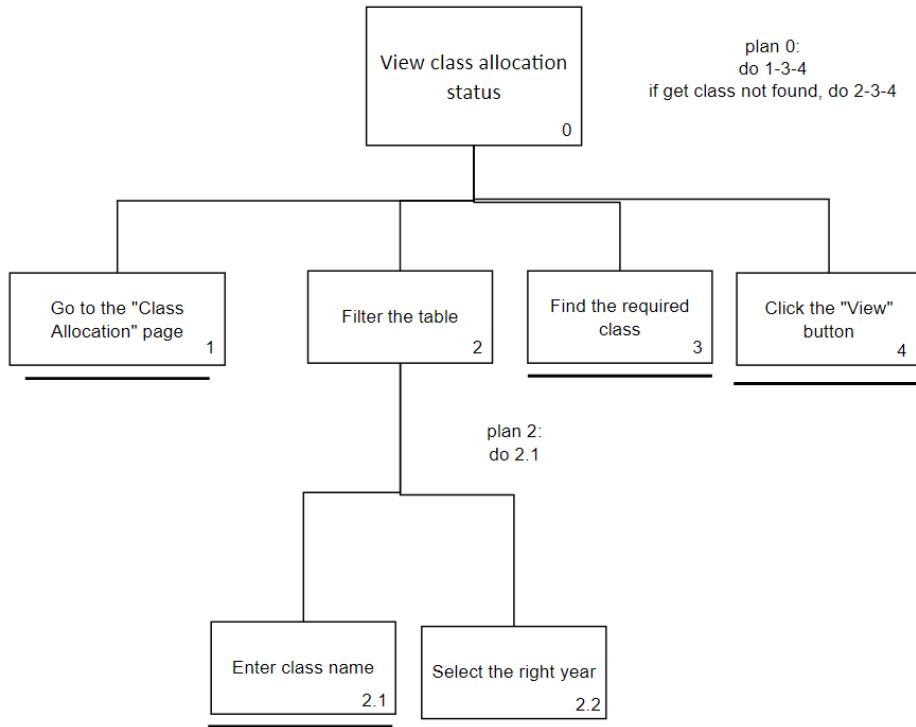
(Set class archive-style 2)

## 2. Edit Class information



## 3. Student

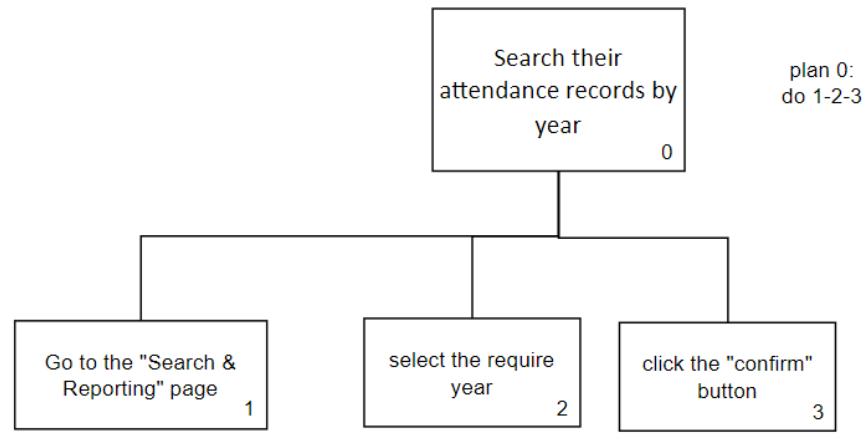
### 1. View their Class allocation status (including current year and previous years)



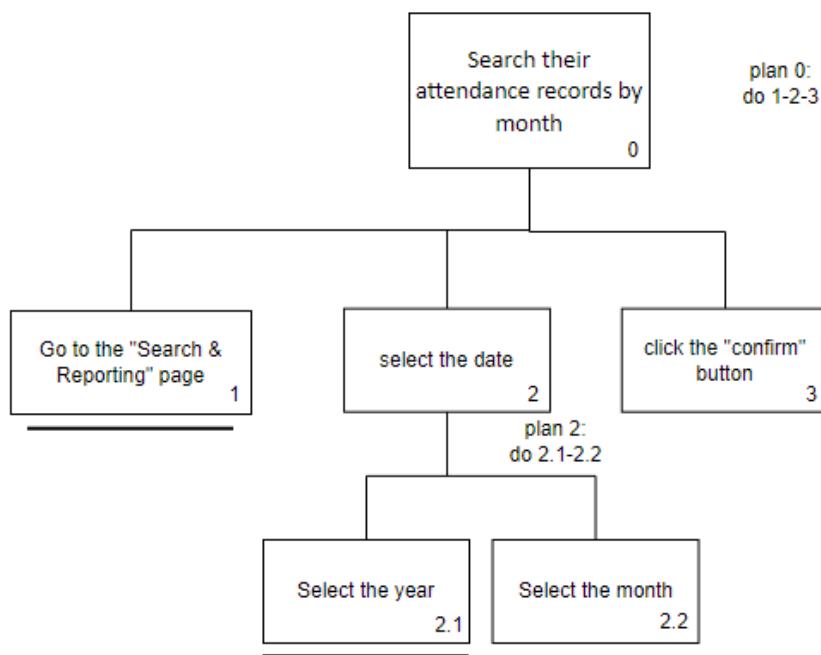
### 3. Searching & reporting:

#### 1. Student

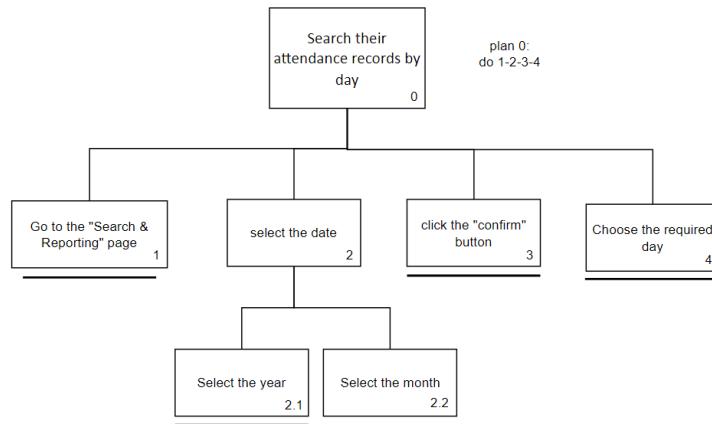
1. Search their attendance records by year, month, etc.



(Search attendance by year)



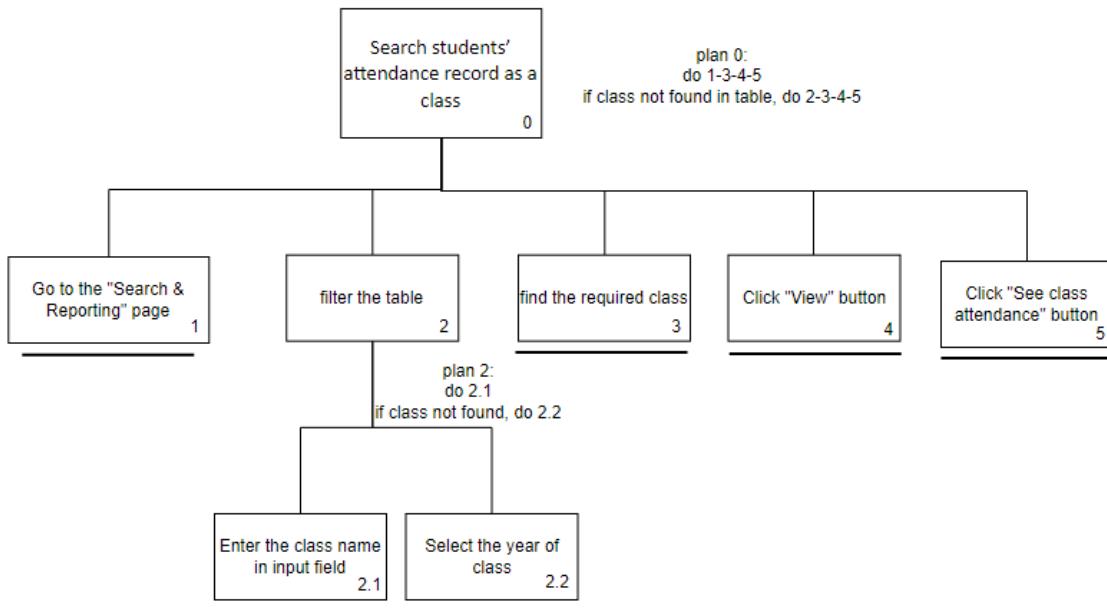
(Search attendance by month)



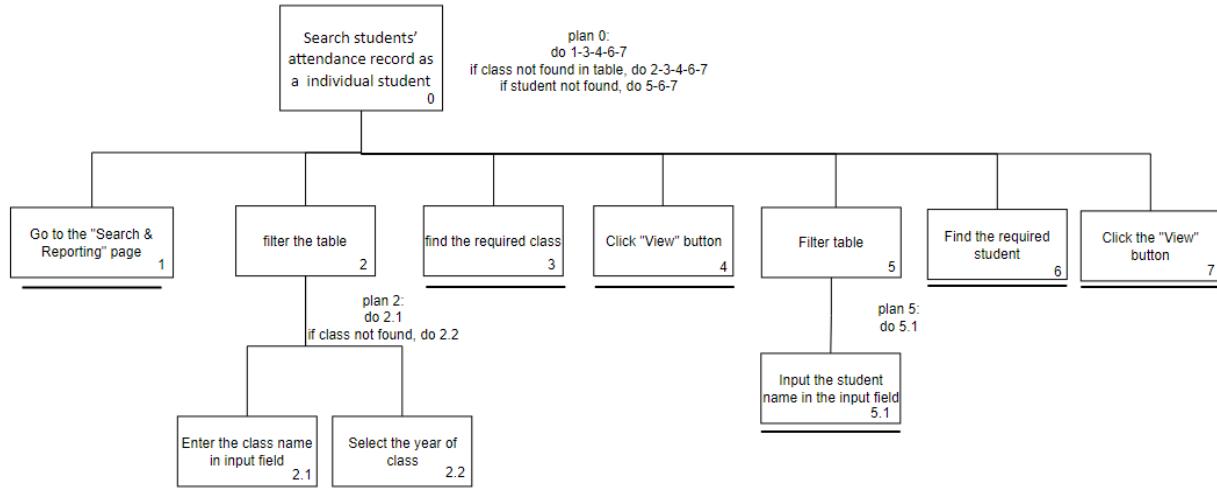
(Search attendance by day)

## 2. Class Teacher

Search students' attendance record as a class and an individual student in the current year.

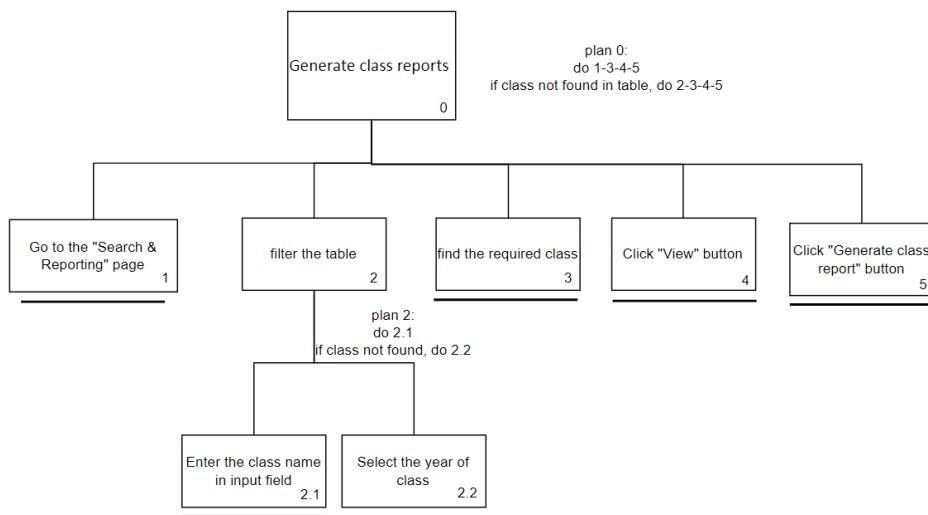


(Search attendance record as a class)



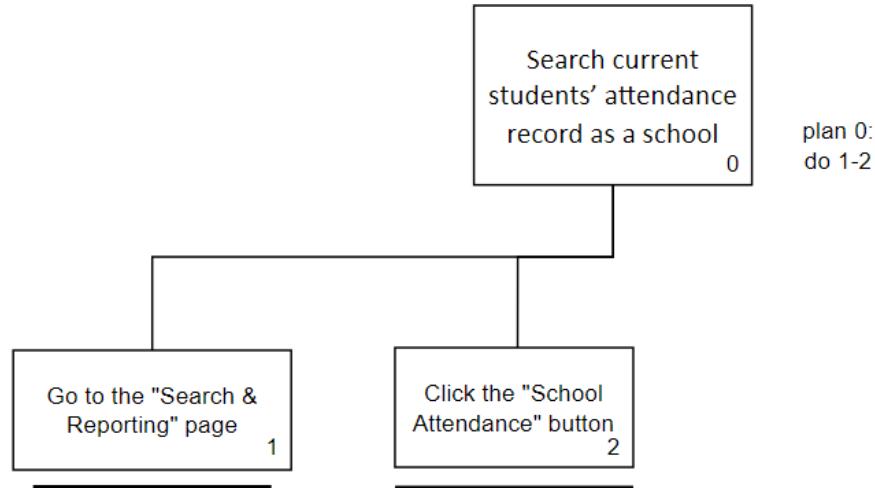
(Search attendance record as a single student)

2. Generate class reports for the attendance record, absent record, sick leave record, late record, etc.

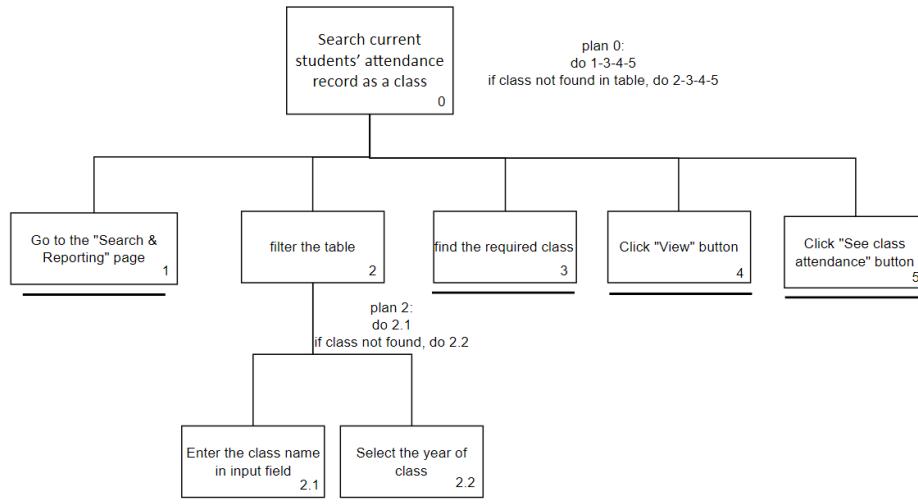


### 3. School Admin

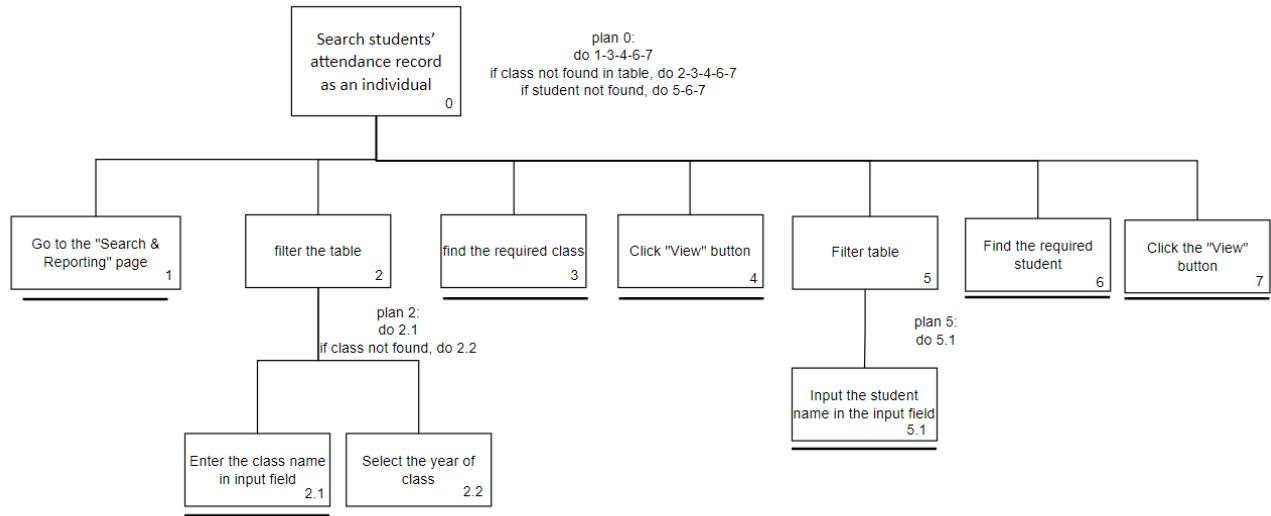
#### 1. Search current students' attendance record as a school, class, and an individual



