



**ASSIGNMENT TITLE : OCEANA CLINIC MANAGEMENT SYSTEM**

**MODULE NAME :VB.NET (AAPP008-4-2-VBN )**

**NAME :YAW XIN YING (TP054359)**

**LECTURER : DR. DEBASHISH DAS**

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## 1.0 Introduction

Most of the clinic in Malaysia are still using paperwork as the primary way of recording and storing data. These paperwork may be cheap to implement but would slow down the overall business performance of the clinic. For example, it might take a long time for staff to retrieve a patient's file that are stored in a file cabinet. This problem can be avoided if clinic implement clinic management system that can systematically record and store data in an efficient way.

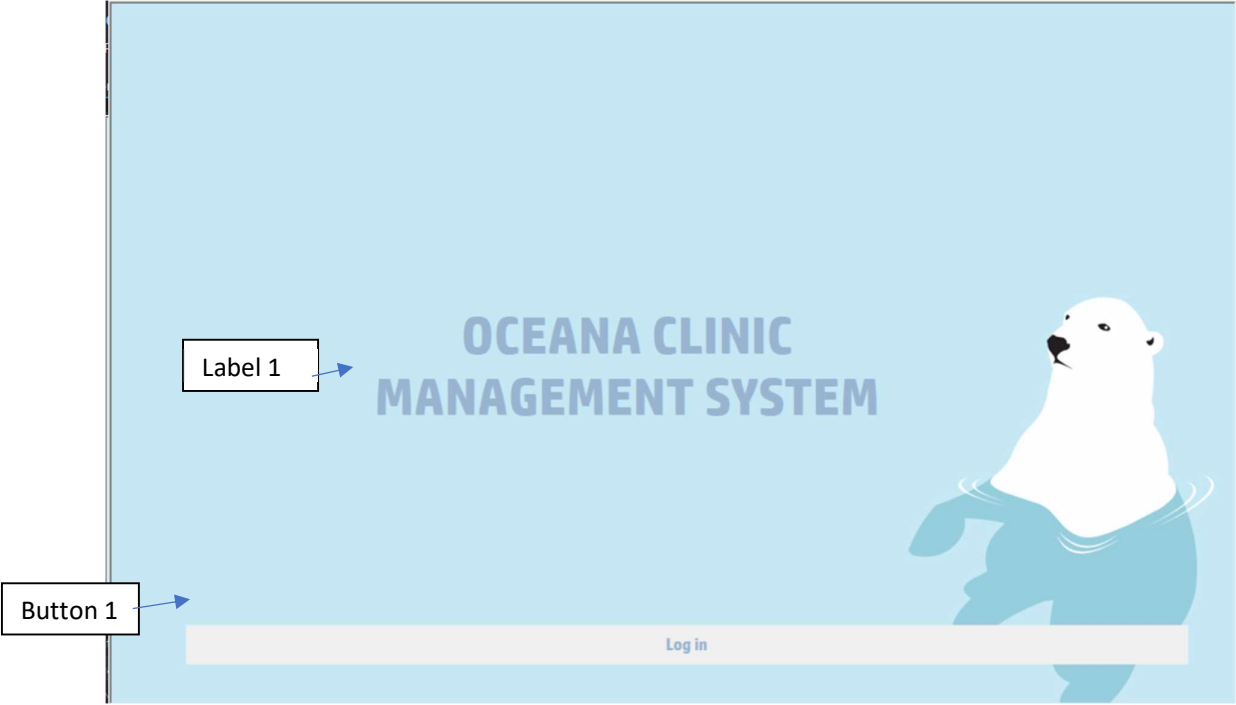
By integrating this information system into the clinic, nurse will not need to fill up tedious amount of patient's information on the paper form manually but could just type and store the data into the system in just a few minutes. This could keep human error to a minimum and this in turn, from a business perspective, could help to reduce cost and saves time since less time are spent on fixing errors but more on focusing how to deliver the best service to the patients.

Therefore, the purpose of this project is to develop an information system called- **OCEANA clinic management system** to facilitate the daily operations of the OCEANA clinic. It aims to help staff in OCEANA clinic which includes admin, staff, and doctor to do their job more efficiently.

The main functionality of this system differs according to user type. For admin, they are able to create and manage system user profile. Nurse on the other hand, could register patient into the system and store patient's data into the system database. They could also generate bill during payment after patient's had completed their consultation or treatment. Doctor could retrieve patient's health information and also their previous treatment record in order to smoothen their consultation process. In addition, doctor can also use this system to record all the services and medicine prescribed to patients into the database for future reference.

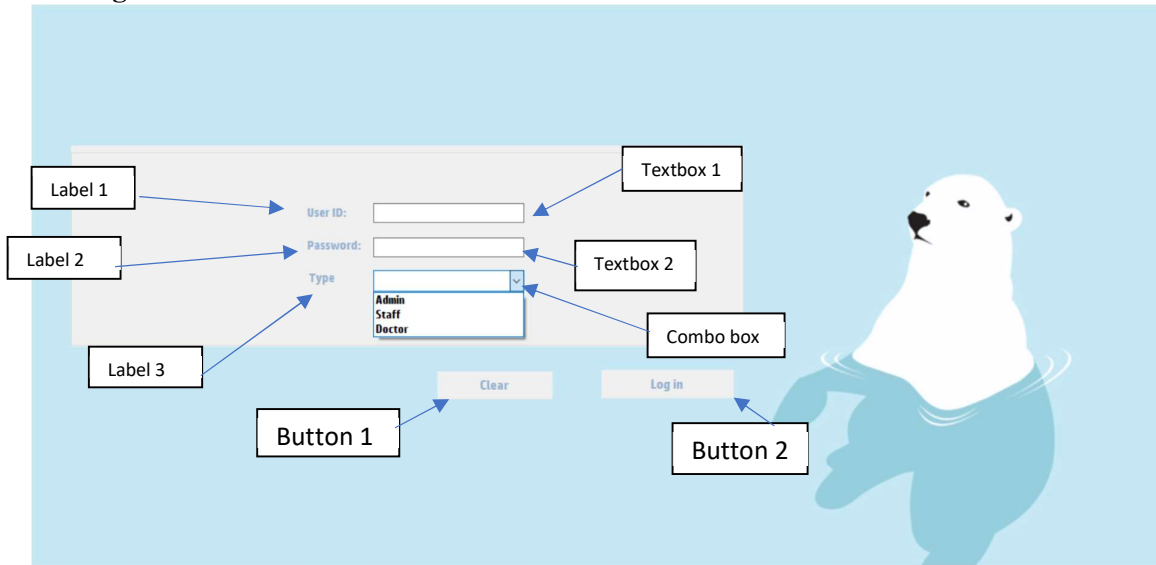
2.0 Storyboard

2.1 Home Screen



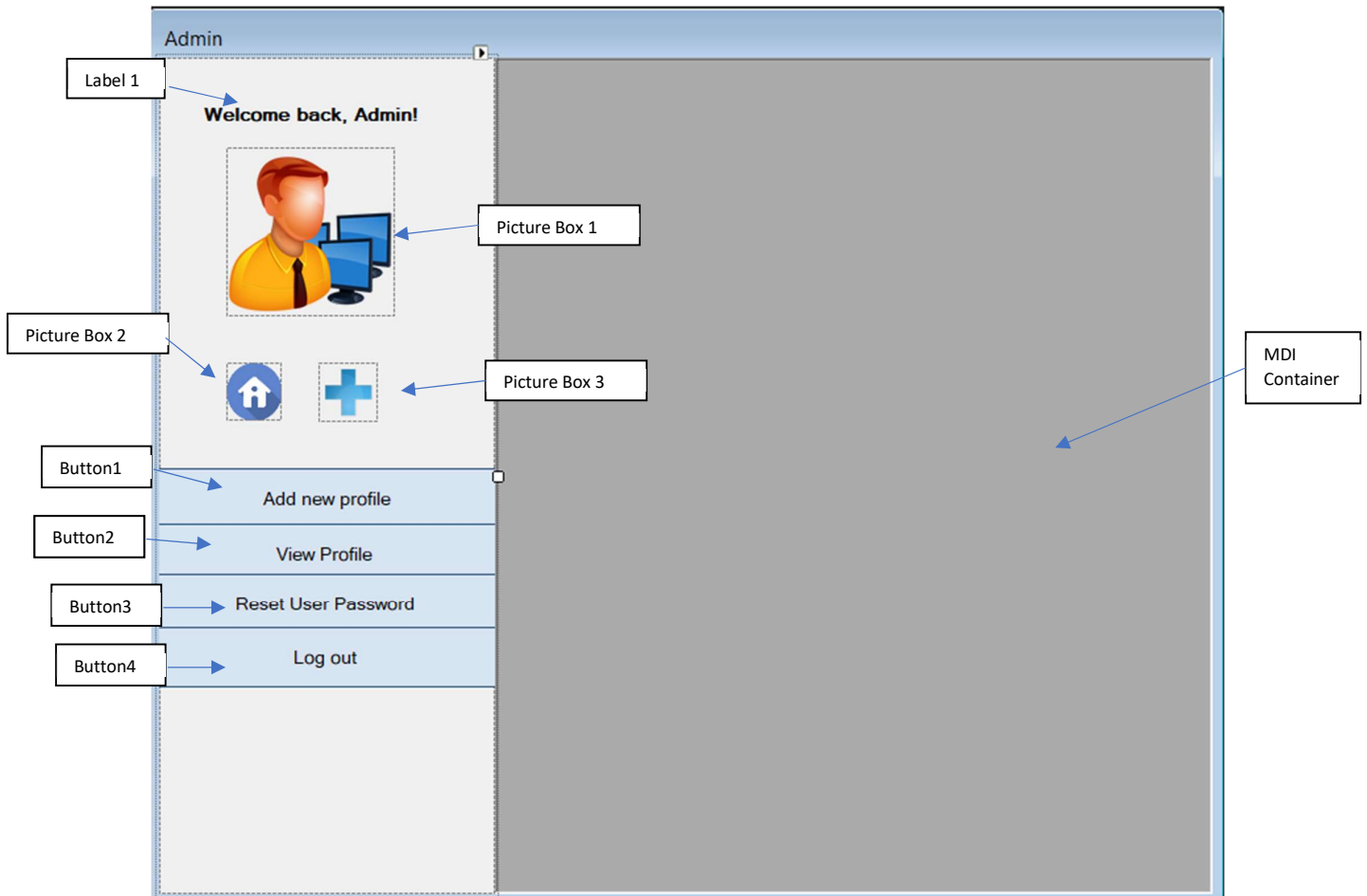
Control	Control Name	Description
Label 1	lblTitle	Display the title
Button 1	btnLogin	To log in to the system

## 2.2 Login Screen



Control	Control Name	Description
Label 1	LblID	To label the related controls to the right
Label 2	lblPassword	
Label 3	lblUserType	
Textbox 1	txtID	To allow user to enter ID
Textbox 2	txtPassword	To allow user to key in password
Combo Box	cboUserType	To allow user to choose from a list of user type: Admin,staff,doctor
Button 1	btnClear	Clear all the content in textbox and combo box
Button 2	btnLogin	To enable user to log in to the system with the credentials provided


## 2.3 Admin Main Screen



Control	Control Name	Description
Label 1	lblWelcome	Display welcome message
Picture Box 1	picAdmin	Display picture of Admin user
Picture Box 2	picHome	Hide all forms and return to the home screen
Picture Box 3	picAdd	Add new user profile
Button 1	btnAdd	Add new user profile
Button 2	btnView	View and edit user profile
Button 3	btnResetpassword	Reset password for users
Button 4	btnLogout	Log out of the system and return to the home screen login page
MDI Container	mdiAdmin	Act as a MDI parent to allow multiple forms to open inside this form

## 2.4 Admin add new user profile

Welcome back, Admin!



Home +

Add new profile

View Profile

Reset User Password

Log out

Label 1

Label 2

Label 3

Label 4

Label 5

Name:

User ID

New Password

Confirmed Password

Type

Clear

Create

Textbox 1

Textbox 2

Textbox 3

Textbox 4

Combo box

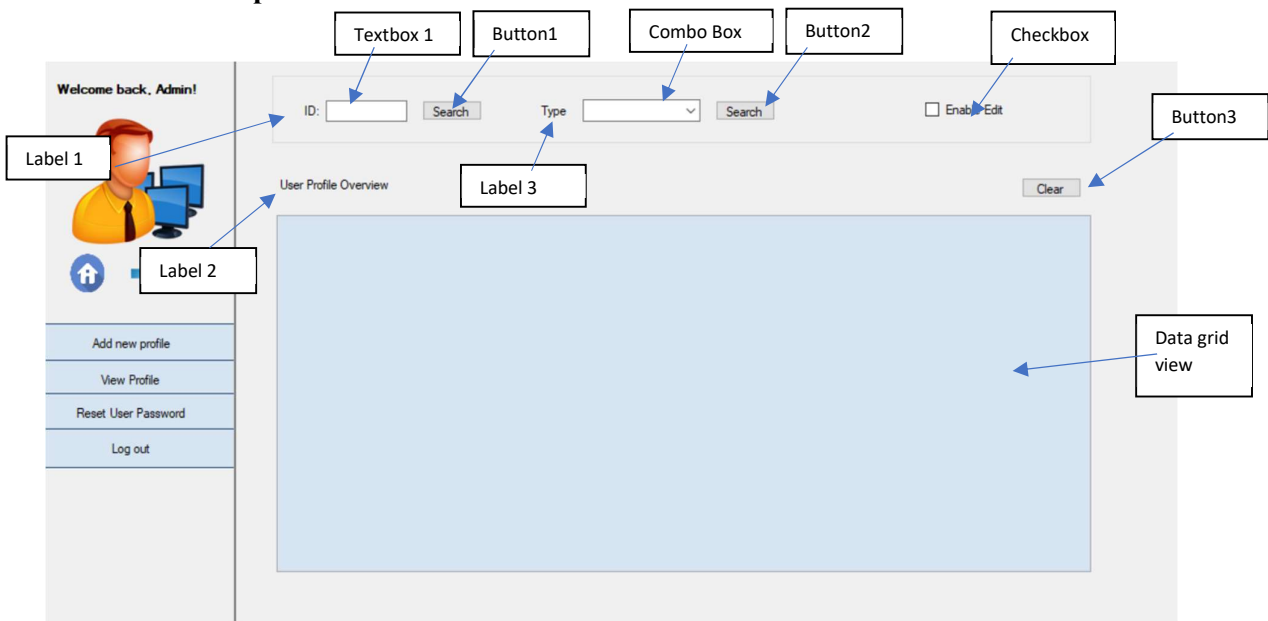
Button1

Button2

Control	Control Name	Description
Label 1	lblName	To label the related controls to the right
Label 2	lblID	
Label 3	lblNewPassword	
Label 4	lblConPassword	
Label 5	lblUserType	
Textbox 1	txtName	To enable admin to key in the name of the new user
Textbox 2	txtID	To allow admin to add new ID
Textbox 3	txtNewPassword	To allow admin to key in new password
Textbox 4	txtConPassword	To compare and verify the password
Combo box	cboUserType	To allow user to choose from a list of user type: Admin,staff,doctor
Button 1	btnClear	Clear all the content in textbox and combo box
Button 2	btnCreate	To allow admin create new user profile



## 2.5 Admin view profile



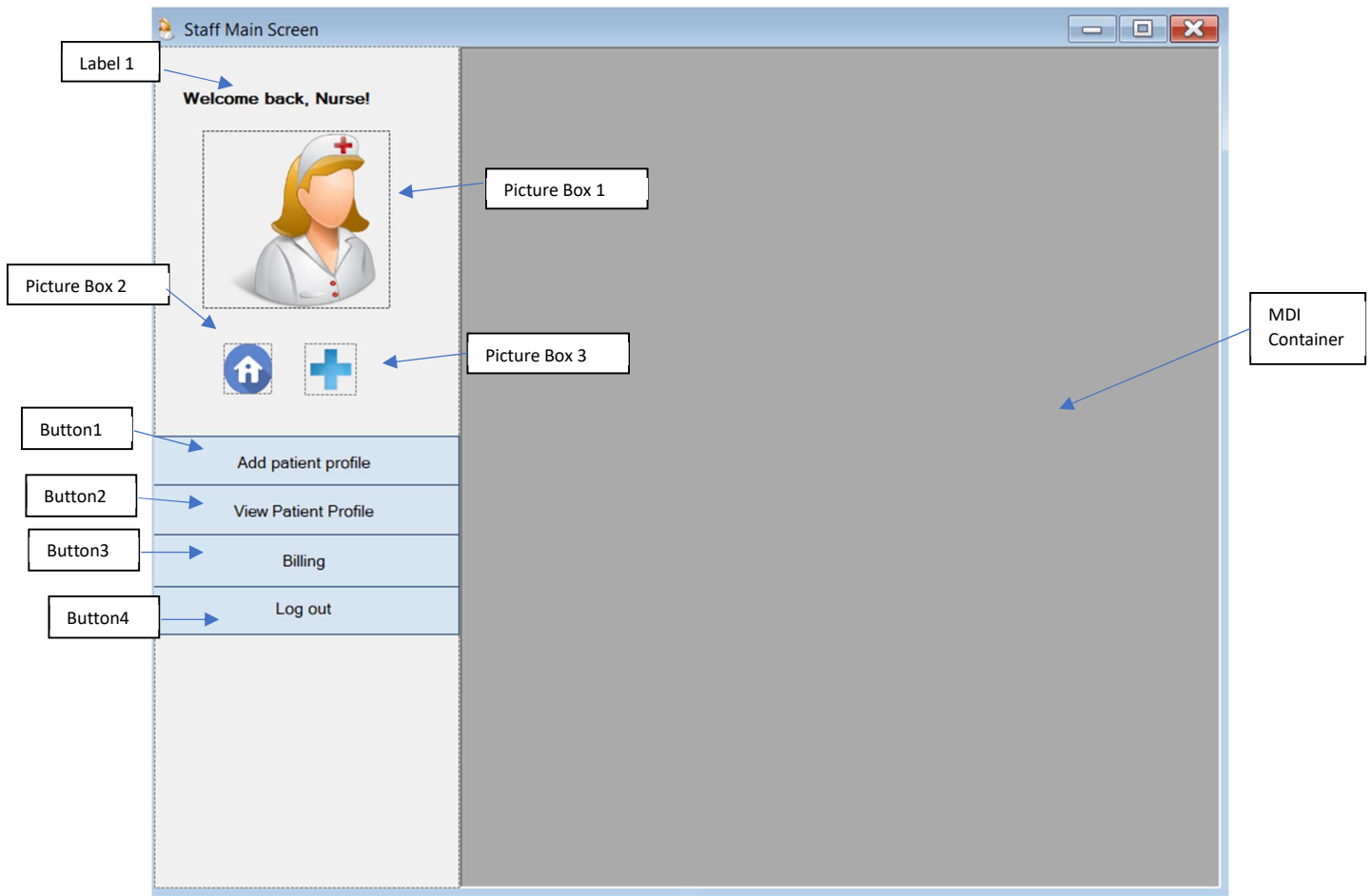
Control	Control Name	Description
Label 1	lblID	To label the related controls to the right
Label 2	lblUserProfileOverview	
Label 3	lblUserType	
Textbox 1	txtID	To allow admin to key in User ID
Combo Box	cboUserType	To allow user to choose from a list of user type: Admin,staff,doctor
Button 1	btnSearchID	To allow admin to search user data by ID
Button 2	btnSearchType	To allow admin to search user data by User Type
Button 3	btnClear	Reset data grid view and return it to its default blank state
Checkbox	chkEditEnabled	To enable admin to modify the content inside the data grid view
Data grid view	dgvUserProfile	To display all the data of user registered in the system

## 2.6 Admin Reset Password

The screenshot shows a web application interface for an admin to reset a user's password. On the left is a sidebar with a welcome message 'Welcome back, Admin!', a user profile icon, and navigation links: 'Add new profile', 'View Profile', 'Reset User Password' (highlighted), and 'Log out'. The main content area contains a light blue form box with the following labels and textboxes: 'User ID' (labeled Label 1), 'Old Password:' (labeled Label 2), 'New Password:' (labeled Label 3), and 'Confirmed New Password:' (labeled Label 4). These are followed by four textboxes labeled Textbox 1 through Textbox 4. Below the form are two buttons: 'Clear' (labeled Button1) and 'Submit' (labeled Button2). Arrows point from the labels to their respective controls.