(Search attendance as a school)

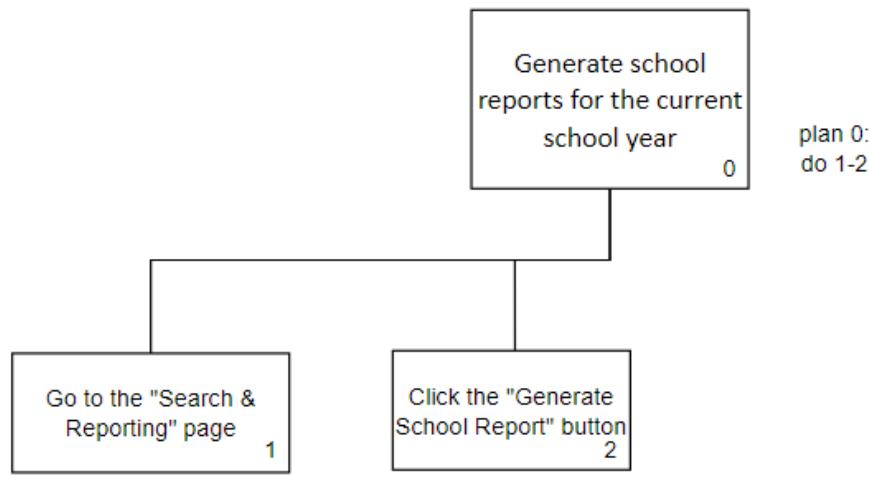


(Search attendance as a class)

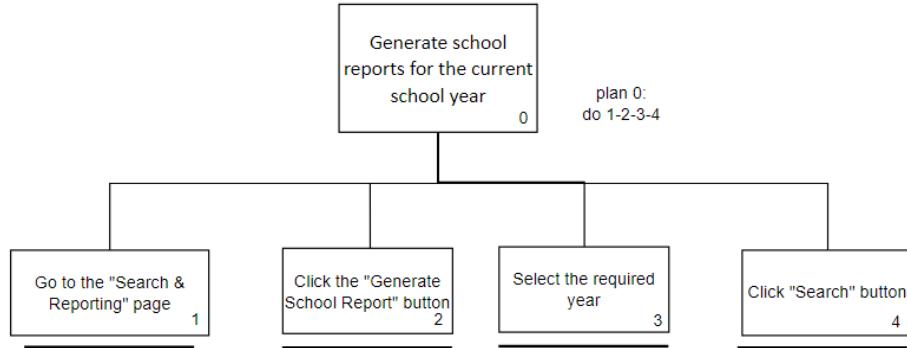


(Search attendance as a single student)

2. Generate school reports for the attendance rate, absents record, sick leave record, late record, etc, for the current school year



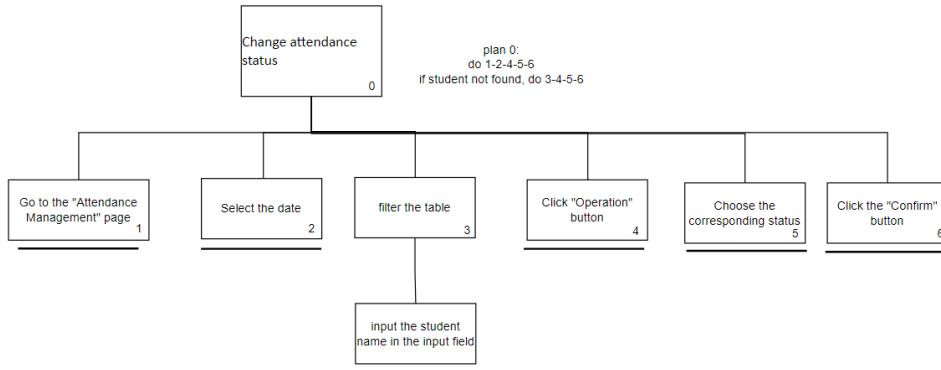
3. Generate the above reports for previous years



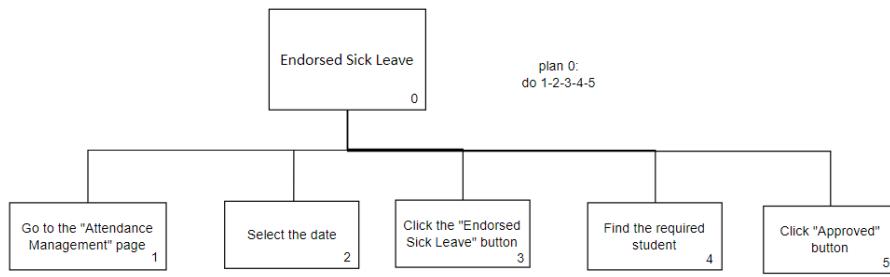
#### 4. Attendance Management:

##### School Admin

###### 1. Tick attendance

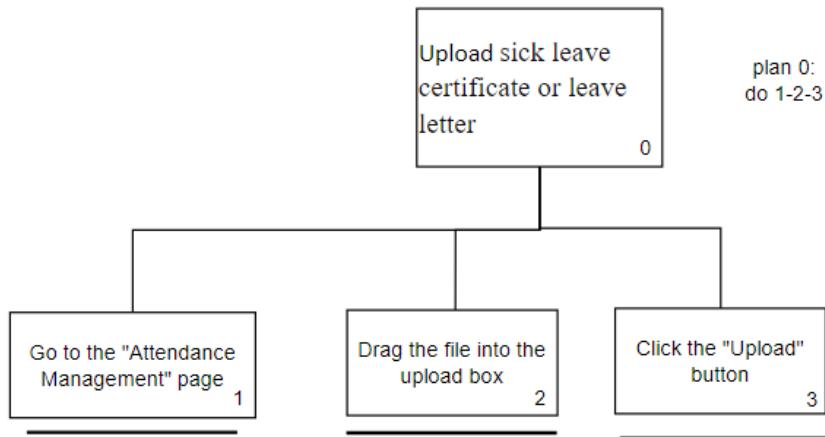


###### 2. Endorse Sick Leave Letter

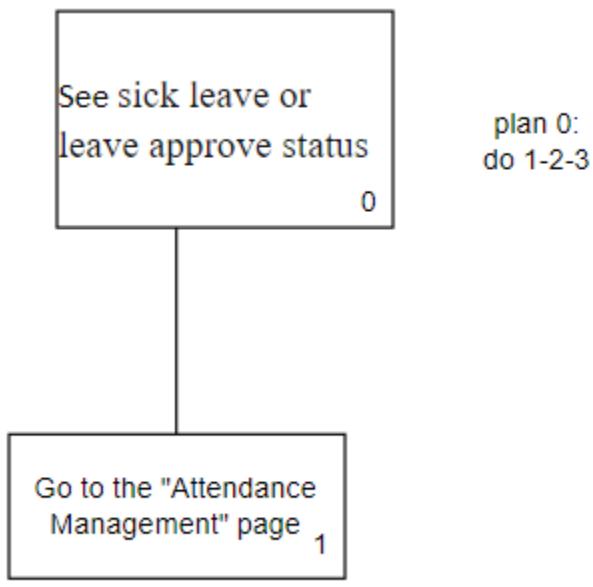


## Student

1.Upload sick leave certificate and leave letter

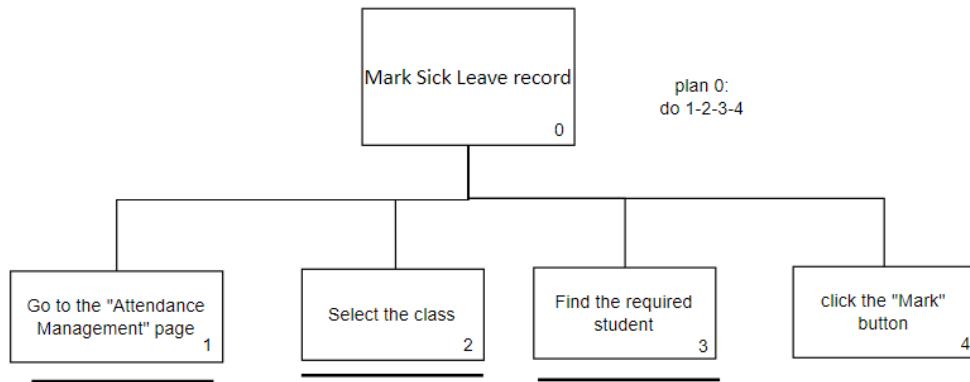


2.See sick leave or leave approve status



## Admin

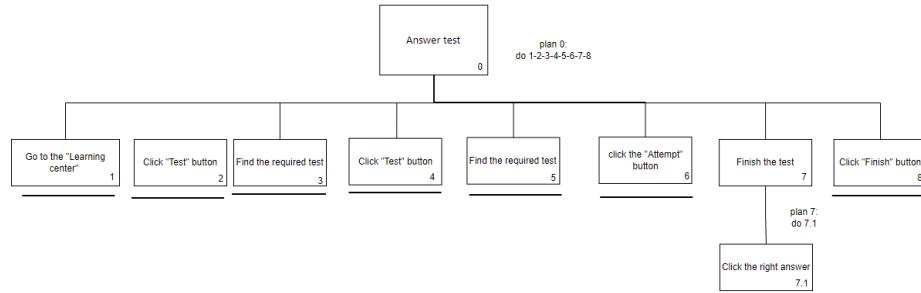
### 1. Mark sick leave status



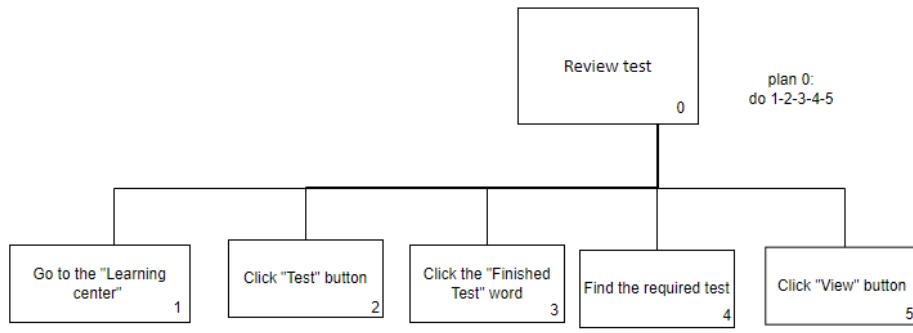
## **Learning Center**

### Student

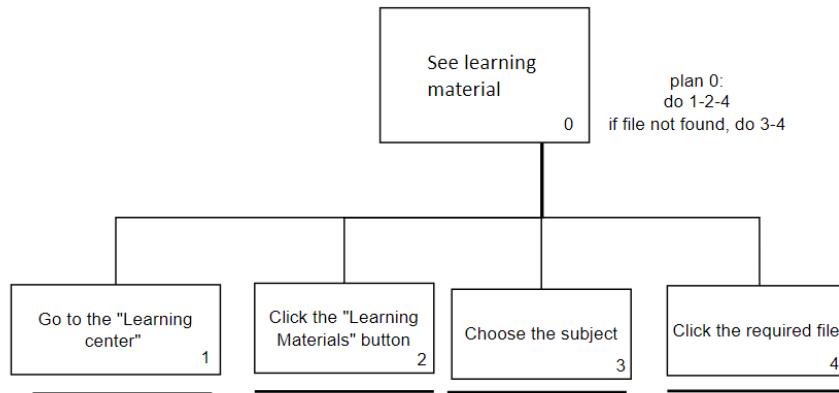
#### 1. Answer test



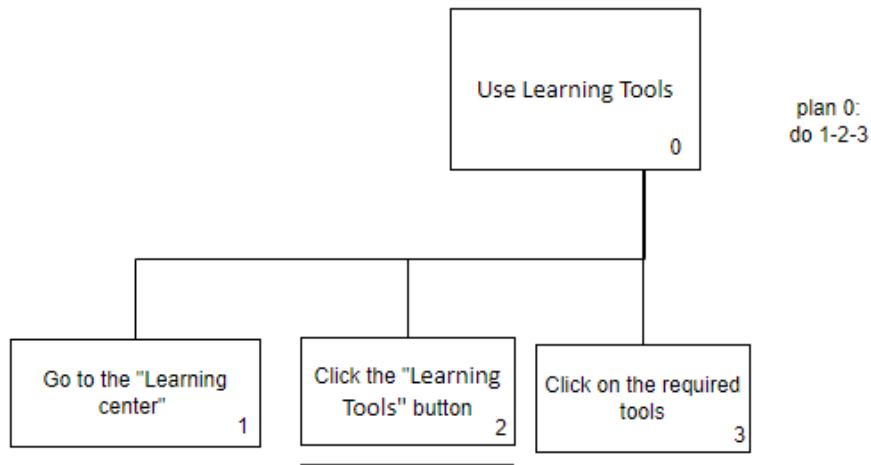
#### 2. Review test



### 3. View learning material

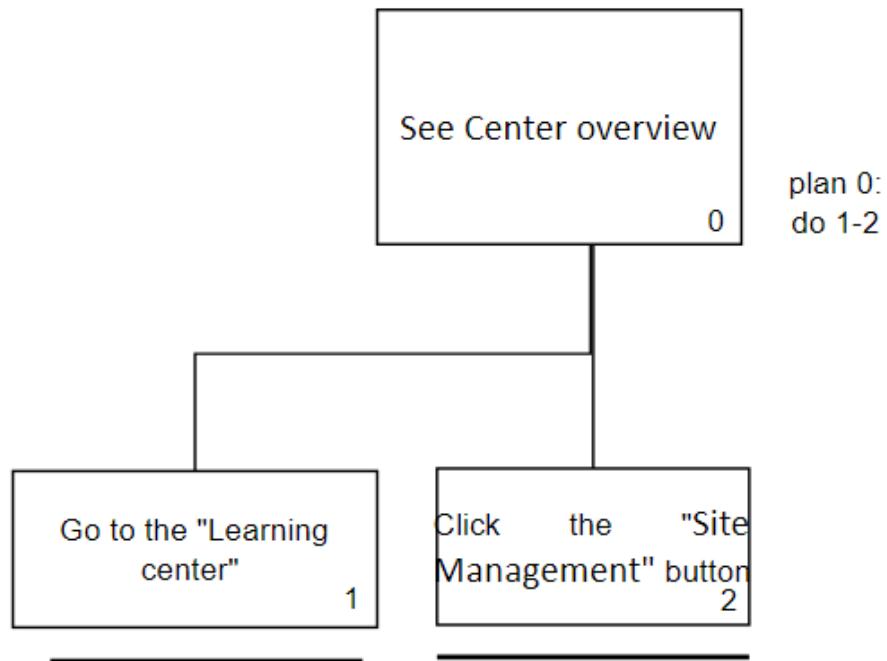


### 4. Use learning tools

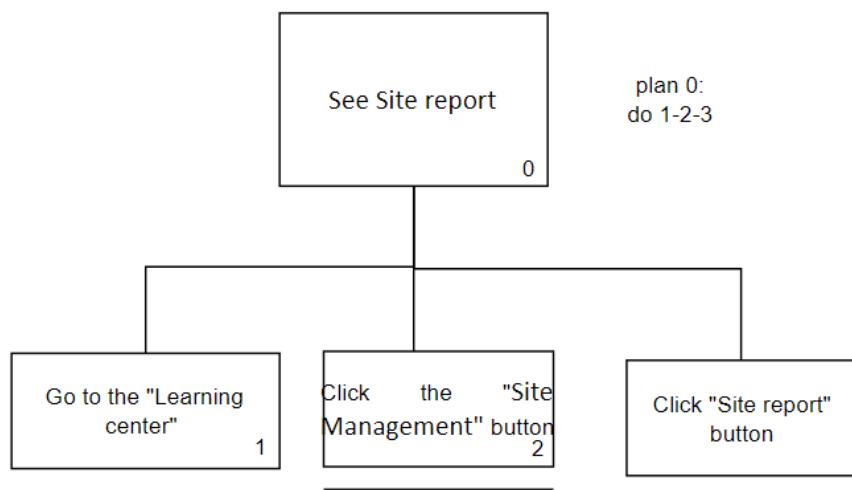


## Admin

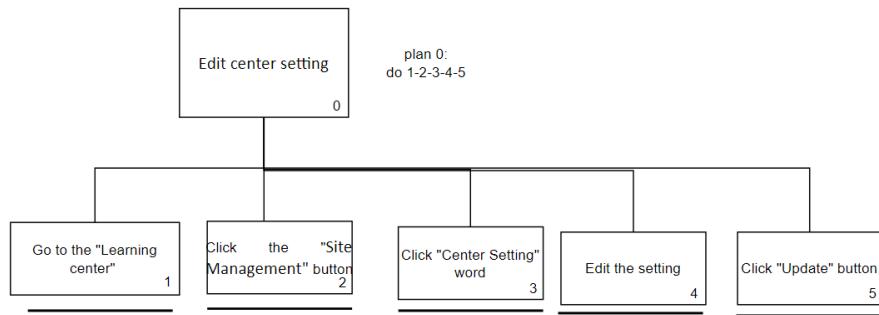
### 1.See center overview



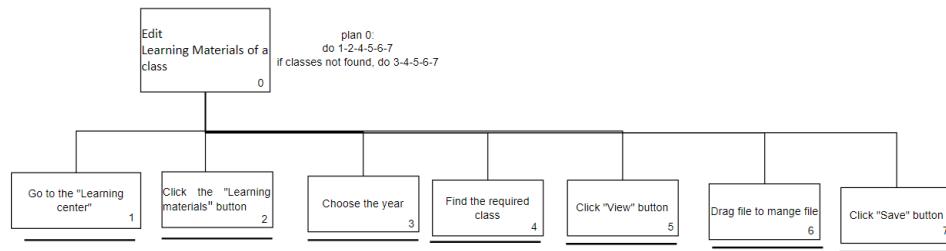
### 2.See site report



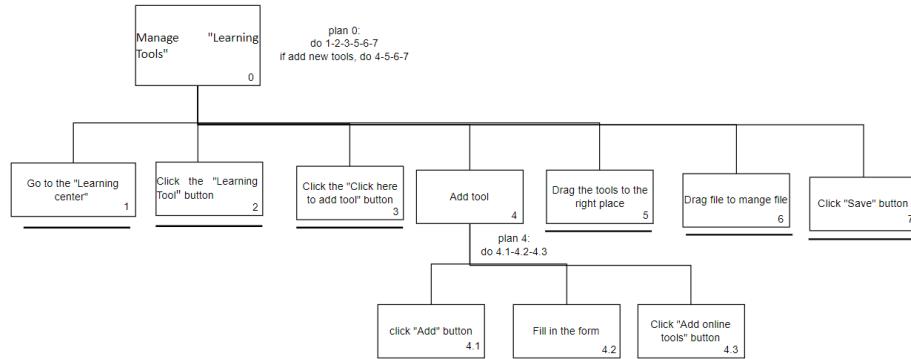
### 3.Edit center setting



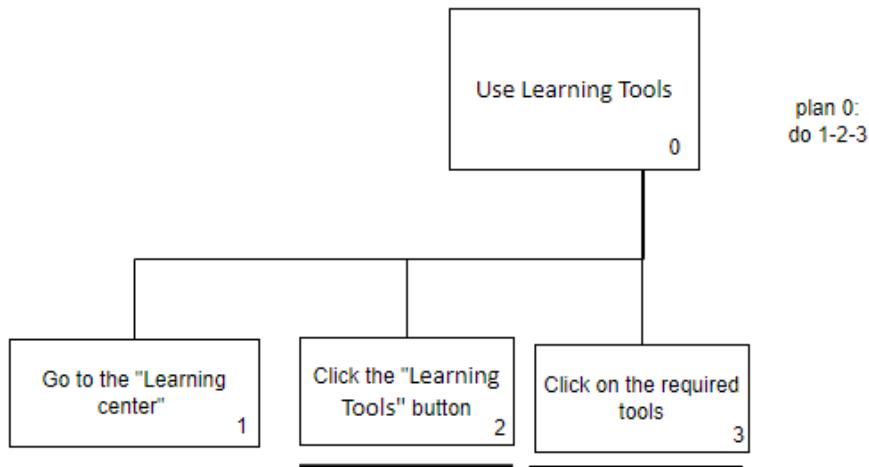
### 4.Manage Learning Materials of a class



### 5.Manage Learning tools

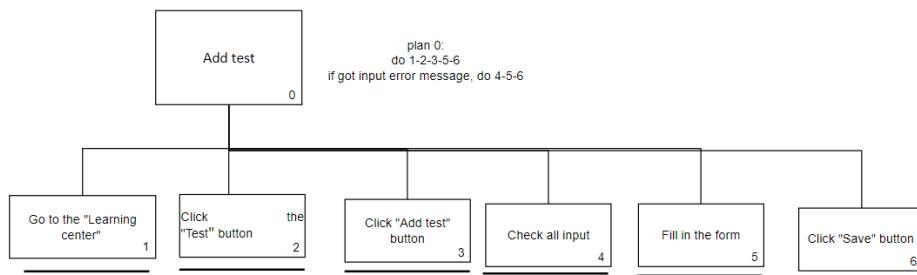


## 5. Use Learning tools

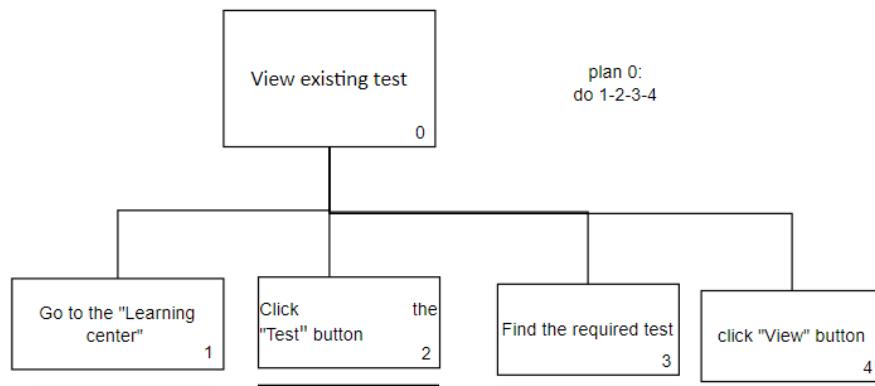


### Teacher

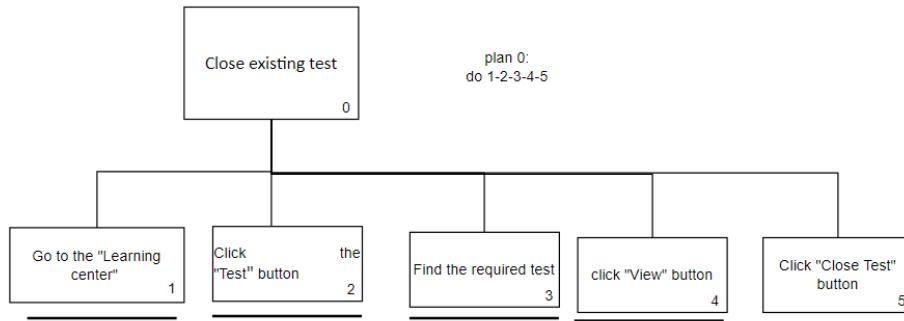
#### 1. Create test



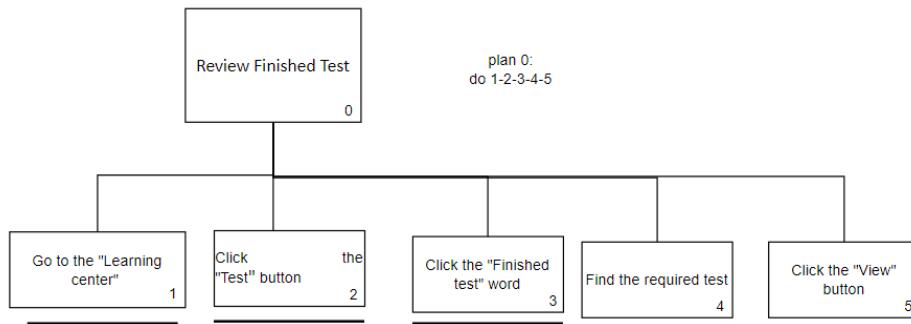
#### 2. View existing test status



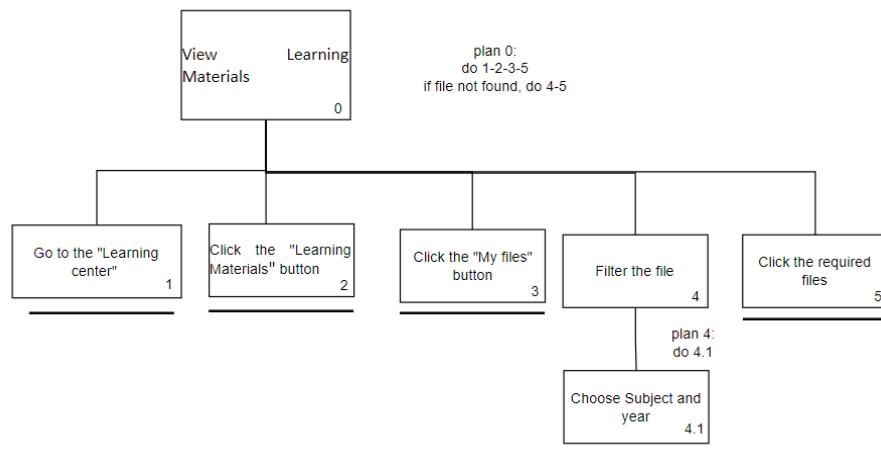
### 3. Close existing test



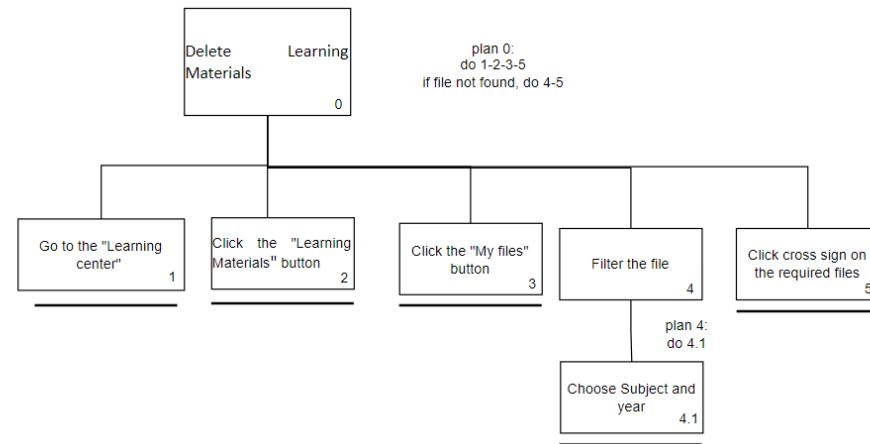
### 4. Review finished test



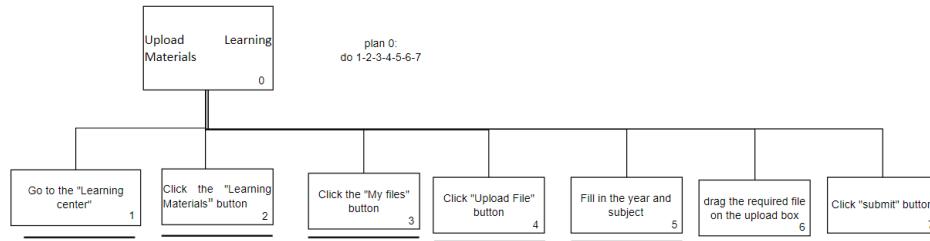
### 5. View learning materials



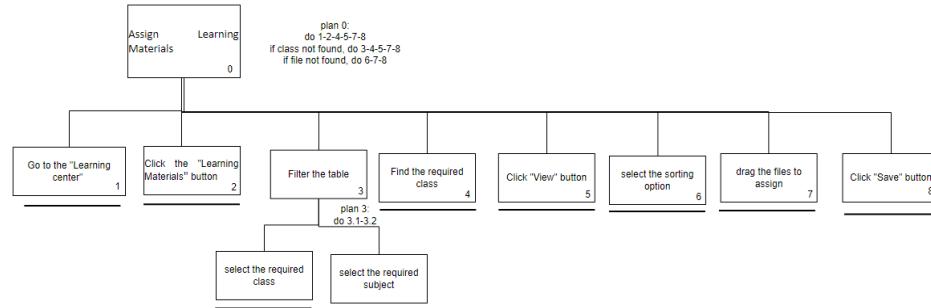
## 6.Delete Learning Materials



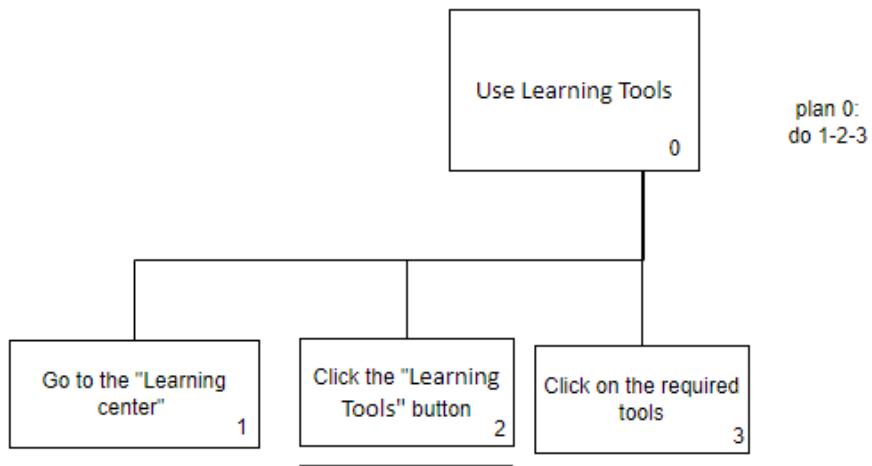
## 7. Upload learning materials



## 8.Assign learning materials to students

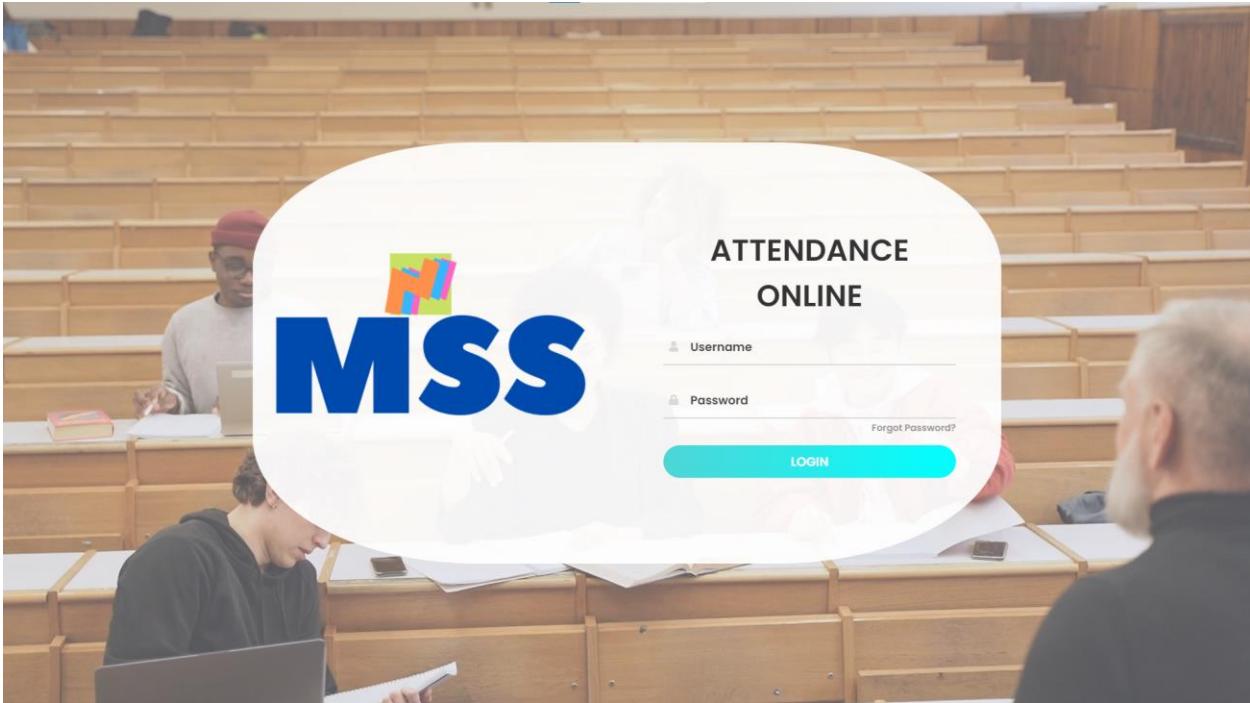


## 9. Use learning tools



### 3 Mental Model

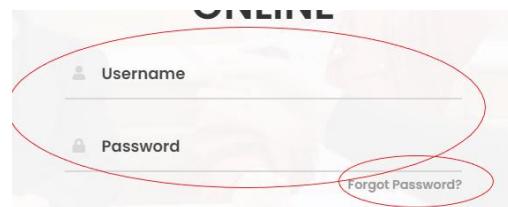
#### 3.1 Login Page



The user will be using the login page to do the login operation, this operation will include the role of Admin, class teacher and student.

Webpage have following Mental Model:

- complete login
- 1. enter correct Username and Password
- 2. click “login” button
- 3. Login success
- Forget password
- 1. Click “forget password”
- 2. Send forget password message



### 3.2 Home page

The screenshot shows the homepage of the Man Secondary School (MSS) website. At the top, there is a navigation bar with links to Home, Account Management, Class allocation, Searching & reporting, Attendance Management, Learning Center, and a user profile for Lin Yijun. Below the navigation bar, a blue banner displays the text "Welcome Back". Underneath the banner, there is a section titled "Site announcements:" which contains a single news item. The news item is titled "Arrangement of online assessment/test" and was posted by ITSD Admin on Monday, 20 September 2021, at 12:36 PM. The content of the news item is as follows:

Dear Teaching Staff,  
For online assessment/test would be arranged in Moodle system, kindly please download and fill the [application form](#), then send to [itsd-helpdesk@vtc.edu.hk](mailto:itsd-helpdesk@vtc.edu.hk).  
[ITSD will provide monitoring on the Moodle system during the submitted online assessment time-slot.](#)  
(Download form : Please click 'File' -> 'Save as' -> 'Download a Copy'.)

Thanks.

Reminder  
please upload your homework earlier.

Copyright (c) the Man Secondary School 2021. All rights reserved.

Home page is used for displaying the news of the school or give the notice to users.

Webpage have following Mental Model:

- Move to other page
- 1. Move to navigation bar
- 2. Click navigation bar item
- 3. Move success
- Change displayed news
- 1. Move to turn left/ turn right button
- 2. Click button
- 3. change success

### 3.3 Admin

#### 3.3.1 Account Management

Account View ⓘ

User ID	Email Address	Name	Password	Role	Enable/Disable
0001	Edwin@gmail.com	Edwin	Edwin123	Admin	<input checked="" type="checkbox"/>
0002	jackyngai01@gmail.com	Jacky	Jacky123	Admin	<input checked="" type="checkbox"/>
0003	Andy@gmail.com	Andy	Andy456	Teacher	<input checked="" type="checkbox"/>
0004	Sam@gmail.com	Sam	Sam789	Student	<input checked="" type="checkbox"/>

Hover on the ⓘ to get more help!

Webpage have following Mental Model:

- View and search all user information
  1. Move to the filter column
  2. Enter keyword
  3. Show filtered table
- create accounts for all the school members
  1. Click “create account” button
  2. Enter account information (username, email address, role)
  3. click “confirm”
  4. create success
- Enable/ Disable user accounts
  1. Move to appropriate account record
  2. Click Enable/ Disable checkbox
  3. Enable/ Disable success
- Get notice of webpage
  1. Move to the notice logo and hover
  2. Notice display

Hover on the ⓘ to get more help!

Filter

Create Account

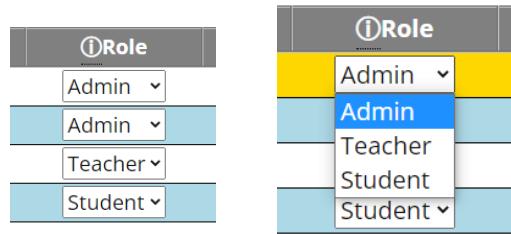
Enable/Disable

Hover on the ⓘ  
There are many sign like this in this page that can help you

Account View ⓘ It's use to be

- create accounts
- set the account enable/disable

- Change account role
  1. Move to appropriate account record
  2. Click drop-down list
  3. Change success



- Ascending/ descending record
  1. Click top of column
  2. Ascending/ descending record success

User ID ▲
0004
0003
0002
0001

User ID ▼
0001
0002
0003
0004

- Change table page
  1. Click drop down list under table
  2. Select appropriate number
  3. Change success

User ID ▼

User ID	Email Address	Name	Password	Role	Enable/Disable
0001	Edwin@gmail.com	Edwin	Edwin123	Admin	<input checked="" type="checkbox"/>
0002	jackyngai01@gmail.com	Jacky	Jacky123	Admin	<input checked="" type="checkbox"/>
0003	Andy@gmail.com	Andy	Andy456	Teacher	<input checked="" type="checkbox"/>
0004	Sam@gmail.com	Sam	Sam789	Student	<input checked="" type="checkbox"/>

Hover on the ⓘ to get more help!

1 ⓘ 2 3 4 5 6 7 8

### 3.3.2 Class Allocation

All Classes:

[New Class Profile](#)

[+Add Class](#) [+Add Hobby Class](#)

[Archive](#) [Cancel](#) [Active](#)

Filter

#	AY	Class	Status	Action
	21/22	2C	Active	<a href="#">View</a> <a href="#">Manage</a> <a href="#">Edit</a>
	21/22	2D	Active	<a href="#">View</a> <a href="#">Manage</a> <a href="#">Edit</a>
	20/21	2A	Archived	<a href="#">View</a> <a href="#">Manage</a> <a href="#">Edit</a>
	20/21	2B	Active	<a href="#">View</a> <a href="#">Manage</a> <a href="#">Edit</a>
	20/21	2C	Archived	<a href="#">View</a> <a href="#">Manage</a> <a href="#">Edit</a>
	20/21	2D	Archived	<a href="#">View</a> <a href="#">Manage</a> <a href="#">Edit</a>

\*This table show same grade of this year and last year.

Year:

[Last Grade](#) [Next Grade](#)

Hover on the [?](#) to get more help!

Webpage have following Mental Model:

- Set the Classes Archive/Cancel/Active
  - Click at least one class's checkbox
  - Click the status that want to change
  - Change success

#	AY	Class	Status
<input checked="" type="checkbox"/>	21/22	2C	Active
<input checked="" type="checkbox"/>	21/22	2D	Active
<input type="checkbox"/>	20/21	2A	Archived
<input type="checkbox"/>	20/21	2B	Active
<input type="checkbox"/>	20/21	2C	Archived
<input type="checkbox"/>	20/21	2D	Archived

- new Classes creation
  - click “add class” button
  - select class, classroom and lesson set
  - click “save”
  - create complete
- Edit Class information
  - Move to appropriate class record
  - Click “edit”
  - When complete edit, click “save”
  - Edit complete

New Class Profile

[+Add Class](#) [+Add Hobby Class](#)

[Archive](#) [Cancel](#) [Active](#)

Add Class

Select Class:

Enter Class Teacher Name:

Select classroom:

Select lesson set:

Enter Class Description:

[Save](#) [Cancel](#)

- Modify new class profile
  1. Click “new class profile”
  2. Select information
  3. Click “save”
  4. Modify success

New Class Profile  
\*You may overwrite the previous profile

Apply these profile by:

Class  
 Year

Enter The information Below:

AY/21/22

Enter Class code(empty will be generated):  
Select Class:  
1A

Upload Pre Arranged Student List for Class:  
(\*Optional)

Select classroom:  
Auto arrange

Select lesson set:  
default

Enter Profile Description (optional):  
e.g. AY19/20 1C Elite Class

Save Cancel

- View class detail
  1. Move to appropriate class record
  2. Click “view”
  3. View success

Filter

Action

Class No.	Name
1A	Tang Ka Wei
1B	Lui Shing Hin
1C	Kam Sui San
1D	Ho Chui Ming
1E	Lui Yiu Chung
1F	Law Chi Hong
1G	Tsang Wai Hung
1H	Wong Chok Hin
1I	Zheung Wenzhen
1J	Yan Chun Kit
1K	Yuen Yip Man
2A	Chan Ho Yin
2B	Chan Yuen Hi
2C	Luk Tsz Shan

Class Student list

Class detail

Save

- Manage class student
  1. Move to appropriate class record
  2. Click “manage”
  3. Move student name to appropriate class
  4. Click “save”
  5. Manage success

Filter

Action

Student In School:

Tang Ka Wei
Lui Shing Hin
Kam Sui San
Ho Chui Ming
Lui Yiu Chung
Law Chi Hong
Tsang Wai Hung
Wong Chok Hin
Zheung Wenzhen
Yan Chun Kit
Yuen Yip Man

(Only first 20 result will be show)  
Why there is some student cannot be selected?

Student In 2C:

Chan Ho Yin
Chan Yuen Hi
Luk Tsz Shan

Load Student List from admin

>> <<

Save

### 3.3.3 Searching & reporting

## Searching & reporting

All Classes:			
AY	Class	Status	Action
21/22	1A	Active	 View
21/22	1B	Active	 View
21/22	1C	Active	 View
21/22	1D	Active	 View

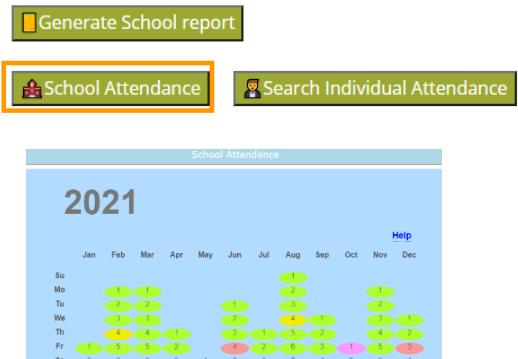
\*This table show one year on each page.

Year:  1

Hover on the  to get more help!

Webpage have following Mental Model:

- Search students' attendance record as school
  1. Click "school attendance"
  2. Search success



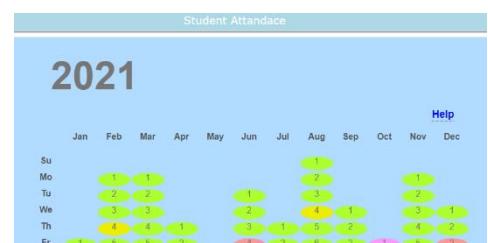
- Search students' attendance record as class
  1. Move to appropriate class record
  2. Click "view"
  3. Click "see class attendance"
  4. Search success

AY	Class	Status	Action
21/22	1A	Active	 View
21/22	1B	Active	 View

Class

 Generate Class report

 See Class Attendance



- Search students' attendance record as individual
  1. Click “search individual attendance”
  2. Enter student name to search student record
  3. Click “view” when search success
  4. View individual attendance success

 Generate School report

 School Attendance

 Search Individual Attendance

Enter Student Name:

Chan Tai Man



Result:

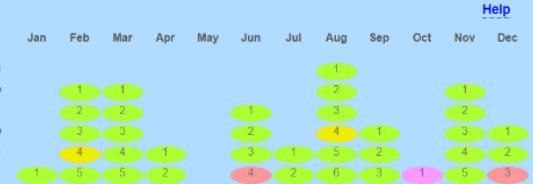
Name	Action
Chan Tai Man	 VIEW

- Search students' attendance record from class as individual
  1. Move to appropriate class record
  2. Move to appropriate student record
  3. Click “view”
  4. Search success

AY	Class	Status	Action
21/22	1A	Active	 View
21/22	1B	Active	 View

Student Attendance

2021



- Generate school reports
  1. Click “generate school report”
  2. Select generate year
  3. Generate success

 Generate School report

 School Attendance

 Search Individual Attendance

Generate Report

School Reports

Select year :

2021

Search

Report of 2021:

attendance record, absent record, sick leave record, late record

Total students in this year: 365

Generate Report

School Reports

Select year :

2021

Search

2021

2020

2019

2018

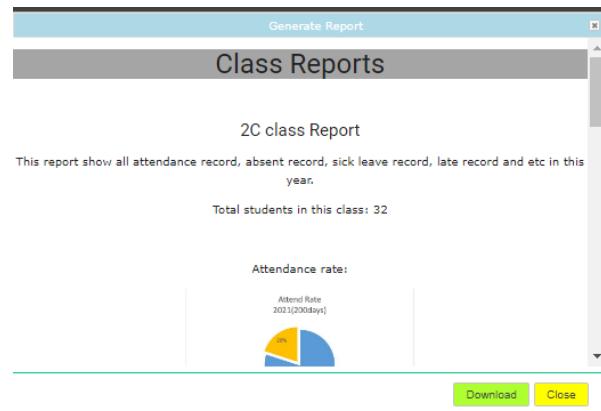
2017

- Generate class report
  1. Move to appropriate class record
  2. Click “view”
  3. Click “generate class report”
  4. Generate success

AY	Class	Status	Action
21/22	1A	Active	<a href="#">View</a>
21/22	1B	Active	<a href="#">View</a>

[Generate Class report](#)

[See Class Attendance](#)



### 3.3.4 Attendance Management

The screenshot shows a top navigation bar with the MSS logo and links for Home, Account Management, Class allocation, Searching & reporting, Attendance Management (which is highlighted in yellow), Learning Center, and user profile information (Lin Yijun). Below the navigation is a search bar with the placeholder "Please select the Class". A dropdown menu is open, showing options like All, 1A, 1B, 1C, 1D, 2A, 2B, 2C, and 2D.