Control	Control Name	Description
Label 1	lblID	To label the related controls to the right
Label 2	lblOldPassword	
Label 3	lblNewPassword	
Label 4	lblConPassword	
Textbox 1	txtID	To allow admin to key in User ID
Textbox 2	txtOldPassword	To allow admin to key in Old user password
Textbox 3	txtNewPassword	To allow admin to key in New password
Textbox 4	txtConPassword	To allow admin to key in the new password again for confirmation purpose
Button 1	btnClear	Clear all contents inside the textbox
Button 2	btnSubmit	Verify old password with user ID and reset password for the user

## 2.7 Staff Main Screen



Control	Control Name	Description
Label 1	lblWelcome	Display welcome message
Picture Box 1	picStaff	Display picture of Staff user
Picture Box 2	picHome	Hide all forms and return to the home screen
Picture Box 3	picAdd	Add new patient profile
Button 1	btnAdd	Add new patient profile
Button 2	btnView	View and edit patient profile
Button 3	btnBilling	Calculate total fees and generate bill
Button 4	btnLogout	Log out of the system and return to the home screen login page
MDI Container	mdiStaff	Act as a MDI parent to allow multiple forms to open inside this form

## 2.8 Staff Add patient profile

The form is titled "Add patient profile" and is designed for a nurse to enter patient information. It is organized into three main sections: Personal Details, Address, and Health Information. Each section contains specific input fields and labels. The Personal Details section includes fields for Name, IC/Passport Number, Mobile No, Gender, Birth Date, and Email. The Address section includes fields for Address (Unit, Street), Zip Code, State, and Country. The Health Information section includes fields for Weight, Height, Blood Type, and Allergies. There are also date pickers for Registration Date and Birth Date, and a dropdown for Gender. The form is surrounded by various labels and textboxes, and includes a "Clear" button and a "Submit" button. A sidebar on the left contains a "Welcome back, Nurse!" message, a home icon, a plus icon, and buttons for "Add patient profile", "View Patient", "Billing", and "Log out".

Control	Control Name	Description
Label 1	lblNewPatientID	To label the contents related to the right
Label 2	lblDate	
Label 3	lblName	
Label 4	lblIC	
Label 5	lblMobile	
Label 6	lblGender	
Label 7	lblDOB	
Label 8	lblEmail	
Label 9	lblAddress1	
Label 10	lblZipCode	
Label 11	lblStreet	
Label 12	lblCountry	
Label 13	lblWeight	
Label 14	lblBloodType	
Label 15	lblAllergies	
Label 16	lblHeight	
Textbox 1	txtNewPatientID	To allow staff to enter new patient ID
Textbox 2	txtName	To allow staff to enter patient's name
Textbox 3	txtIC	To allow staff to enter patient's IC / Passport
Textbox 4	txtMobile	To allow staff to enter patient's contact number
Textbox 5	txtEmail	To allow staff to enter patient's email
Textbox 6	txtUnit	To allow staff to enter unit address
Textbox 7	txtZipCode	To allow staff to enter zip code
Textbox 8	txtStreet	To allow staff to enter street

Textbox 9	txtCountry	To allow staff to enter country
Textbox 10	txtWeight	To allow staff to enter weight
Textbox 11	txtAllergies	To allow staff to enter allergies
Textbox 12	txtHeight	To allow staff to enter height
Date picker 1	dateRegister	To allow staff to pick registration date
Date picker 2	dateDOB	To allow staff to pick birth date
Combo Box 1	cboGender	To allow staff to pick gender
Combo Box 2	cboBloodType	To allow staff to pick blood type
Button 1	btnClear	Clear all contents inside textbox and combo box
Button 2	btnCreate	To allow staff to create new patient profile
Group Box 1	grpPersonalDetail	To group all controls related to patient's personal detail
Group Box 2	grpAddress	To group all controls related to patient's Address
Group Box 3	grpHealthInfo	To group all controls related to patient's health information

## 2.9 Staff View/Edit Screen

Welcome back, Nurse!

Label 1 points to the 'Patient ID' field.

Label 4 points to the 'Registration Date' field.

Label 2 points to the 'Doctor in charge' field.

Label 5 points to the 'Name' field in the Personal Details section.

Label 3 points to the 'Gender' dropdown in the Personal Details section.

Label 6 points to the 'Birth Date' field in the Personal Details section.

Button 1 points to the 'Previous' button at the bottom left.

Button 2 points to the 'Next' button at the bottom center.

Button 3 points to the 'Update' button at the bottom right.

Checkbox points to the 'Enable Edit' checkbox at the bottom right.

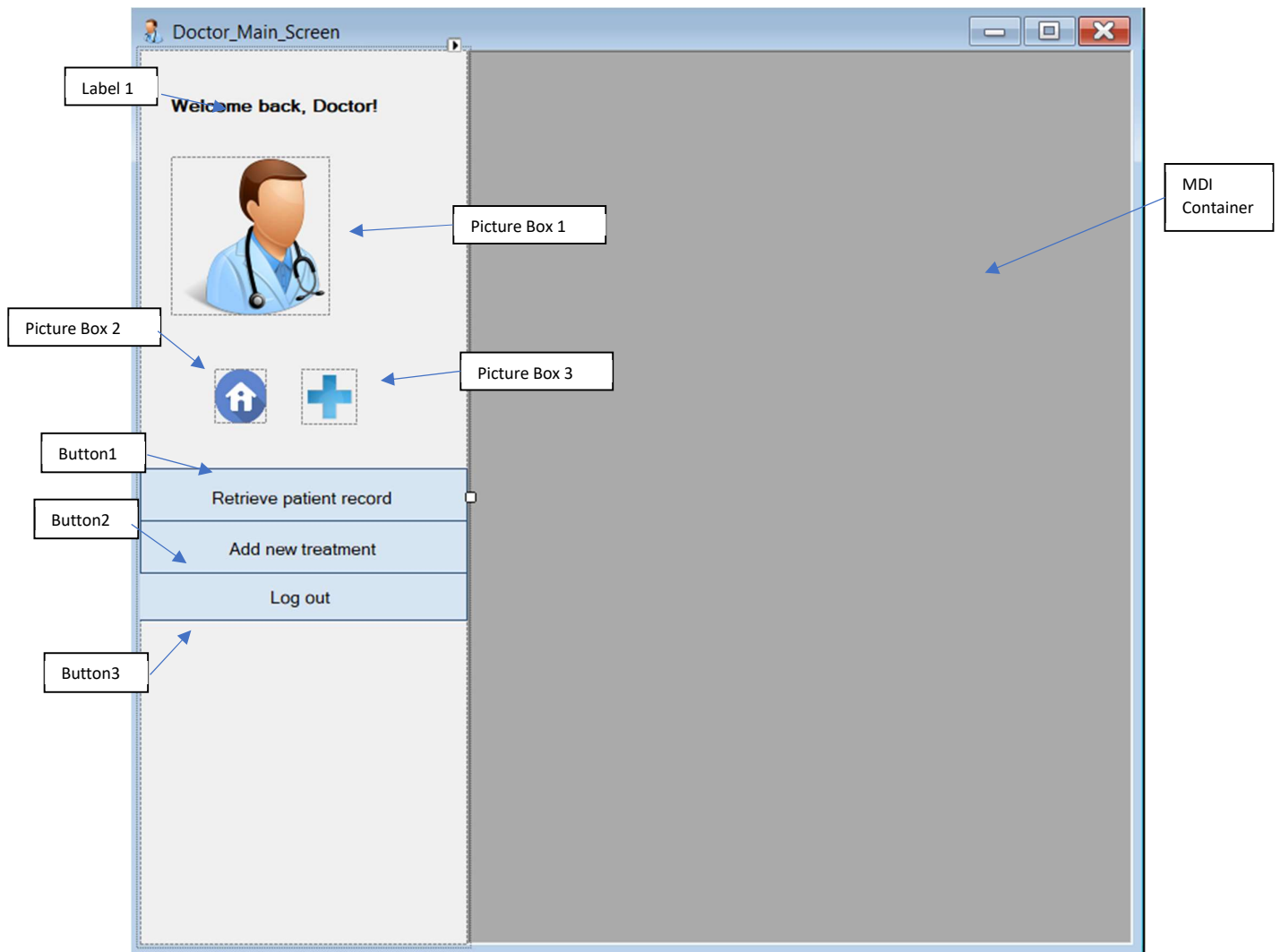
Control	Control Name	Description
Label 1	label1	To label the related controls to the right
Label 2	label2	
Label 3	label3	
Label 4	lblPatientID	Display Patient ID
Label 5	lblDate	Display Patient's registration date
Label 6	lblDocInCharge	Display Patient's doctor-in charge
Button 1	btnPrevious	Navigate to the previous patient profile
Button 2	btnNext	Navigate to the next patient profile
Button 3	btnUpdate	Allow staff to update patient's information and save the data into the database
Checkbox	chkEditEnabled	Allow staff to modify patient profile

## 2.10 Staff Billing Screen

The screenshot shows a web application interface for staff billing. It includes a sidebar with navigation links (Add patient profile, View Patient Profile, Billing, Log out) and a main content area. The main area is divided into sections: Patient Information (Patient's ID, Doctor In Charge), Treatment (Services selected, Number of medicine prescribed), Total Fees, and Bill Generator (Fees Paid, Change, Generate Bill). There are also buttons for Submit, Calculate Total Fees, Generate Bill, Reset, and Save. A listbox on the right displays the generated bill. Labels 1 through 11 point to specific controls on the screen.

Control	Control Name	Description
Label 1	label1	To label the related controls to the right
Label 2	label2	
Label 3	label3	
Label 4	label4	
Label 5	label5	
Label 6	label6	
Label 7	label7	
Label 8	lblDocInCharge	To display patient's doctor-in-charge
Label 9	lblMedicine	To display number and type of medicines prescribed to the patient
Label 10	lblTotalFees	To display the total fees of the treatment
Label 11	lblChange	To display change if the fees is paid in excess
Textbox 1	txtPatientID	To allow staff to key in patient ID
Textbox 2	txtFeesPaid	To allow staff to enter total fees paid by patient
Button 1	btnSubmit	Search patient ID in the database and display relevant information in the labels
Button 2	btnBill	Allow staff to generate bill containing treatment details and treatment fees
Button 3	btnReset	Clear all the contents inside the labels , textbox and listbox
Button 4	btnSave	Save the treatment details and fees in database
List box 1	lstServices	Display the services and treatment undergone by patient
List box 2	lstBill	Display the generated bill

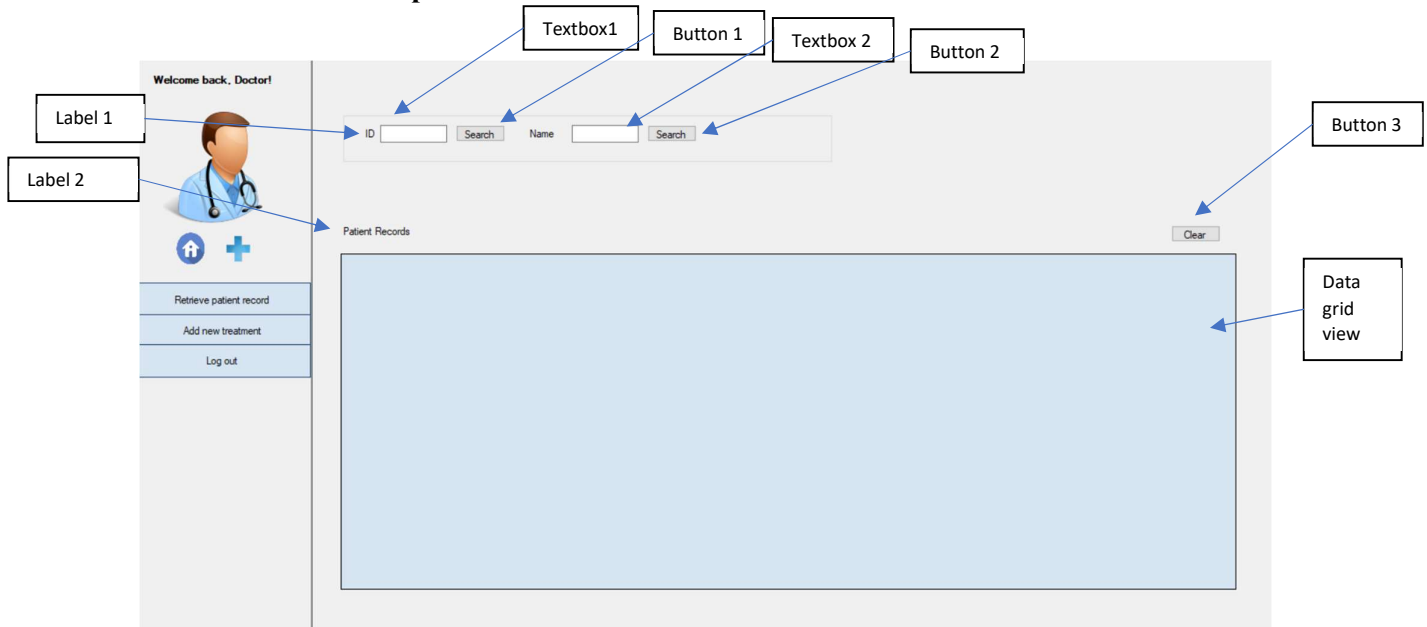
## 2.11 Doctor Main Screen



Control	Control Name	Description
Label 1	lblWelcome	Display welcome message
Picture Box 1	picDoc	Display picture of Doctor user
Picture Box 2	picHome	Hide all forms and return to the home screen
Picture Box 3	picAdd	To allow doctor to add new treatment details
Button 1	btnRetriveRecord	To allow doctor to retrieve patient's records from database
Button 2	btnAddTreatment	To allow doctor to add new treatment details
Button 3	btnLogout	Log out of the system and return to the home screen login page
MDI Container	mdiStaff	Act as a MDI parent to allow multiple forms to open inside this form



## 2.12 Doctor Retrieve patient records



Control	Control Name	Description
Label 1	lblPatientID	To label the related controls
Label 2	lblRecord	
Textbox 1	txtPatientID	To allow doctor to enter patient ID
Textbox 2	txtPatientName	To allow doctor to enter patient name
Button 1	btnSearchID	To allow doctor to retrieve patient's records by searching via patient ID
Button 2	btnSearchName	To allow doctor to retrieve patient's records by searching via patient Name
Button 3	btnClear	Clear all content inside data grid view
Data grid view	dgvPatient	Display patient's information

## 2.13 Doctor record treatment details

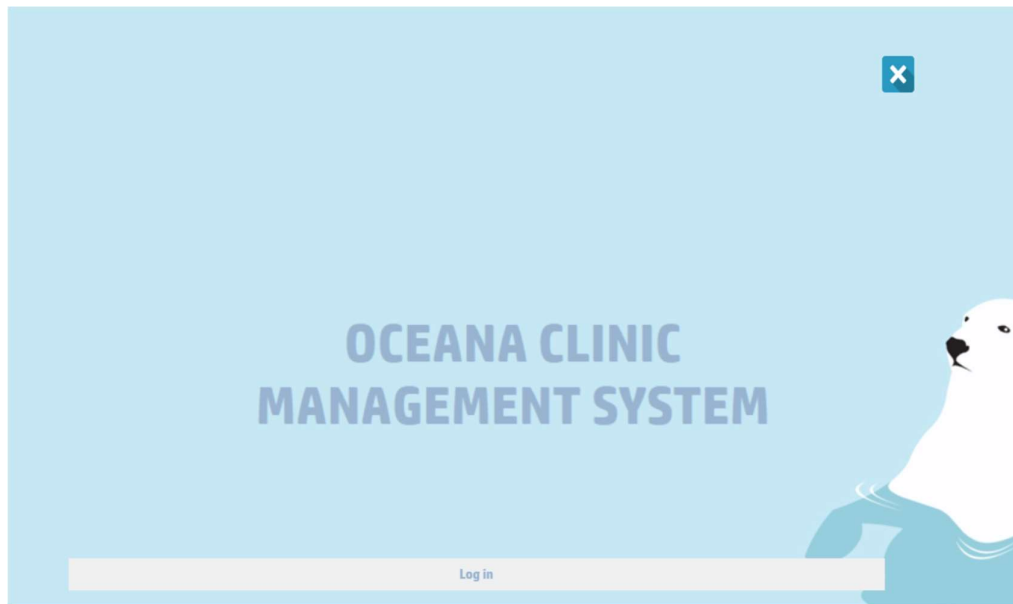
The screenshot shows a web application for a doctor to record treatment details. The interface is divided into several sections:

- Header:** "Welcome back, Doctor!"
- Left Sidebar:** Contains a doctor's profile icon, a home button, and three buttons: "Retrieve patient record", "Add new treatment", and "Log out".
- Main Content Area:**
  - Services (Red background):** Contains a "Patient ID:" label and a "Textbox 1". Below it, a "Group Box 1" contains five checkboxes: "General consultation", "Lab service", "X-Ray", "Comprehensive health check", and "Partial Health Check". A label "Checkbox 1,2,3,4,5" points to these checkboxes.
  - Medicine (Blue background):** Contains a "Group Box 2" with five checkboxes labeled "A", "B", "C", "D", and "E". A label "Checkbox 6,7,8,9,10" points to these checkboxes.
  - Additional treatment details (Yellow background):** Contains a "Comment:" label and a "Textbox 2". A label "Label 2" points to the "Comment:" label. A "Group Box 3" label points to this section.
- Bottom Section:** Contains two buttons: "Button1" (labeled "Clear") and "Button2" (labeled "Submit").