## Mark Sick Leave record

Please select the Class

All

Webpage have following Mental Model:

- Mark Sick Leave record
  1. Select appropriate class
  2. Click “confirm”
  3. Mark success

Please select the Class

All

All

1A

1B

1C

1D

2A

2B

2C

2D

There have Four students need to Mark the sick leave record

**Confirm**

**cancel**

Please select the Class

1B

Student Class Number	Name	Status	operation
0001	Lin Yijun	Sick Leave	waiting for upload sick leave certificate
0002	Lin Yijun	Sick Leave	waiting for upload sick leave certificate
0003	Lin Yijun	Sick Leave	waiting for upload sick leave certificate
0004	Lin Yijun	Sick Leave	waiting for upload sick leave certificate

### Learning Center

Webpage have following Mental Model:

- Generate site report
  1. Click “site Management”
  2. Click “center overview”
  3. Click “site report”
  4. Generate success

## Site Management

Site Management



Site Management

Center Overview

Site Report

Total Test this year: 80

Open: 52

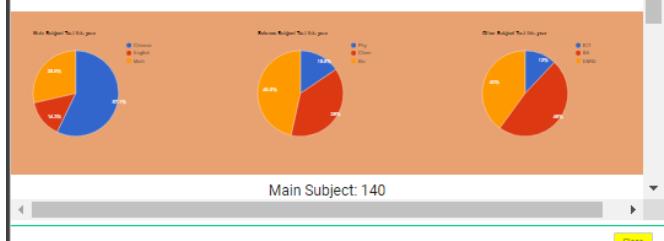
Closed: 28

Student on site/test now: 150

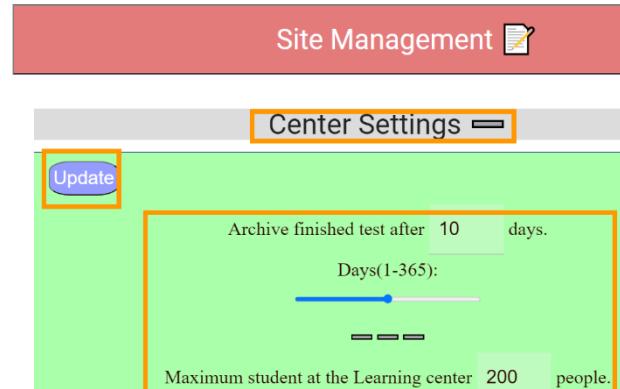
Site pressure:

### Test count this year

Total: 200

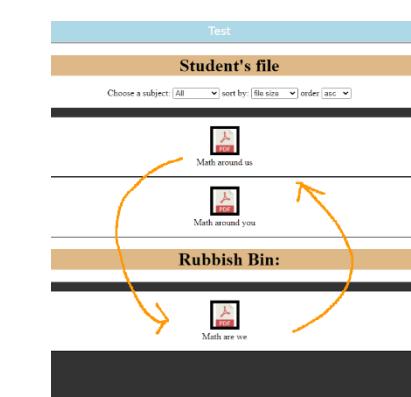


- Update learning center page setting
  1. Click “site Management”
  2. Click “center setting”
  3. Update information
  4. Click “update to confirm setting”
  5. Update success



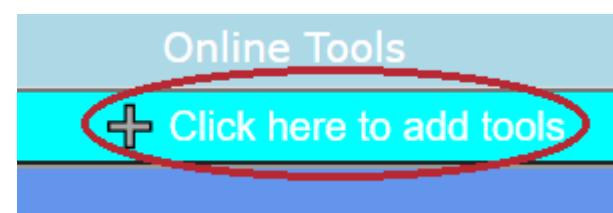
- Update learning material
  1. Update learning material
  2. Select year and move to appropriate class
  3. Click “view”
  4. Update material
  5. Click “save”
  6. Update success

Learning Materials		
Year:		
Class	Action	
1	VIEW	
1A	42	
1B	42	
1C	10	
1D	25	



Save

- View online tools
  1. Click “learning tools”
  2. View success



- Modify online tools
  1. Click “learning tools”
  2. Click “click here to add tools”
  3. Modify tools (add, delete and change tools category)
  4. Click “save”
  5. Modify success

---	Languages	Math	Science	Others
+ Add Tools	Google Translate <span style="float: right;">×</span>	Mathematic-Wolfram <span style="float: right;">×</span>	Open Science <span style="float: right;">×</span>	Welcome to Python <span style="float: right;">×</span>
Translator <span style="float: right;">×</span>	Chinese Translate <span style="float: right;">×</span>	Math.com <span style="float: right;">×</span>	Science Speaks <span style="float: right;">×</span>	Codecademy <span style="float: right;">×</span>
Calculator <span style="float: right;">×</span>	English Translate <span style="float: right;">×</span>		Science <span style="float: right;">×</span>	

Add Tools ×

Title

Description

Link

Add Online Tools

## 3.4 Student

### 3.4.1 Account Management

Personal Information 

First Name:  
Yijun

First Name:  
Lin

Gender:  
Male

Phone Number:  
26909670

Date of Birth:  
2003/05/22

Address:  
Ming Wah Ind Bldg, Tsuen Wan, Hong Kong

Password:  
.....

Confirm Password:  
.....

Webpage have following Mental Model:

- View and edit personal detail
  - 1. Modify personal data
  - 2. Click “confirm”
  - 3. Edit “success”

Personal Information 

First Name:  
Yijun

First Name:  
Lin

Gender:  
Male

Phone Number:  
26909670

Date of Birth:  
2003/05/22

Address:  
Ming Wah Ind Bldg, Tsuen Wan, Hong Kong

Password:  
.....

Confirm Password:  
.....

An orange arrow points from the "Confirm" button back towards the "Confirm" button in the first form, indicating a mental model of a successful interaction.

### 3.4.2 Class Allocation

**Class Allocation** 

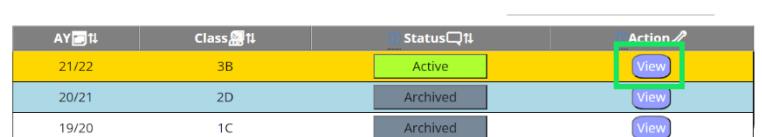
All Classes:

AY	Class	Status	Action
21/22	3B	Active	
20/21	2D	Archived	
19/20	1C	Archived	

Hover on the  to get more help!

Webpage have following Mental Model:

- View Class allocation status
  1. Move to appropriate class record
  2. Click “view”
  3. View success



AY	Class	Status	Action
21/22	3B	Active	
20/21	2D	Archived	
19/20	1C	Archived	

Class Detail

Class Student list:

Class No.	Name
01	Chan Tai Man
02	Man Tai Chan
03	Tai Man Chan
04	Ng Chun Yin
05	Wong man
06	Pu pok
07	Yuk zi tong
08	Tong Ka Ming
09	Yu Ka Lok
10	Lam Hei
11	Fan Cheuk Pan
12	Chan Yik Chun

### 3.4.3 Searching and reporting

## Search

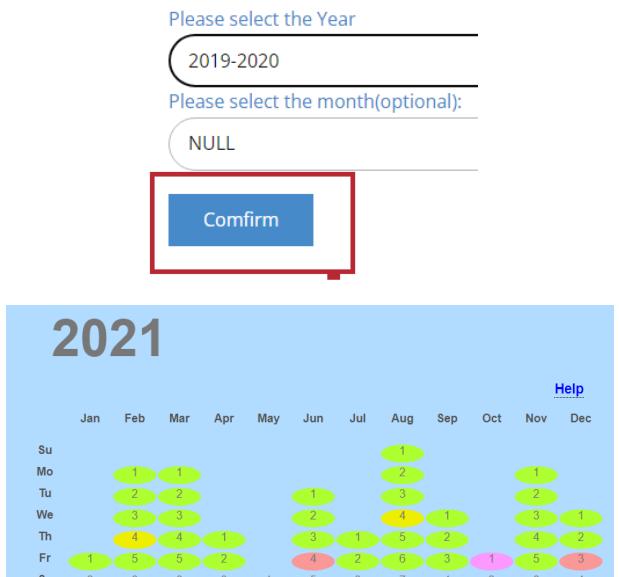
Please select the Year

Please select the month(optional):

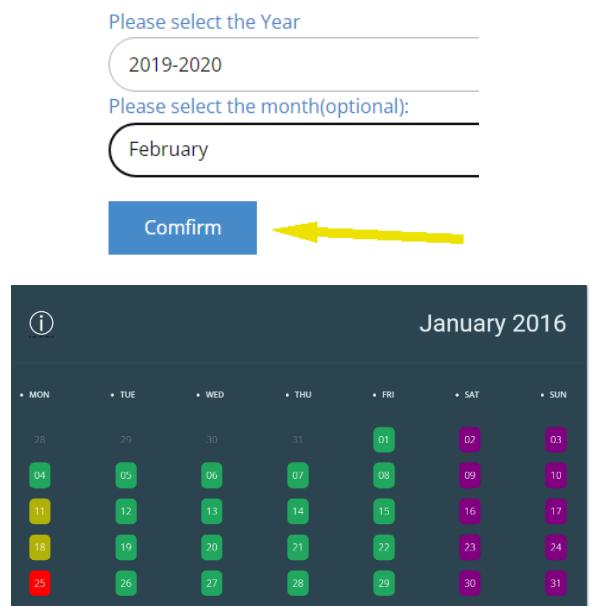
**Comfirm**

Webpage have following Mental Model:

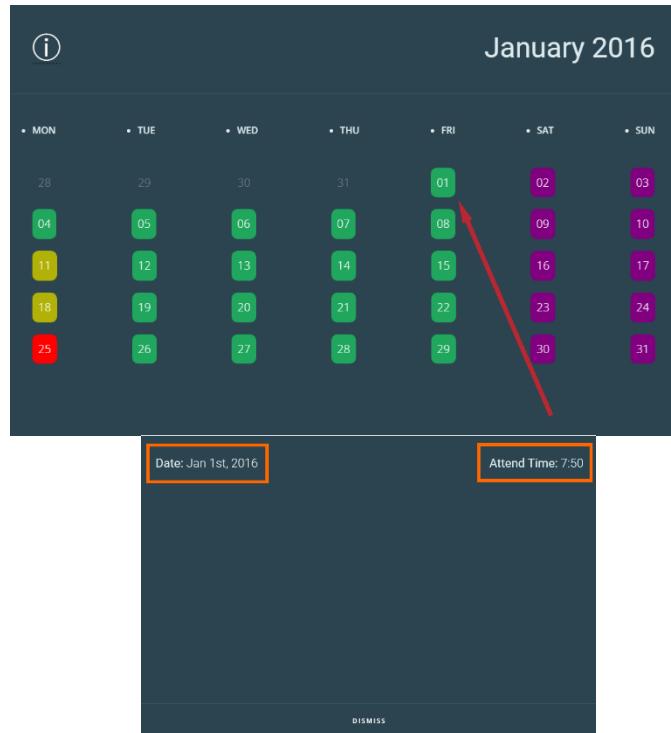
- Search year attendance record
  1. Select correct year
  2. Click “confirm”
  3. Search success



- Search month attendance record
  1. Select correct year and month
  2. Click “confirm”
  3. Search success



- Search day attendance record
  1. Select correct year and month
  2. Click “confirm”
  3. Click day in the calendar
  4. Search success

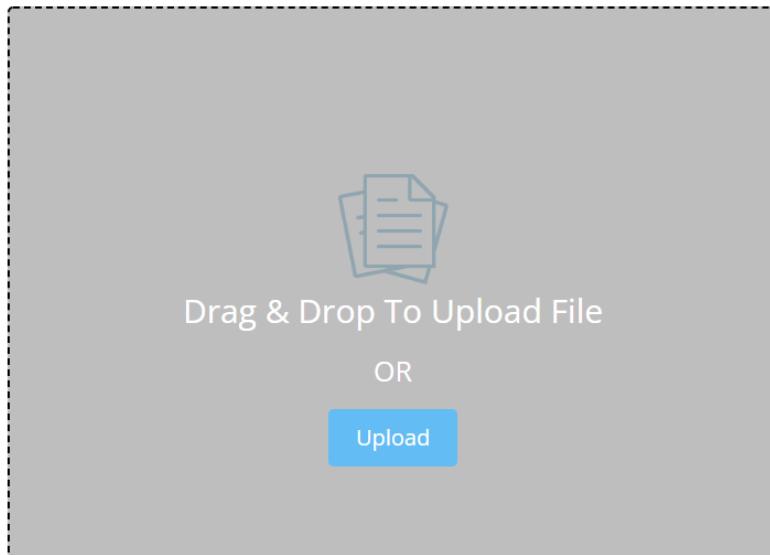


### 3.4.4 Attendance Management

Upload 

Document ID	Submit Item	File Name	Submission Date	File Size	Situation
0001	sick leave certificate	sickLeave.pdf	Sat Nov 13 2021 20:28:43 GMT+0800 (香港標準時間)	2.03KB	Progress
0002	notice/Leave Letter	LeaveLetter.pdf	Sun Nov 14 2021 10:28:43 GMT+0800 (香港標準時間)	1.03KB	Completed

1 ▾



Webpage have following Mental Model:

- Upload sick leave certificate/leave letter
  1. Drag & Drop file or click “upload” button
  2. Select submission type (certificate or leave letter)
  3. Click “confirm”
  4. Upload success



Upload Date:	Mon Nov 15 2021 22:08:21 GMT+0800 (中國標準時間)
File Size:	12.84KB
Submission Type:	( sick leave certificate )
Confirm	

### 3.4.5 Learning center

## Learning Center

Test 

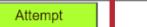
Learning materials 

Learning Tools 

Webpage have following Mental Model:

- Test Attempt
  1. Click “Test” button
  2. Click sub-title “Test”
  3. Move to appropriate test and click “attempt”
  4. Success to test attempt



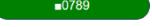
Test code	Subject 	Duedate 	Action 
100	Chinese	10/12/2021	
108	Math	21/12/2021	
138	English	22/12/2021	
177	Chem	23/12/2021	

Test

### QUIZ

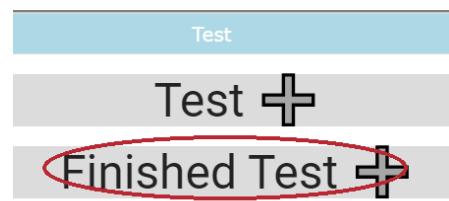
What is answer of  $69 * 69$ ?