Control	Control Name	Description
Label 1	lblPatientID	To label the related controls to the right
Label 2	lblComment	
Textbox 1	txtPatientID	To allow doctor to enter patient ID
Textbox 2	txtComment	To allow doctor to enter additional treatment details
Checkbox 1	chkConsult	To allow doctor to select 'general consultation' as patient's treatment
Checkbox 2	chkLab	To allow doctor to select 'lab services' as patient's treatment
Checkbox 3	chkXray	To allow doctor to select 'X-ray' as patient's treatment
Checkbox 4	chkFullCheck	To allow doctor to select 'comprehensive health check' as patient's treatment
Checkbox 5	chkParCheck	To allow doctor to select 'partial health check' as patient's treatment
Checkbox 6	chkMedA	To allow doctor to select Medicine type A as prescription to patient
Checkbox 7	chkMedB	To allow doctor to select Medicine type B as prescription to patient
Checkbox 8	chkMedC	To allow doctor to select Medicine type C as prescription to patient
Checkbox 9	chkMedD	To allow doctor to select Medicine type D as prescription to patient
Checkbox 10	chkMedE	To allow doctor to select Medicine type E as prescription to patient
Button 1	btnClear	Clear all contents inside textbox and uncheck all check boxes
Button 2	btnSubmit	Submit the treatment details and save it into database
Group Box 1	grpServices	To group all the controls related to treatment and services
Group Box 2	grpMed	To group all the controls related to medicine
Group Box 3	grpDetails	To group all the controls related to treatment details


### 3.0 User Manual

#### 3.1 Home Screen

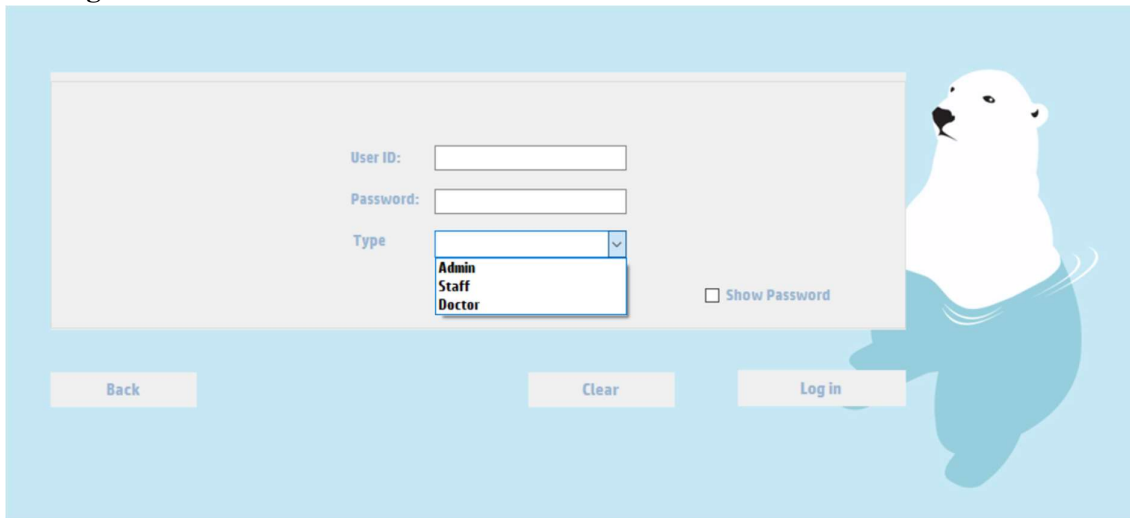


1. By clicking on the log in button, user are able to get in to the login screen:



2. By clicking on the close button,  user can exit the application.

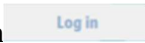

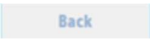

### 3.2 Login Screen



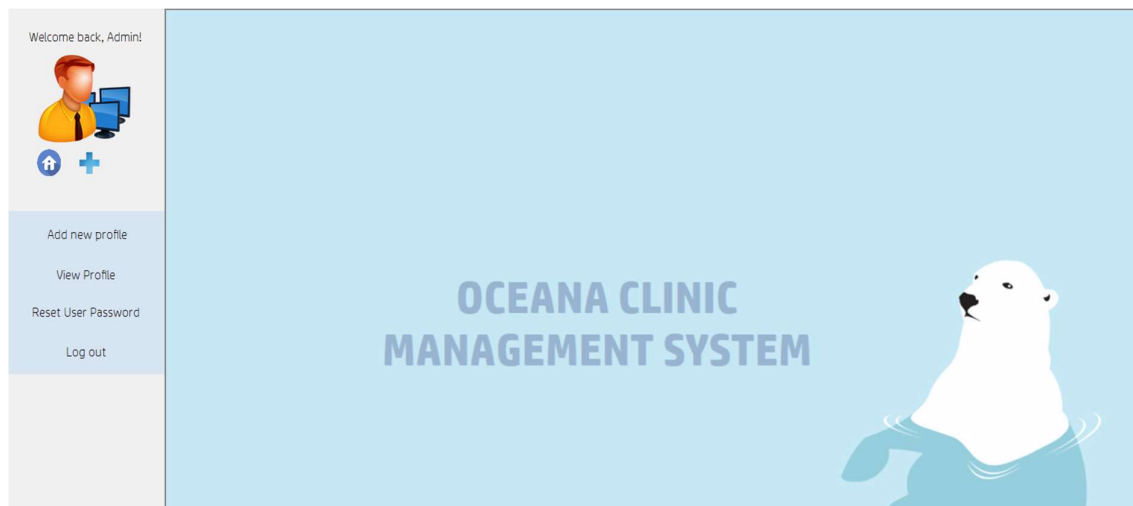
The login screen features a light blue background with a white polar bear illustration on the right side. The login form is a light gray rectangle containing the following elements:

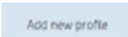


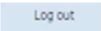


- User ID:** A text input field.
- Password:** A text input field.
- Type:** A dropdown menu with a blue border and a downward arrow. The dropdown is open, showing three options: **Admin**, **Staff**, and **Doctor**.
- Show Password:** A checkbox with the text "Show Password" next to it.

Below the form are three buttons: **Back**, **Clear**, and **Log in**.

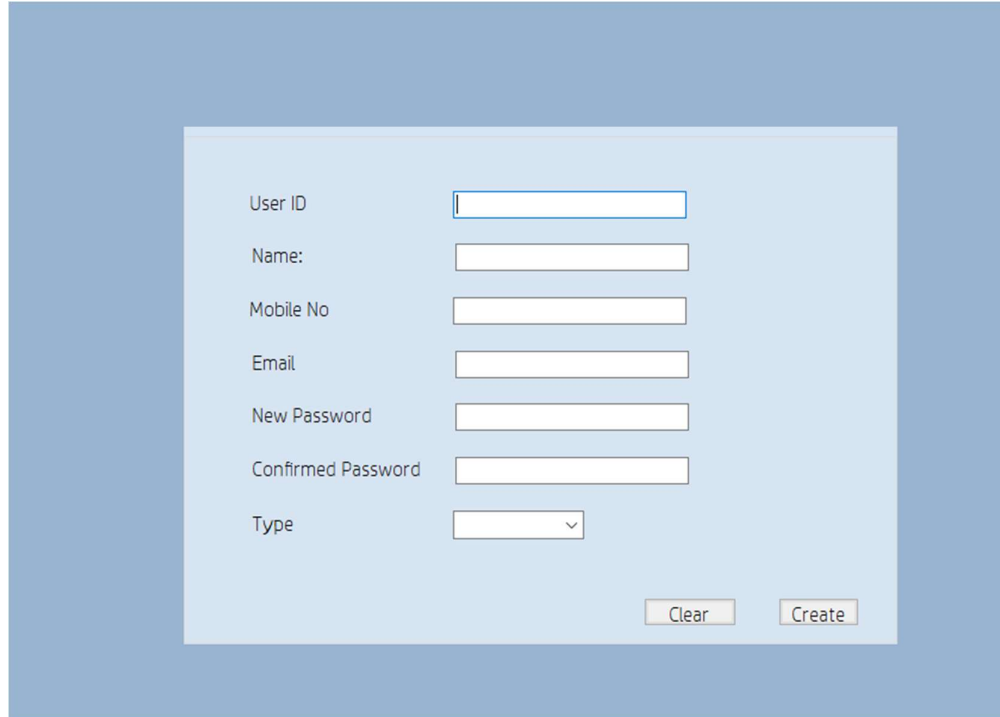
1. To be able to access the system, user must enter User ID, Password and select the correct user type. After all the fields are filled, user click on the 'Log in' button  which will bring them to their respective home screen .
2. To show the hidden password character, user can click on the 'show password'  option to display the password character instead of hiding them.
3. Click 'Back' button  to go back to the Home Screen .
4. Click 'Clear' button  to clear all the contents inside the textbox.

### 3.3 Admin Home Screen




1. To create new profile, click on 'Add new profile'. 
2. To view or manage user profile, click 'View profile' . 
3. To reset password for user, click 'Reset User Password' . 
4. To log out from the system, click 'Log out'. 
5. To collapse all the form and return to the main screen , click 
6.  is the shortcut button for 'Add new profile' .

### 3.3.1 Admin – Add new profile



The screenshot shows a web form titled 'Add new profile' within an 'Admin' interface. The form is light blue and contains several input fields for user data. The fields are arranged vertically on the left, with their corresponding input boxes on the right. The fields are: 'User ID' (a text box with a blue border), 'Name:' (a text box), 'Mobile No' (a text box), 'Email' (a text box), 'New Password' (a text box), 'Confirmed Password' (a text box), and 'Type' (a dropdown menu with a downward arrow). At the bottom right of the form, there are two buttons: 'Clear' and 'Create'.

User ID	<input type="text"/>
Name:	<input type="text"/>
Mobile No	<input type="text"/>
Email	<input type="text"/>
New Password	<input type="text"/>
Confirmed Password	<input type="text"/>
Type	<input type="text"/>

1. To successfully create a user profile, Admin must entered all the data into the provided textbox according to the description on the left , after entering all the data , click ‘create’ button  to store the new data into the database.
2. Message Box will be displayed if new user profile is created successfully, otherwise error message will be displayed.

### 3.3.2 Admin – View Profile

ID:

Name

User Profile Overview

☐ Enable Edit

User ID

Name:

Email:

Mobile No:

Type:

1. To retrieve user profile information, admin can either search by User ID or user’s full name .

ID:

Name

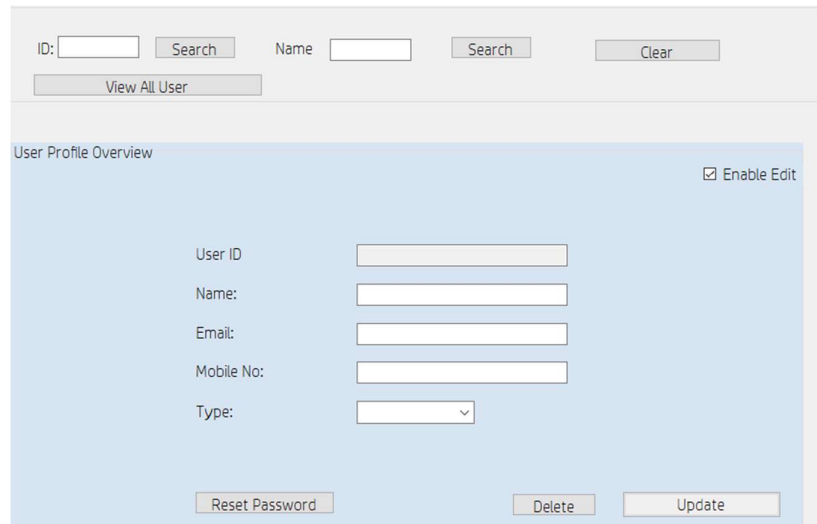
2. To view all existing user in the system, click ‘View All User’ ,

which will bring up this window:

ViewAllUser

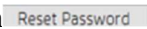
	FullName	UserID	UserType	MobileNo	Email
▶	Alex Jones	blablatatsheep	Admin	0145672345	sheep90@gmail.com
	Sam Blake	avocado	Staff	0123456789	avo19@gmail.com
	Lee Khai Wen	kwen61	Staff	0198745637	kwen97@gmail.com
	Chang Wan Nie	yunnie18	Staff	0143290267	yunnie66@gmail.com
	Yap Sin Yee	sy.scrap	Doctor	0197390284	sy.scrap@gmail.com
	ng kim tian	ahbui12	Admin	0123582007	mandy89@gmail.com
	Zach Mason	void17	Doctor	019-7823459	Zach81@gmail.com
	yaw xin ying	suckerxy	Doctor	0176543269	suckerxy20@gmail.com
*					

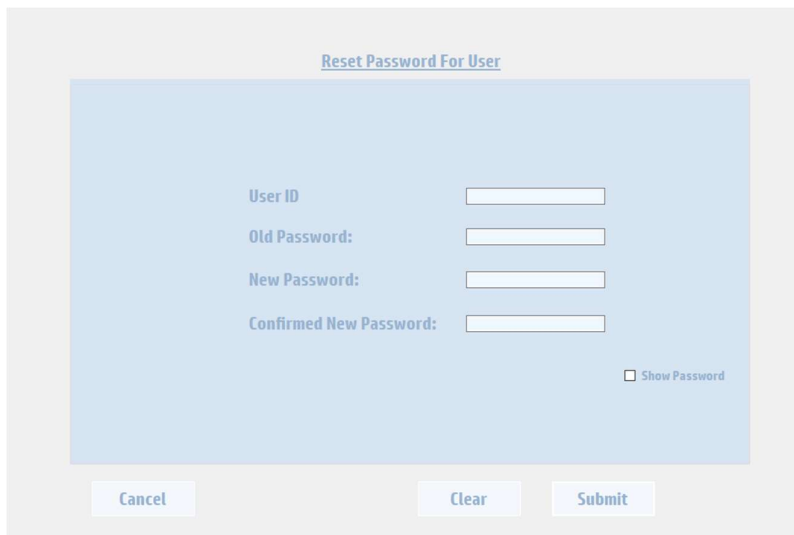
3.To modify the user's info, check the 'enable edit' to enable all the textbox :



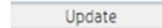
The 'User Profile Overview' form is displayed within a light gray container. At the top, there are search fields for 'ID' and 'Name', each with a 'Search' button, and a 'Clear' button. Below these is a 'View All User' button. The main area has a light blue background. On the right side of this area, there is a checkbox labeled 'Enable Edit' which is currently checked. On the left side, there are five labels with corresponding input fields: 'User ID' (text box), 'Name:' (text box), 'Email:' (text box), 'Mobile No:' (text box), and 'Type:' (dropdown menu). At the bottom of the form, there are three buttons: 'Reset Password', 'Delete', and 'Update'.

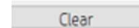
4. To delete user from the system, click 'delete' button. 

5. To reset password for user, click 'reset password' button  which will bring up this window :



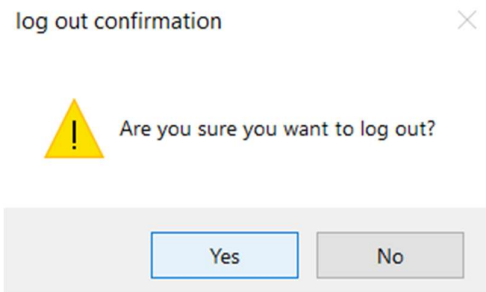
The 'Reset Password For User' dialog box has a light blue background. It contains four labels with corresponding text input fields: 'User ID', 'Old Password:', 'New Password:', and 'Confirmed New Password:'. In the bottom right corner, there is a checkbox labeled 'Show Password' which is currently unchecked. At the bottom of the dialog, there are three buttons: 'Cancel', 'Clear', and 'Submit'.

6. To update the modified information, click 'update' button. 

7.To clear all the contents , click 'clear' button. 





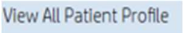




### 3.3.3 Admin – Log out



1. Click 'yes' to log out from the system as Admin.
2. Click 'no' to cancel action and return to the admin main screen.

### 3.4 Staff Main Screen



1. To create new patient profile, click 'Add patient profile'. 
2. To edit patient profile, click 'Edit Patient Profile'. 
3. To view all registered patient in the system, click 'View All Patient Profile' 
4. To generate bill , click 'Billing' 
5. To log out from the system, click 'Log out'. 
6. To collapse all the form and return to the main screen , click 
7.  is the shortcut button for 'Add patient profile' .

### 3.4.1 Staff – Add Patient Profile

Assign New Patient ID

---

**Personal Details**

Name:	<input type="text"/>	Gender	<input type="text" value=""/>
IC/Passport Number	<input type="text"/>	Birth Date	<input type="text" value="8/ 4/2020"/>
Mobile No	<input type="text" value=""/>	Email:	<input type="text"/>

---

**Address**

Address (Unit,Street)	<input type="text"/>	State	<input type="text"/>
Zip Code	<input type="text"/>	Country	<input type="text"/>

---

**Health Information**

Weight (kg):	<input type="text"/>	Height (cm):	<input type="text"/>
Blood Type:	<input type="text" value=""/>		
Allergies:	<input type="text" value="None"/>		

1. The Patient ID is auto generated to avoid duplication.
2. Staff must enter all the data into all the textbox before the data can be saved into the database.
3. To save the data into the database , click ‘submit’ button.
- 4.To clear all the contents inside the textbox, click ‘clear’ button .

### 3.4.2 Staff – Edit Patient Profile

The screenshot shows the 'Edit Patient Profile' form with the following fields and values:

- Search Fields:** Patient ID (3), Patient IC/PassportNo: (empty). Both have 'Search' buttons.
- Form Header:** Patient ID (3), ☐ Enable Edit.
- Personal Details:**
  - Name: Lily
  - Gender: Male
  - IC/Passport Number: 789304054560
  - Birth Date: 5/ 4/1987
  - Mobile No: 012-3245687
  - Email: lily98@gmail.com
- Address:**
  - Address (Unit,Street): 78, Jalan Bahagia
  - State: Negeri Sembilan
  - Zip Code: 70100
  - Country: Malaysia
- Health Information:**
  - Weight: 57
  - Height: 150
  - Blood Type: A
  - Allergies: ampicillin
- Buttons:** Clear

1. Staff can retrieve patient's information by either searching for patient ID or patient's IC/Passport No.

Close-up of the search fields showing Patient ID (3) and Patient IC/PassportNo: (empty) with Search buttons.

2. All the textboxes are read-only, therefore, to be able to modify patient's information, staff must check the 'Enable Edit' ☒ Enable Edit to enable all the textboxes.

The screenshot shows the 'Edit Patient Profile' form with the 'Enable Edit' checkbox checked. The form is identical to the previous one, but now includes an 'Update' button at the bottom right.

3. After the 'enable edit' has been checked, the 'update' button will appear

Close-up of the 'Update' button.

4. To store the updated/modified information, click 'Update' button to store it into the database.

5. After editing, simply uncheck the 'enable edit' to prevent making unnecessary changes, which will once again make all the textboxes read-only.