 ▲4761     ♦5432

 •8545     ■0789

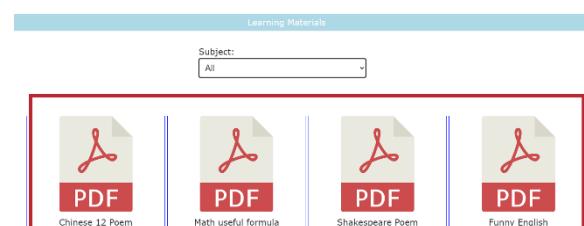
Question 1 of 4  
Time passed: 00 : 51

- View Finished Test
  1. Click “Test” button
  2. Click sub-title “Finished Test”
  3. Move to appropriate test and click “view”
  4. View success



Test code	Subject	Finish Date	Action
101	Math	30/11/2021	<a href="#">View</a>
33	Chinese	10/12/2021	<a href="#">View</a>
42	Math	21/12/2021	<a href="#">View</a>

- View Learning material
  1. Click “Learning materials” button
  2. Click “appropriate material”
  3. View success



- View Learning tools
  1. Click “learning tools” button
  2. Click appropriate hyperlink
  3. Online Tools access success



<b>Languages</b>	<b>Math</b>	<b>Science</b>	<b>Others</b>
<a href="#">Google Translate</a> This tool can translate different language	<a href="#">Mathematics - Wolfram Alpha Examples</a> Mathematics. WolframAlpha has broad knowledge and deep computational power when it comes to math. Whether you're looking for algebra, calculus, differential	<a href="#">Open Science - Science website</a> Free and access scientific news. Get the most recent news from science, arts - Current scientific affairs, from medicine to space and astronomy - Browse Sections - Make A Donation -	<a href="#">Welcome to Python.org</a> The official home of the Python Programming Language
<a href="#">Chinese Translate</a> This tool can translate different language. This looks so good.	<a href="#">Math.com - World of Math Online</a> Free math lessons and math homework help from basic math to advanced topics like calculus and statistics. A favorite of students, teachers, parents, and everyone can find solutions to ...	<a href="#">Science Speaks - Will You Listen?</a> Science is an adventure! Limited only by your imagination, #NotYourTextbookScientists - Science Speaks. Will You Listen? Videos on the atmosphere & creativity in sciences.	<a href="#">Codecademy, Learn to Code - for Free</a> Interactive hands-on learning. Designed for all levels. Guidance every step of the way. Complete projects to show off to the world or a coding community.
<a href="#">English Translate</a> This tool can translate different language. Get english in 3 second.	<a href="#">Science : AAAS</a> The strength of Science and its online journal sites rests with the strengths of its community of authors, who come from a wide range of educational institutions ...	<a href="#">Coding Games and Programming Challenges to Code Better</a> CodeGame is a challenge-based game that allows you to practice and improve where you can improve your coding skills with fun exercises (25+ languages supported)	

## 3.5 Teacher

### 3.5.1 Account management

## Student Information

Class:2C

Filter

Student Class Number	First Name	Last Name	Gender	Phone Number	Birth	Address	operation
0001	Yijun	Lin	M	26909670	2003/10/23	Ming Wah Ind Bldg, Tsuen Wan, Hong Kong	
0002	Tu	Bai	M	23382338	2003/05/22	Comfort Ct, Fanling, Hong Kong	
0003	Mu	Tang	F	26820316	2003/08/18	Sunshine Mans North Point, Eastern District, Hong Kong	
0004	Yahui	Wu	M	35568636	2003/04/23	Cyberport Wah Fu, Southern District, Hong Kong	

1

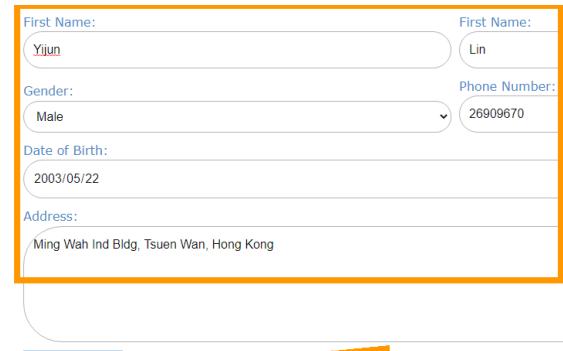
Hover on the  to get more help!

Webpage have following Mental Model:

- Search and View student information in their Class
  1. Enter keyword in filter column
  2. Show filtered table
- Edit student information in their Class
  1. Move to appropriate student record
  2. Click “edit”
  3. Update student information
  4. Click “confirm”
  5. Edit success



Student Class Number	First Name	Last Name	Gender	Phone Number	Birth	Address	operation
0001	Yijun	Lin	M	26909670	2003/10/23	Ming Wah Ind Bldg, Tsuen Wan, Hong Kong	

First Name:	Yijun	First Name:	Lin
Gender:	Male	Phone Number:	26909670
Date of Birth:	2003/05/22	Address:	
		Ming Wah Ind Bldg, Tsuen Wan, Hong Kong	
<input type="button" value="Confirm"/>			

- View and edit personal account information
  1. Click teacher profile icon
  2. Modify personal data
  3. Click “confirm”
  4. Edit success



#### Personal Information [\(i\)](#)

First Name:

First Name:

Gender:  
 Male

Phone Number:

Date of Birth:

Address:

Password:

Confirm Password:

### 3.5.2 Class Allocation

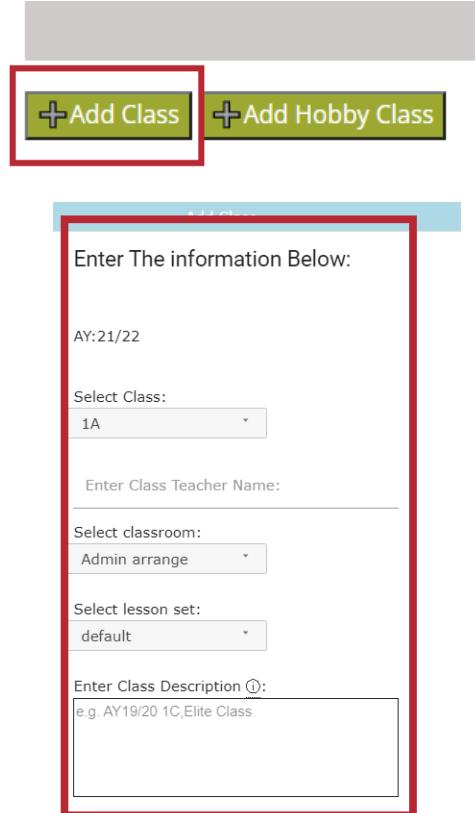
## Class Allocation

Your Classes:				
AY	Class	Status	Action	
21/22	2C	Active	View	Manage Edit
21/22	2D	Active	View	Manage Edit
20/21	1C	Archived	View	
19/20	1C	Canceled	View	
18/19	1A	Archived	View	
17/18	1B	Archived	View	
17/18	1D	Canceled	View	

Hover on the  to get more help!

Webpage have following Mental Model:

- Create Class
  1. Click “Add Class”
  2. Select class information
  3. Click “save”
  4. Create success



Enter The information Below:

AY:21/22

Select Class:

Enter Class Teacher Name:

Select classroom:

Select lesson set:

Enter Class Description :  
e.g. AY19/20 1C,Elite Class

Save

- Edit Class information
  1. Move to target record
  2. Click “edit”
  3. Edit information
  4. Click “save”
  5. Edit success

AY	Class	Status	Action
21/22	2C	Active	<a href="#">View</a> <a href="#">Manage</a> <a href="#">Edit</a>
21/22	2D	Active	<a href="#">View</a> <a href="#">Manage</a> <a href="#">Edit</a>

Edit Class Information

Class Information:

Enter Class Teacher Name:  
Chan Tai Man

Select classroom:  
Admin arrange

Select lesson set:  
default

Enter Class Description (i):  
AY21/22 2C,  
math elite class,  
two student need special care.

Save

- Add/Drop students to their class
  1. Move to target record
  2. Click “Manage”
  3. Add/drop students
  4. Click “save”
  5. success to manage class's students

AY	Class	Status	Action
21/22	2C	Active	<a href="#">View</a> <a href="#">Manage</a> <a href="#">Edit</a>
21/22	2D	Active	<a href="#">View</a> <a href="#">Manage</a> <a href="#">Edit</a>

Filter

Student in School:	Student in 2C:
Ching Yuen Chan Ho Yin Ho Chi Ming Kam Siu San Lai Yau Chung Lam Tsz Kin Law Chi Hong Luk Tsz Shan Tsang Wai Hung Wong Chok Hin Zheung Wenzhen Zhang Qian	Load Student List from admin
Chan Yuen Hi Tang Ka Wai >> <<	

(\* Only first 20 result will be show)  
Why there is some student cannot be selected? (i)

Save

- View Student list and Class detail
  1. Move to target record
  2. Click “view”
  3. View success

Action		
<a href="#">View</a>	<a href="#">Manage</a>	<a href="#">Edit</a>
<a href="#">View</a>	<a href="#">Manage</a>	<a href="#">Edit</a>

Class Detail	
Class Student list:	
Class No.	Name
01	Chan Tai Man
02	Man Tai Chan
03	Tai Man Chan
04	Ng Chun Yin
05	Wong man
06	Pu pok
07	Yuk zi tong
08	Tong Ka Ming

### 3.5.3 Searching and Reporting

## Searching & reporting

### All Classes:

 Search Individual Attendance

 Filter

AY	Class	Status	Action
21/22	1A	Active	
21/22	1B	Active	
21/22	1C	Active	
21/22	1D	Active	

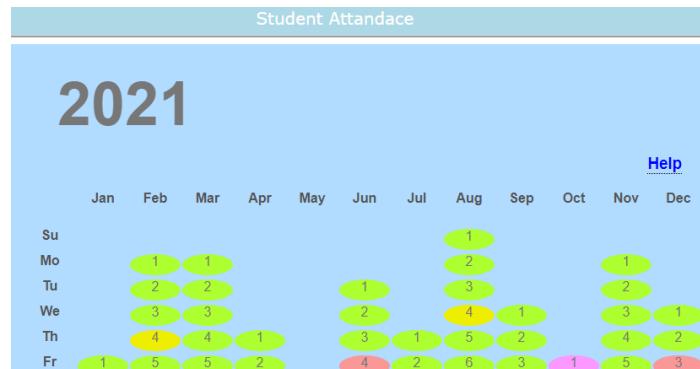
\*This table show one year on each page.

Year:  1

Webpage have following Mental Model:

- Search students' attendance record as a class
  1. Move to target class record
  2. Click "view"
  3. Move to target student record
  4. Click "view"
  5. Search success

AY	Class	Status	Action
21/22	1A	Active	 
21/22	1B	Active	 
Class No.	Name	Action	Action
01	Chan Tai Man	 	 
02	Man Tai Chan	 	 
03	Tai Man Chan	 	 
04	Ng Chun Yin	 	 
05	Wong man	 	 



- Search students' attendance record as an individual student
  1. Click “search individual attendance”
  2. Enter correct student name and search
  3. Move to target student record
  4. Click “view”

### Search Individual Attendance

#### Individual Student Search:

Enter Student Name:

Chan Tai Man



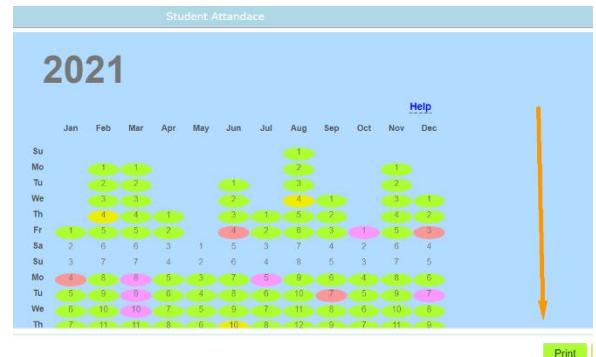
Result:

Name	Action
Chan Tai Man	

- Print students' attendance record as a class
  1. Move to target class record
  2. Click “view”
  3. Move to target student record
  4. Click “view”
  5. Click print
  6. Print success

AY	Class	Status	Action
21/22	1A	Active	
21/22	1B	Active	

Class No.	Name	Action
01	Chan Tai Man	
02	Man Tai Chan	
03	Tai Man Chan	
04	Ng Chun Yin	
05	Wong man	



- Generate class reports
  1. Move to target class record
  2. Click “view”
  3. Click “generate class report”
  4. Generate success

AY	Class	Status	Action
21/22	1A	Active	
21/22	1B	Active	

### Generate Class report

Generate Report

#### Class Reports

##### 2C class Report

This report show all attendance record, absent record, sick leave record, late record and etc in this year.

Total students in this class: 32

Attendance rate:

Attend Rate  
2021(200days)



### 3.5.4 Attendance Management

## Tick attendance

Please select the dayz

年 /月/日



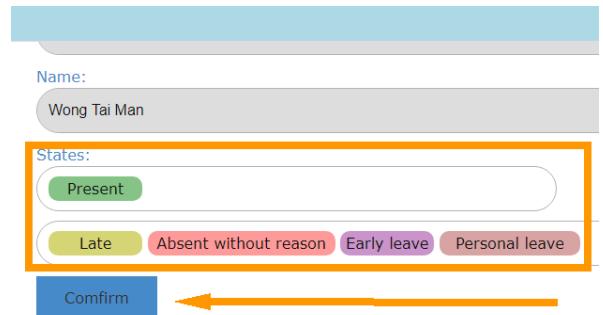
Class 2C attendance in 2021/11/27

Filter

Student Class Number	Name	Status	operation
0001	Lin Yijun	Present	
0002	Lin Yijun	Late	
0003	Lin Yijun	Sick Leave	
0004	Lin Yijun	Absent without reason	

Webpage have following Mental Model:

- Tick attendance
  1. Move to target student record
  2. Click operation icon
  3. Modify the attendance status
  4. Click “confirm”
  5. Modify attendance record complete



- Endorsed sick leave
  1. Click “endorsed sick leave”
  2. Move to target student sick leave record
  3. Check sick leave record
  4. Click “approved”
  5. Sick leave approved

Student Class Number	Name	document	operation
0001	Lin Yijun	sick leave certificate	
0002	Lin Yijun	sick leave certificate	
0003	Lin Yijun	sick leave certificate	
0004	Lin Yijun	sick leave certificate	

### 3.5.5 Learning center

Webpage have following Mental Model:

- Add test
  1. Click “test” button
  2. Click sub-title “test”
  3. Click “add test”
  4. Insert test details
  5. Click “save”
  6. Add test complete

The diagram illustrates the mental model of a 'Test' interface through four distinct stages:

- Red Header:** A red rectangular box containing the word "Test" next to a pencil icon.
- Title Bar:** A grey header bar with the word "Test" followed by a horizontal bar icon.
- Table View:** A green table view showing two rows of test details:
 

Test code	Class	Subject
100	1B	Chinese
108	2C	Math
- Input Form:** A detailed input form for adding a new test. It includes fields for:
  - A large orange-bordered box labeled "Enter The information Below:" containing fields for "AY:21/22", "Select Class: (1A)", "Enter Testcode:", "Due Date:", "Enter Due Date", "Select subject: (Chinese)", and "Select Test set (if available: none)".
  - Two buttons at the bottom: "Add questions" and "Remove questions".
  - An orange arrow points from the "Add questions" button to the "Save" button at the bottom right.
  - An orange arrow points from the "Remove questions" button to the "Save" button at the bottom right.
  - A vertical orange arrow points downwards from the "Select Test set" dropdown to the "Save" button.
  - A green "Save" button located at the bottom right.

- Notice student to complete test
  1. Click “test” button
  2. Click sub-title “test”
  3. Move to target test record and click view
  4. Click “notice them via school mail”

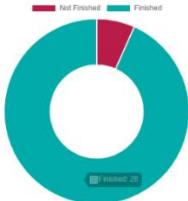
Test 

Test =

Test code	Class	Subject 	Duedate 	Action 
100	1B	Chinese	10/12/2021	
108	2C	Math	21/12/2021	

Test

Attempt Rate



Time remaining: 24d 20h 45m 4s

Name List of student who not yet finish: [Notice them via school mail](#)

Class number	Name
11	Tai Man
22	Wong Man Tai

- Close test
  1. Click “test” button
  2. Click sub-title “test”
  3. Move to target test record and click view
  4. Click “close test”

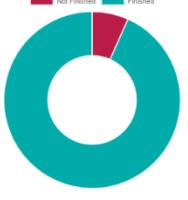
Test 

Test =

Test code	Class	Subject 	Duedate 	Action 
100	1B	Chinese	10/12/2021	
108	2C	Math	21/12/2021	

Test

Attempt Rate



Time remaining: 24d 20h 44m 36s

Name List of student who not yet finish: [Notice them via school mail](#)

Class number	Name
11	Tai Man
22	Wong Man Tai

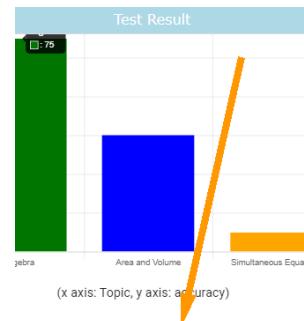


- View and download test content of finished test
  1. Click “test” button
  2. Click sub-title “finished test”
  3. Move to target test record and click “view”
  4. Click “download result report” or “download student result”
  5. Download success



## Finished Test +

Test code	Class	Subject	Finish Date	Action
42	1C	Math	11/9/2021	<a href="#">View</a>
33	2B	Chinese	12/10/2021	<a href="#">View</a>



[Download Result Report](#)  
[Download Student Result](#)

- delete leaning material
  1. Click “learning material”
  2. Click “my file”
  3. Click delete icon
  4. Delete success

## Learning materials

Learning Materials

<a href="#">My Files</a>	Subject:	<input type="text" value="All"/>
	Year:	<input type="text" value="All"/>



- Upload leaning material
  1. Click “learning material”
  2. Click “my file”
  3. Click “upload file”
  4. Upload file
  5. Click “submit”
  6. Upload success

Learning materials

Learning Materials

**My Files**

Subject: All

Year: All

My Files

**Upload file**

Subject: All

Year: All

Test

Choose year: 1 Choose subject: Chinese

選擇檔案 未選擇任何檔案  
(or) Drag and Drop files here.

**Submit**

- Modify student’s learning material
  1. Click “learning material”
  2. Move to target record and click “view”
  3. Modify student’s learning material.
  4. Click “save”

Learning materials

Your Classes:

Class	Subject	Action
1B	Math	<b>VIEW</b>
2C	Chinese	<b>VIEW</b>

Test

**Student's file**

sort by: file size asc

Math around us

Math are we

**Your file**

sort by: file size asc

Math around you

Math with you

**Save**

- View online tools
  1. Click “learning tools”
  2. View success

**Learning Tools** 

Online Tools

#### Languages

[Google Translate](#)  
This tool can translate different language.

[Chinese Translate](#)  
This tool can translate different language. This tool is good.

[English Translate](#)  
This tool can translate different language. Get English in 3 second.

#### Math

[Mathematics - Wolfram|Alpha Examples](#)  
Mathematics. Wolfram|Alpha has broad knowledge and deep computational power when it comes to math. Whether it's arithmetic, algebra, calculus, differential...

[Math.com - World of Math Online](#)  
Free math lessons and math homework help from basic math to algebra, geometry, and beyond. Students, teachers, parents, and everyone can find solutions to...

#### Science

[Open Science - Science website](#)  
Free open access scientific news. Get the most interesting science facts. Current scientific affairs. From medicine to space and astronomy. ...

[Science Speaks - Will You Listen?](#)  
Science is an adventure limited only by your creativity. #NotYourTextbookScientist + Science Speaks. Will You Listen? Video on the adventure & creativity in science.

[Science | AAAS](#)  
The strength of Science and its online journal sites rests with the strengths of its community of authors, who provide cutting-edge research, incisive...

#### Others

[Welcome to Python.org](#)  
The official home of the Python Programming Language.

[Codecademy: Learn to Code - for Free](#)  
Interactive, hands-on learning. Designed for all levels. Guidance every step of the way. Complete career-readiness. The power of a coding community.

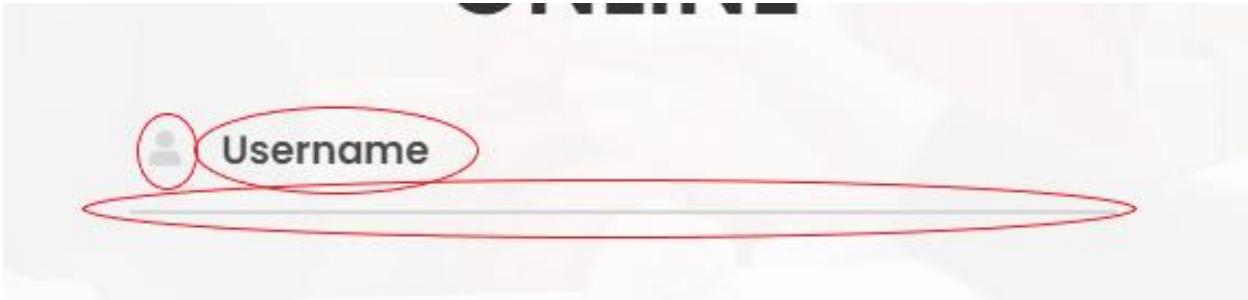
[Coding Games and Programming Challenges to Code Better](#)  
CodingGame is a challenge-based training platform for programmers where you can improve your coding skills with fun exercises (25+ languages supported)

[Cancel](#)

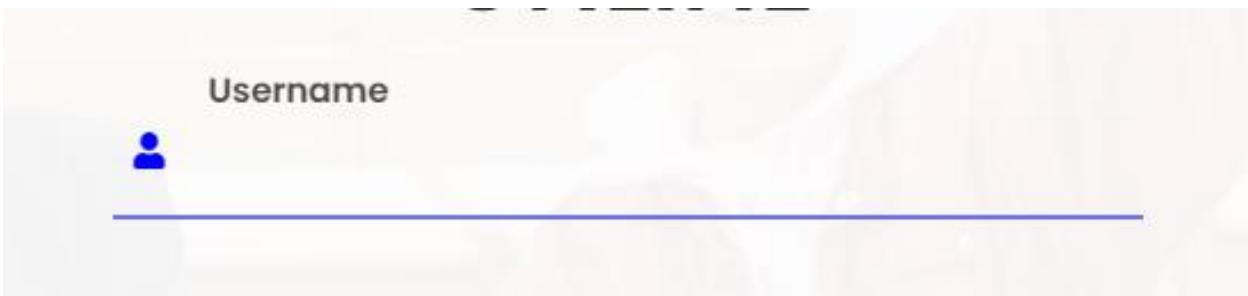
## 4 Affordance

### 4.1 Login Page

- There are icons, column names and underscores (See Figure 3) to let users know that there is a user name input area and let them input account information.



- In addition, when the user clicks on the column, the column will be expanded (See Figure 4), and user will be allowed to enter account information.

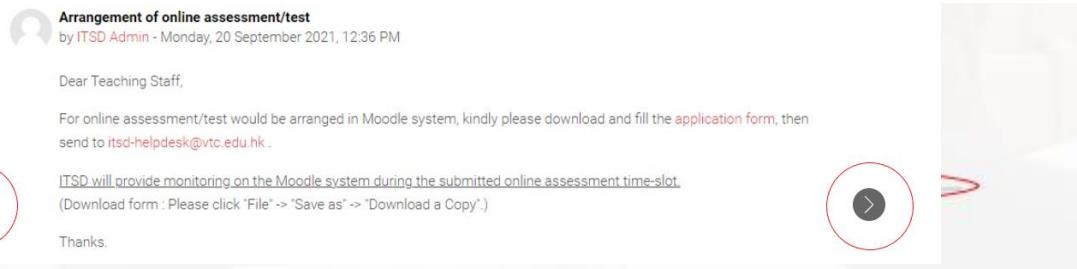


- “Forgot password” and “login” button will change background color when the user is hover in the button area.

Non-hover	hover

## 4.2 Home page

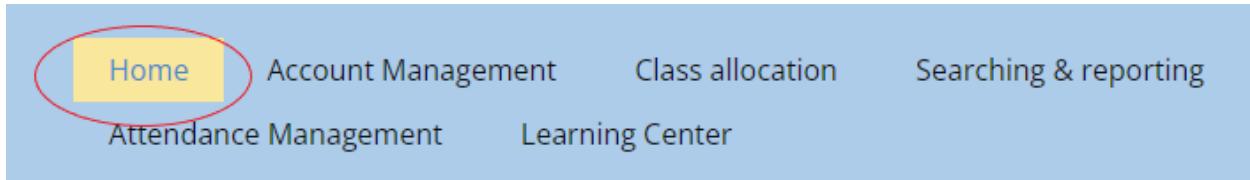
- There are left and right buttons, and user can use it to change displayed information.



- Regarding the navigation bar, the website uses icons to indicate functions. For example, the logout function is represented by the leave sign.



- Website's navigation bar have using yellow background color and blue color text displayed that your current website.



- when hover in the navigation bar item, the item's text will change to red color

Account Management

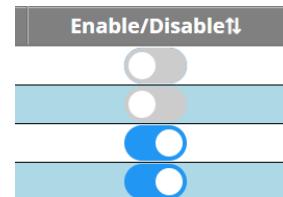
## 4.3 Admin

### 4.3.1 Account Management

- When clicked, the filter will expand to allow the entry of keywords, and the underline will change to red

Filter

- enable or disable check box use gray represent disable, blue represent enable

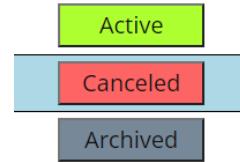


- The account creation form will have placeholders to inform the user to enter account information.

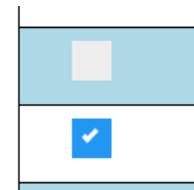
Three rounded rectangular input fields. The first field contains the placeholder "Enter user's name". The second field contains the placeholder "Enter his/her email address". The third field contains the placeholder "Please enter the password(if empty, it will generate automatically!)".

### 4.3.2 Class Allocation

- Status archive, cancel and Active use different color to represent (Archived is grey, cancel is red, Active is green)



- Checkbox will use blue background color and white font color to represent checked, use grey background color represent non-checked.



### 4.3.3 Searching & reporting

- The button will have icon in front of the button name, it can easier represent the function to the user



#### 4.3.4 Attendance Management

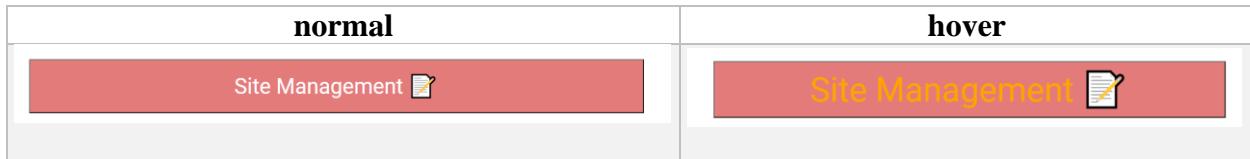
- admin will use drop-down list to select the class for which sick leave records need to be marked.

Please select the Class

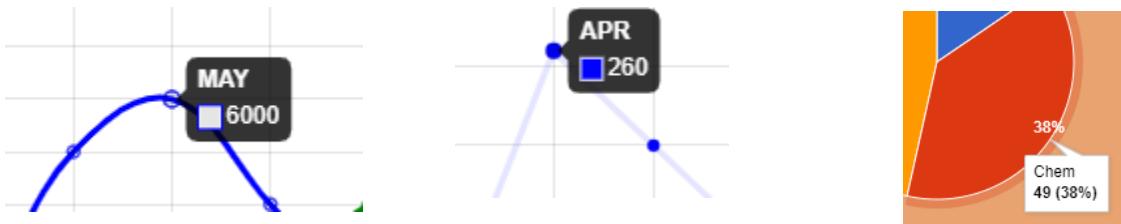
All  
1A  
1B  
1C  
1D  
2A  
2B  
2C  
2D

#### 4.3.5 Learning Center

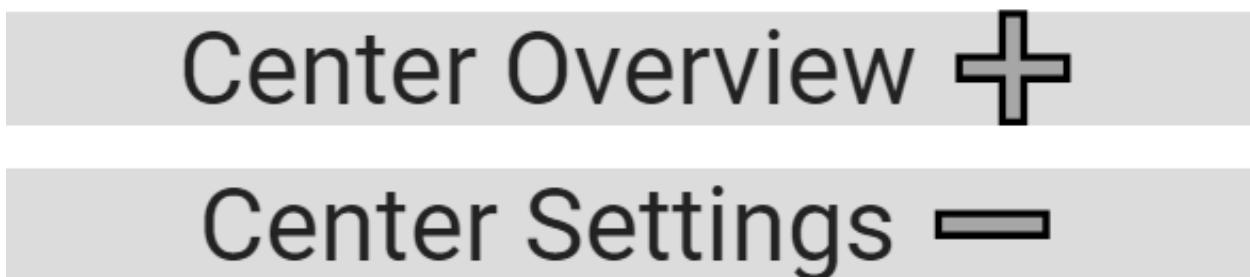
- Hover buttons will change button size, font size and font color.



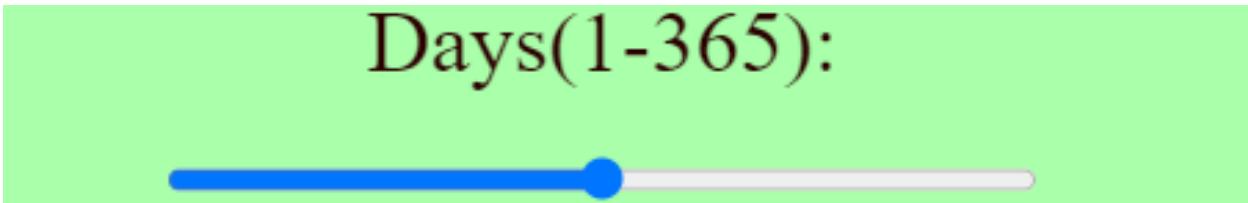
- Hover the mouse over the pie chart and line chart, it will show statistics.



- The web page will use "+" and "-" to display the status of the sub-pages, "+" means the sub-page is collapsed, and "-" means the sub-page is expanded



- Use blue range bar to let user modify webpage setting.



- The online tool block uses a white background color, allowing category to be changed by dragging and dropping.

- All hyperlinks are in purple, which makes it easier for users to identify them.

**Math**

[Mathematics - Wolfram|Alpha Examples](#)

Mathematics. Wolfram|Alpha has broad knowledge and deep computational power when it comes to math. Whether it be arithmetic, algebra, calculus, differential ...

## 4.4 Student

### 4.4.1 Account Management

- The form column are curved, allowing users to identify every part of the form.

First Name:

Yijun

### 4.4.2 Class Allocation

- Student will click “view” to watch their class allocation status



### 4.4.3 Searching and reporting

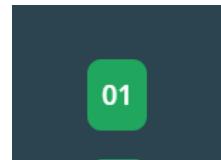
- The user can click the confirm button to query the attendance record of the year, month and day.