### 3.4.3 Staff – View All Patient

<input type="button" value="Refresh"/> ID <input type="text"/> <input type="button" value="Search"/> Name <input type="text"/> <input type="button" value="Search"/>										
PatientID	PatientName	gender	IC/Passport	Mobile_no	Email	DOB	Unit_Street	ZipCode	State	
1	Sam	Male	010808050318	014-3268802	sam12@gmail.com	5/9/2001	13, Jalan Loop	70300	Negeri Se	
2	Avocado	Female	790906055390	015-6783356	avocado4ever@gmail.com	8/8/1999	20, Jalan Bidara	58200	Kuala Lur	
3	Lily	Male	789304054560	012-3245687	lily98@gmail.com	5/4/1987	78, Jalan Bahagia	70100	Negeri Se	
4	Kelvin	Female	010829050329	019-6067892	kelvin143@gmail.com	9/7/1995	90, Jalan Merah	43500	Melaka	
5	Alexa	Male	740405030317	011-3289372	alexa90@gmail.com	29/8/2001	89, Jalan Tunku	70100	Negeri Se	
6	Ashlyn	Male	MC88192	017-2321233	ashlyn92@gmail.com	11/11/1987	ewq	40200	eqw	
7	Mary	Female	FT893312	012-3123234	mary.12@gmail.com	11/12/1962	321	55432	ewq	
8	Johnson	Male	UIUHJ312	018-2182939	johnson@yahoo.com	14/12/1999	321	21323	ewq	
9	sarah jones	Female	780906040358	014-8762303	sarahjone34@gmail.com	6/4/1978	C-23-04, Z Residence	58200	Bukit Jalil	
10	Michael Jacksons	Male	A872492	019-2932424	kinqofpop21@hotmail.com	7/4/1954	13, Kings Road	13546	Los Ange	

1. Staff can filter the result by searching for Patient ID or Patient Name.

ID	<input type="text"/>	<input type="button" value="Search"/>	Name	<input type="text"/>	<input type="button" value="Search"/>
----	----------------------	---------------------------------------	------	----------------------	---------------------------------------

2. If the recently updated information does not appear in the database, click 'refresh' button

to resolve the issue.

### 3.4.4 Staff – Billing

1. To view recent treatment records, click ‘view all treatment records’ .Staff can filter the result by searching Patient ID or patient name.

which will bring up this window:

PatientID	<input type="text"/>	Search	PatientName	<input type="text"/>	Search	Reset
Name	<input type="text"/>	ID	<input type="text"/>			
Treatment Records						
Treatment_ID	Treatment_Date	Patient_ID	PatientName	Treatment	Medicine	
7	2/4/2020	8	Johnson	General consultation, X-Ray,	B, C, D,	
8	2/4/2020	9	sarah jones	General consultation,	E,	
9	2/4/2020	6	Ashlyn	General consultation, Partial Health Check,	A, C,	
1	1/12/2019	2	Avocado	General consultation, Lab service, X-Ray,	A,B	
0	1/12/2019	3	Lily	General consultation, Lab service, X-Ray,	None	
2	1/12/2019	1	Sam	Lab service, Comprehensive health check,	C,E	
3	1/12/2019	3	Lily	General consultation, Lab service, X-Ray,	None	
4	1/12/2019	3	Lily	General consultation, Lab service, X-Ray,	None	
5	1/12/2019	3	Lily	General consultation, Lab service, X-Ray,	D	
6	1/12/2019	5	Alexa	Comprehensive health check, Partial Health Check,	None	

2.To generate bill , the staff must first enter treatment ID followed by Fees Paid by patient and click ‘Generate Bill’ button :

3. After clicking on ‘Generate Bill’ , the payment details will be display in the listbox:

Bill

View All Bill

Oceana Clinic

TreatmentID: 3

Treatment Date: 1/12/2019 12:00:00 AM

Patient Info

Patient ID: 3

Patient Name: Lily

Treatment Details

Treatment undergone: General consultation, Lab service, X-Ray,

Medicine prescribed: None

Payment Details

Total Treatment Fees: RM180

Total Paid RM: 200

Change RM: 20

Reset

Save

4. To view recent bills, click 'view all bill':

View All Bill

5. To clear all the contents and reset the billing system, click 'reset'.

Reset

6. To save the billing details into the database, click 'save'.

Save

### 3.4.5 Staff – Log out

log out confirmation

×

!

Are you sure you want to log out?

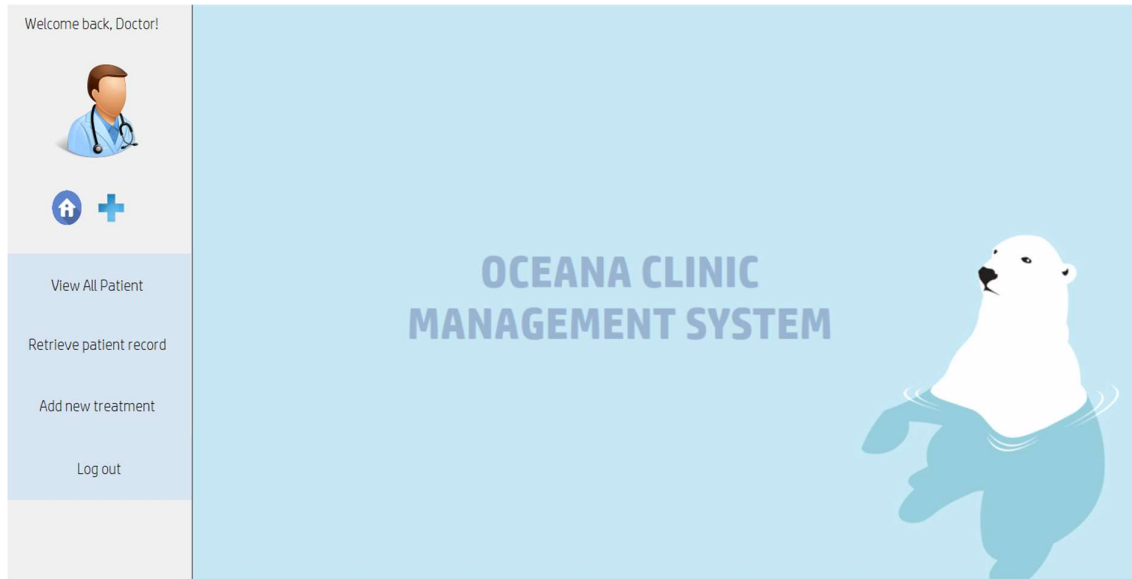
Yes



No

1. Click 'yes' to log out from the system as Staff.

2. Click 'no' to cancel action and return to the Staff main screen.

### 3.5 Doctor Main Screen



1. To view all existing patient in the system, click ‘ view all patient’.
2. To retrieve patient’s treatment records, click ‘retrieve patient record’
3. To record new treatment details, click ‘Add new treatment’ or 
4. To log out from the system, click ‘log out’
5. To collapse all the form and return to the main screen , click 

#### 3.5.1 Doctor – View All Patient

<div> <input type="button" value="Refresh"/> <div> <input type="text" value="ID"/> <input type="button" value="Search"/> </div> <div> <input type="text" value="Name"/> <input type="button" value="Search"/> </div> </div>										
PatientID	PatientName	gender	IC/Passport	Mobile_no	Email	DOB	Unit_Street	ZipCode	State	
1	Sam	Male	010808050318	014-3268802	sam12@gmail.com	5/9/2001	13, Jalan Loop	70300	Negeri S	
2	Avocado	Female	790906055390	015-6783356	avocado4ever@gmail.com	8/8/1999	20, Jalan Bidara	58200	Kuala Lu	
3	Lily	Male	789304054560	012-3245687	lily98@gmail.com	5/4/1987	78, Jalan Bahaqia	70100	Negeri S	
4	Kelvin	Female	010829050329	019-6067892	kelvin143@gmail.com	9/7/1995	90, Jalan Merah	43500	Melaka	
5	Alexa	Male	740405030317	011-3289372	alexa90@gmail.com	29/8/2001	89, Jalan Tunku	70100	Negeri S	
6	Ashlyn	Male	MC88192	017-2321233	ashlyn92@gmail.com	11/11/1987	ewq	40200	ewq	
7	Mary	Female	FT893312	012-3123234	mary.12@gmail.com	11/12/1962	321	55432	ewq	
8	Johnson	Male	UIUJ312	018-2182939	johnson@yahoo.com	14/12/1999	321	21323	ewq	
9	sarah jones	Female	780906040358	014-8762303	sarahjone34@gmail.com	6/4/1978	C-23-04, Z Residence	58200	Bukit Jali	
10	Michael Jacksons	Male	A872492	019-2932424	kingofpop21@hotmail.com	7/4/1954	13, Kings Road	13546	Los Anq	

1. Staff can filter the result by searching for Patient ID or Patient Name :

<div> <input type="button" value="Refresh"/> <div> <input type="text" value="ID"/> <input type="button" value="Search"/> </div> <div> <input type="text" value="Name"/> <input type="button" value="Search"/> </div> </div>										
PatientID	PatientName	gender	IC/Passport	Mobile_no	Email	DOB	Unit_Street			
3	Lily	Male	789304054560	012-3245687	lily98@gmail.com	5/4/1987	78, Jalan Bahaqia			



### 3.5.2 Doctor – Retrieve Patient Record

ID

Name

**Health Information**

Name

ID

Weight:

Height:

Blood Type:

Allergies:

**Treatment Records**

	Treatment_Date	Treatment	Medicine	Comment	TotalFees
▶	1/12/2019	General consultation, Lab service, X-Ray,	None	None	180
	1/12/2019	General consultation, Lab service, X-Ray,	None	None	180
	1/12/2019	General consultation, Lab service, X-Ray,	None	None	180
	1/12/2019	General consultation, Lab service, X-Ray,	D	None	190
*					