Please select the month(option)

NULL

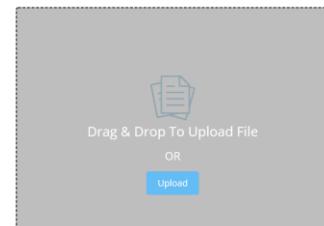
Comfirm

- Users can click on the monthly calendar date to query the attendance record details of the day



### 4.4.4 Attendance Management

- Have drag and drop area/upload button to let student upload the file



- Have confirm button to let student confirm file information and upload file to the server.

Submission Type:

sick leave certificate

Comfirm

#### 4.4.5 Learning center

- Student can click attempt button to complete the test



- Student can click view button to doing past test review



- Student can click learning material's icon to access relevant material.



- Students can click on the hyperlinks of learning tools to enter different categories of web pages

**Math**

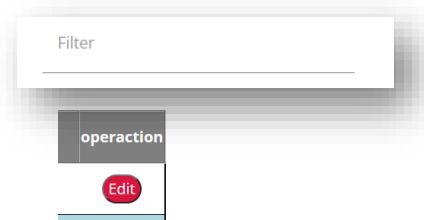
[Mathematics - Wolfram|Alpha Examples](#)

Mathematics. Wolfram|Alpha has broad knowledge and deep computational power when it comes to math. Whether it be arithmetic, algebra, calculus, differential ...

## 4.5 Teacher

### 4.5.1 Account management

- Teachers can input keywords in the filter column to filter table data.
- Teacher can click edit to modify student's personal data



- Teacher can click teacher profile icon to modify his//her personal data



### 4.5.2 Class Allocation

- Teacher can click add class to create a new class



- Teacher can click edit to modify class's information
- Teachers can click Manage to insert or delete students in the list of class student.
- Teacher can click view to looks class details and the list of students.



### 4.5.3 Searching and Reporting

- Teacher can click view button to watch class student's individual attendance



- Teacher can click search individual attendance button to watch student's individual attendance



- Teachers can click the print or download button to print attendance records and reports



- Teachers can click generate class report button to generate class report.



#### 4.5.4 Attendance Management

- Teacher can click the operation icon to modify the student's attendance status.



- Teacher can click endorsed sick leave button to approved student's sick leave



#### 4.5.5 Learning center

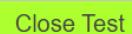
- Teachers can click "Add Test" to create a new test for students



- Teachers can click "notice them via school mail" to send the notification to students



- Teachers can click "Close Test" to change the test status to finished.



- Teachers can click "download result report" or "download student result" to download content of finished test.



- Teachers can click the delete icon to delete inappropriate learning materials.



- Teachers can click "Upload File" to upload new materials to the server



- Teachers can click "View" in the "Learning Materials" dialog box to modify students' learning materials



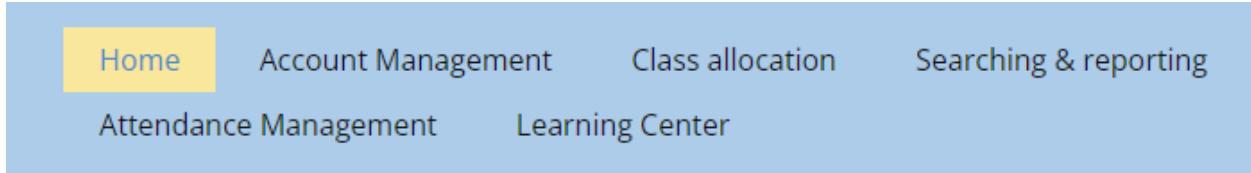
- Teachers can click "Learning Tools" to view the hyperlinks of the latest online tool.



## 5 Content Organization

### 5.1 Organizational schemes

The website uses a task-oriented organization scheme to group projects into their own goals to organize projects.



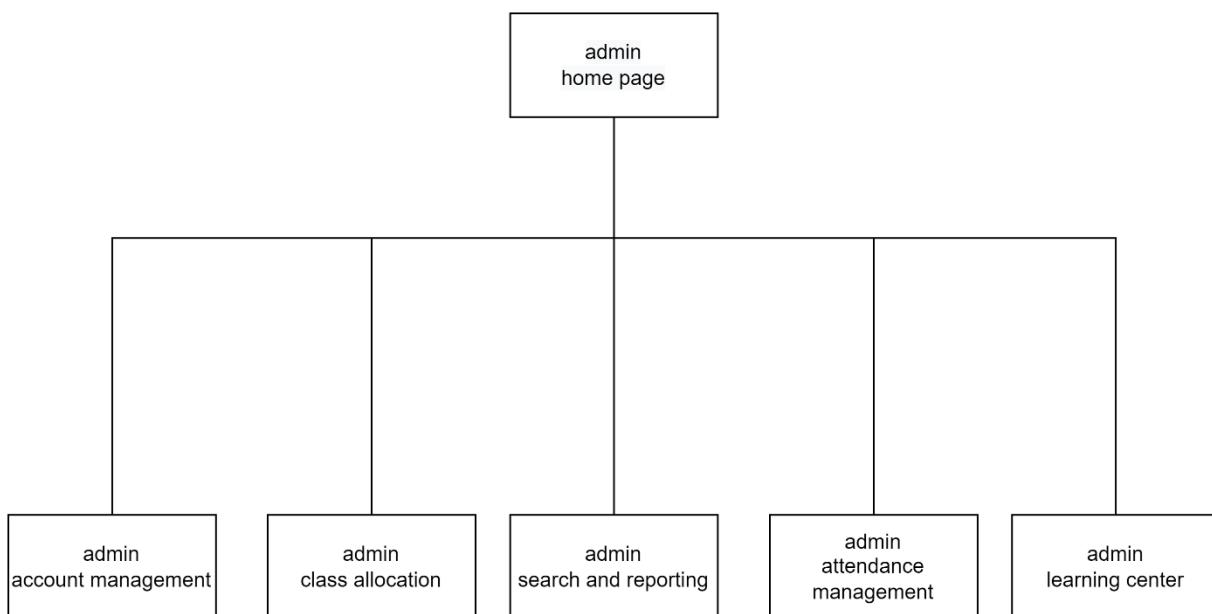
This method enables the user to easily find the function he or she wants.

For example, if the teacher wants to change the student's attendance record, just click on the attendance management button. And then go to the attendance page to change attendance.

### 5.2 Organizational structures

The website has using Hierarchy structure, which is structure by rank or level.

That is the example of the admin interface:



### 5.3 Research and interview techniques

Before creating the website, the development team used Card Sorting to group all functions. For example, according to the card Sorting results, the user classifies the "View and Search All User Information" and "Create Account for All School Members" cards into the same category. Therefore, when the development team implements them, they are classified under the category of "Customer Management"

Account Management

## 6 Visual Organization

### 6.1 Proximity

- Regarding Proximity, the website divides content into three parts (header, body and footer). So that the content can easily attract users' attention.

The screenshot shows a web application for managing student information. At the top is a blue header bar with the 'MSS' logo, navigation links (Home, Account Management, Class allocation, Searching & reporting, Attendance Management, Learning Center), and a user profile (Lin Yijun). Below the header is a large red oval encompassing the main content area. This area features a title 'Student Information' with a help icon, a subtitle 'Class: 2C', and a 'Filter' button. A table lists four student records with columns for Student Class Number, First Name, Last Name, Gender, Phone Number, Birthdate, Address, and operation (Edit button). A note at the bottom says 'Hover on the ⓘ to get more help!'. The footer, also enclosed in a red oval, contains the copyright notice 'Copyright (c) the Man Secondary School 2021. All rights reserved.'

### 6.2 Alignment

- With regard to alignment, the website has been aligned to two ways (center and left alignment). For example, for the title, the website aligns it to the center, which makes it more eye-catching. For content (button), it is aligned to the left, which looks neat.

The screenshot shows a web application for searching and reporting attendance. At the top is a blue header bar with the 'MSS' logo, navigation links (Home, Account Management, Class allocation, Searching & reporting, Attendance Management, Learning Center), and a user profile (Lin Yijun). Below the header is a red oval around the title 'Searching & reporting' with a help icon. Another red oval highlights the search bar 'All Classes:' above a table. The table lists four classes (1A, 1B, 1C, 1D) for the AY 21/22, all marked as 'Active' with a 'View' button. A note at the bottom says 'Hover on the ⓘ to get more help!'. The footer contains the copyright notice 'Copyright (c) the Man Secondary School 2021. All rights reserved.'

### 6.3 Consistency

About the consistency, we have doing following operation:

- Repeating alignment scheme
  - In the other web page on the website, it is also aligned to the title to center and button to left.

**Searching & reporting**

All Classes:

**Search Individual Attendance**

AY	Class	Status	Action
21/22	1A	Active	<span>View</span> <span>Manage</span> <span>Edit</span>
21/22	1B	Active	<span>View</span> <span>Manage</span> <span>Edit</span>
21/22	1C	Active	<span>View</span> <span>Manage</span> <span>Edit</span>
21/22	1D	Active	<span>View</span> <span>Manage</span> <span>Edit</span>

**Class Allocation**

Your Classes:

**Add Class** **View History**

AY	Class	Status	Action
21/22	2C	Active	<span>View</span> <span>Manage</span> <span>Edit</span>
21/22	2D	Active	<span>View</span> <span>Manage</span> <span>Edit</span>
20/21	1C	Archived	<span>View</span>
19/20	1C	Canceled	<span>View</span>
18/19	1A	Archived	<span>View</span>
17/18	1B	Archived	<span>View</span>
17/18	1D	Canceled	<span>View</span>

- Placing navigation tools, like site links, in the same position
  - As for the title of the website, the website put it in the same place for the web page. It makes users not to confuse about the title of each web page. In addition, the title also has a locking position on the web page.

### Searching & reporting

- Using the same style
  - The web page have using same CSS file and let each categories have same style, for example font size, color, background and table.

<p><b>Teacher – Class allocation</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>AY</th> <th>Class</th> <th>Status</th> <th>Action</th> </tr> </thead> <tbody> <tr><td>21/22</td><td>2C</td><td>Active</td><td><span>View</span> <span>Manage</span> <span>Edit</span></td></tr> <tr><td>21/22</td><td>2D</td><td>Active</td><td><span>View</span> <span>Manage</span> <span>Edit</span></td></tr> <tr><td>20/21</td><td>1C</td><td>Archived</td><td><span>View</span></td></tr> <tr><td>19/20</td><td>1C</td><td>Canceled</td><td><span>View</span></td></tr> <tr><td>18/19</td><td>1A</td><td>Archived</td><td><span>View</span></td></tr> <tr><td>17/18</td><td>1B</td><td>Archived</td><td><span>View</span></td></tr> <tr><td>17/18</td><td>1D</td><td>Canceled</td><td><span>View</span></td></tr> </tbody> </table>	AY	Class	Status	Action	21/22	2C	Active	<span>View</span> <span>Manage</span> <span>Edit</span>	21/22	2D	Active	<span>View</span> <span>Manage</span> <span>Edit</span>	20/21	1C	Archived	<span>View</span>	19/20	1C	Canceled	<span>View</span>	18/19	1A	Archived	<span>View</span>	17/18	1B	Archived	<span>View</span>	17/18	1D	Canceled	<span>View</span>	<p><b>Teacher - Searching &amp; reporting</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>AY</th> <th>Class</th> <th>Status</th> <th>Action</th> </tr> </thead> <tbody> <tr><td>21/22</td><td>1A</td><td>Active</td><td><span>View</span></td></tr> <tr><td>21/22</td><td>1B</td><td>Active</td><td><span>View</span></td></tr> <tr><td>21/22</td><td>1C</td><td>Active</td><td><span>View</span></td></tr> <tr><td>21/22</td><td>1D</td><td>Active</td><td><span>View</span></td></tr> </tbody> </table>	AY	Class	Status	Action	21/22	1A	Active	<span>View</span>	21/22	1B	Active	<span>View</span>	21/22	1C	Active	<span>View</span>	21/22	1D	Active	<span>View</span>
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## 6.4 Contrast

- Regarding the content, title and subtitle, webpage use different font colors and font sizes to highlight the content of the title and subtitle. This makes it easier to attract the attention of users to the title.

The screenshot shows the 'Class Allocation' section of the MSS website. At the top, there's a navigation bar with links like 'Home', 'Account Management', 'Class allocation' (which is highlighted in yellow), 'Searching & reporting', 'Attendance Management', and 'Learning Center'. A user profile for 'Lin Yijun' is also visible. Below the navigation, the main content area has a light blue header with the text 'Class Allocation' and an info icon. An arrow points from this text to the right with the label 'using H1'. Below this is a sub-header 'Your Classes:' with an info icon, also accompanied by an arrow and the label 'using h2'. A red oval highlights a table below these headers. The table has columns for 'AY', 'Class', 'Status', and 'Action'. It lists seven rows of data. A red arrow points from the right side of the table towards the bottom right corner with the label 'using font size 20px'. A tooltip at the bottom left of the table says 'Hover on the ⓘ to get more help!'. The table data is as follows:

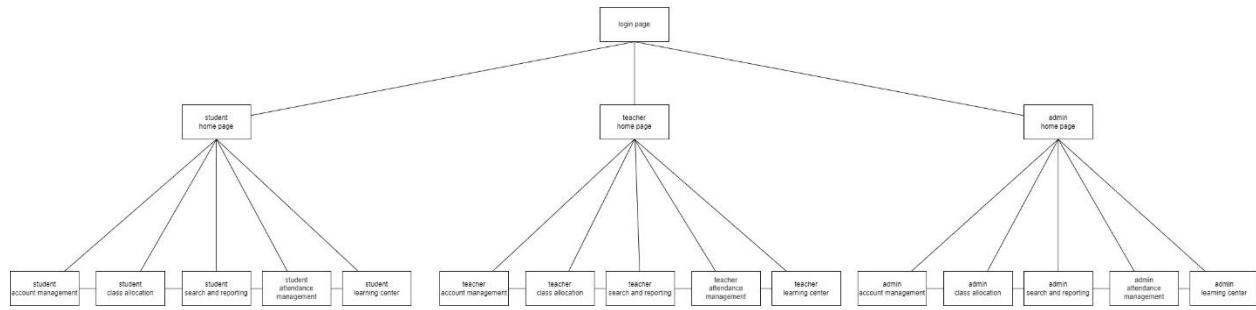
AY	Class	Status	Action
21/22	2C	Active	View Manage Edit
21/22	2D	Active	View Manage Edit
20/21	1C	Archived	View
19/20	1C	Canceled	View
18/19	1A	Archived	View
17/18	1B	Archived	View
17/18	1D	Canceled	View

## 7 Navigation

### 7.1 Navigational Design

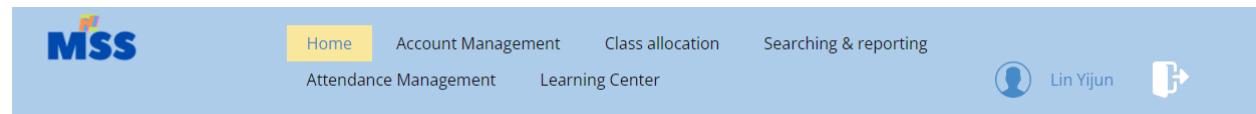
The navigation system used in this website is hierarchical. As for this navigation system, its advantage is that when users use the website, it can facilitate them to move in the hierarchy, instead of going all the way to the top. Besides, it will be easier to maintain in the future.

There is the whole hierarchical design of the website:



### 7.2 Navigational Elements

- website has using Navigation Bars on the top



- standard icons
  - ◆ In the navigation bar, the website uses person icons to represent personal information



- ◆ Use door to indicate the logout function