1. Doctor can retrieve patient's treatment records by either searching for patient ID or patient name.

ID

Name

2. All the textboxes are read-only and cannot be modified.
3. To clear all contents, click 'clear' .

### 3.5.3 Doctor- Add New Treatment

Treatment ID: 10 Patient ID: 4 Date: 8/ 4/2020

Services	Medicine	Additional treatment details
<input checked="" type="checkbox"/> General consultation <input type="checkbox"/> Lab service <input checked="" type="checkbox"/> X-Ray <input type="checkbox"/> Comprehensive health check <input type="checkbox"/> Partial Health Check	<input checked="" type="checkbox"/> A <input type="checkbox"/> B <input checked="" type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E	Comment: <div></div> <div>Clear</div> <div>Submit</div>

Previous Treatment record

Treatment_ID	Treatment_Date	Patient_ID	PatientName	Treatment	Medicine	comment
7	2/4/2020	8	Johnson	General consultation, X-Ray,	B, C, D,	Diarrhea, s
8	2/4/2020	9	sarah Jones	General consultation,	E,	Food Poiso
9	2/4/2020	6	Ashlyn	General consultation, Partial Health Check,	A, C,	Fever, naus
1	1/12/2019	2	Avocado	General consultation, Lab service, X-Ray,	A,B	None
0	1/12/2019	3	Lily	General consultation, Lab service, X-Ray,	None	None
2	1/12/2019	1	Sam	Lab service, Comprehensive health check,	C,E	None
3	1/12/2019	3	Lily	General consultation, Lab service, X-Ray,	None	None
4	1/12/2019	3	Lily	General consultation, Lab service, X-Ray,	None	None
5	1/12/2019	3	Lily	General consultation, Lab service, X-Ray,	D	None
6	1/12/2019	5	Alexa	Comprehensive health check, Partial Health Check,	None	None

Refresh Delete previous record

- To record a treatment , doctor must :
  - Enter a valid Patient ID.
  - Select at least one service.
  - Medicine prescribed and comments are optional and can be skipped if not needed.
  - click on the ‘submit’ button to save the treatment details into the database.
- The newly added treatment record can be found in the treatment table :

Previous Treatment record

Treatment_ID	Treatment_Date	Patient_ID	PatientName	Treatment	Medicine	comment
7	2/4/2020	8	Johnson	General consultation, X-Ray,	B, C, D,	Diarrhea, s
8	2/4/2020	9	sarah Jones	General consultation,	E,	Food Poiso
9	2/4/2020	6	Ashlyn	General consultation, Partial Health Check,	A, C,	Fever, naus
1	1/12/2019	2	Avocado	General consultation, Lab service, X-Ray,	A,B	None
0	1/12/2019	3	Lily	General consultation, Lab service, X-Ray,	None	None
2	1/12/2019	1	Sam	Lab service, Comprehensive health check,	C,E	None
3	1/12/2019	3	Lily	General consultation, Lab service, X-Ray,	None	None
4	1/12/2019	3	Lily	General consultation, Lab service, X-Ray,	None	None
5	1/12/2019	3	Lily	General consultation, Lab service, X-Ray,	D	None
6	1/12/2019	5	Alexa	Comprehensive health check, Partial Health Check,	None	None

Refresh Delete previous record

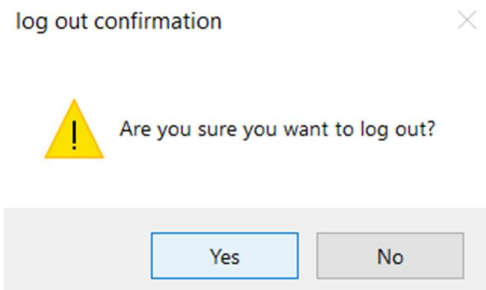
- To delete previous treatment record, click ‘Delete previous record’

Delete previous record

4. If the newly added treatment does not appear in the table, click 'Refresh' to resolve the issue.



### 3.5.4 Doctor – Log out



1. Click 'yes' to log out from the system as Doctor.
2. Click 'no' to cancel action and return to the Doctor main screen.

## 4.0 System Testing

### 4.1 Home Screen Testing

Test Case	Test scenario	Test Objective	Expected Result	Test Result
1	Click login button	To enter the login screen	Open Login Form	Pass
2	Click Exit button	To exit the application	<ol style="list-style-type: none"><li>1. Message box to prompt user for exit confirmation .</li><li>2. If user clicks yes, exit the application.</li><li>3. If user clicks no, cancel exit action.</li></ol>	Pass

### 4.2 Login Screen

Test Case	Test scenario	Test objective	Expected Result	Result
1	Successful Login with valid username and password	To grant user the access to the system	<ol style="list-style-type: none"><li>1. Successful Login.</li><li>2. Message box show 'Login successfully!'</li><li>3. User granted access to the system</li></ol>	Pass
2	Unsuccessful login with invalid username or password / username or password are left blank	To stop invalid user from accessing the system.	<ol style="list-style-type: none"><li>1. Unsuccessful Login.</li><li>2. Message box show invalid username and password.</li><li>3. User will not be granted access to the system.</li></ol>	Pass
3	Verify user type - User selected type 'Admin'	To load respective home screen for Admin user type	Load Admin Home Screen	Pass
4	Verify user type - User selected type 'Staff'	To load respective home screen for Staff user type	Load Staff Home Screen	Pass
5	Verify user type - User selected type 'Doctor'	To load respective home screen for Doctor user type	Load Doctor Home Screen	Pass

### 4.3 Staff Main Screen

Test Case	Test scenario	Test objective	Expected Result	Result
1	Add Patient Profile - Create patient profile successfully without error	To store new patient profile in the database	<ol style="list-style-type: none"> <li>1. All data entered by staff saved into database.</li> <li>2. Message Box display 'successfully created patient profile'.</li> </ol>	Pass
2	Add Patient Profile - Create patient profile unsuccessfully with error(s)	To validate user input and make sure user fill in the required field before all the data can be inserted into the database.	<ol style="list-style-type: none"> <li>1. All data entered by staff will not be saved into database.</li> <li>2. Message Box prompt 'Missing information' if user left all or some of the field blank.</li> </ol>	Pass
3	Edit Patient Profile	To modify patient's information in database	<ol style="list-style-type: none"> <li>1. Any modified information will be updated accordingly in the database.</li> <li>2. Message Box prompt 'Successfully updated information for [patient name]'.</li> <li>3. Information will not be updated if some of the information is missing.</li> <li>4. Display Error message 'Missing information, update unsuccessful' if information is missing.</li> </ol>	Pass
4	Billing	To store billing details into database.	<ol style="list-style-type: none"> <li>1. All related treatment records will be displayed in the list box.</li> <li>2. Payment details and date will be stored into database.</li> <li>3. Message Box display notification 'successfully generated bill'</li> <li>4. Error message to be displayed if invalid or no treatment ID is entered by User.</li> <li>5. Error message to be displayed if user did not enter fees paid.</li> </ol>	Pass

#### 4.4 Doctor Main Screen

Test Case	Test scenario	Test objective	Expected Result	Result
1	View All Patient	To display all the patient info correctly	A table consisting of all existing patient will be displayed into the data grid view.	Pass
2	Retrieve Patient Record	To retrieve patient treatment record	<ol style="list-style-type: none"><li>1. User can search for treatment records by either searching for patient ID or patient name.</li><li>2. Message Box will display 'No treatment records found' if the patient does not have treatment records.</li><li>2. 3.Error message will also be displayed if user enters invalid ID or name.</li></ol>	Pass
3	Create new treatment record	To store new treatment record into the database	<ol style="list-style-type: none"><li>1. Treatments records will be saved into the database if user enters valid patient ID and selected at least one treatment .</li><li>2. Error message to be displayed if user enters invalid patient ID .</li><li>3. 3.Error message to be displayed if user does not select any service/treatment.</li></ol>	Pass

#### 4.5 Admin Main Screen

Test Case	Test scenario	Test objective	Expected Result	Result
1	Create New User Profile	To store new user profile into the data base	<ol style="list-style-type: none"><li>1. All data will be saved into the database if user enters all the data correctly.</li><li>2. Display notification for successfully created profile.</li><li>3. Data will not be saved if user did not filled in all the required field.</li><li>4. Display error message for unsuccessful creation of new user profile.</li></ol>	Pass
2	Manage User profile	To update or delete user profile	<ol style="list-style-type: none"><li>1. All data will be displayed into the textbox if Admin entered valid ID/name.</li><li>2. Data will not be displayed if Admin entered invalid ID or name , error message will also be displayed .</li><li>3. Data will be updated if all the fields are filled, notification will be displayed for successful update.</li><li>4. Data will not be updated if information are missing, error message will be displayed.</li></ol>	Pass
3	Reset User Password	To reset password for system user	<ol style="list-style-type: none"><li>1. The old password will be changed to new password if the old password entered is validated, notification to be displayed for successful changed password.</li><li>2. The password will not be changed if the old password does not match the one in the database or the new confirmed password does not match with the new password.</li><li>3. Password will not be changed if user did not fill in the required field.</li></ol>	Pass

## **5.0 Critical Assessment**

### **5.1 Limitation**

One of the limitations of this system is that it is an overall very simple system so it does not contains a lot of elaborated features like the clinic management system that are available on the market. For example, this system lacks appointment making function which are very crucial in managing patient's appointment.

Another limitation is the database design structure, the current database design are only suitable for storing a reasonably small size of data. This is because all the data are arranged in such a way that are too clustered and hard to manage. If the database continues to grow in the future, it might become hard to keep track of the data which will then cause a problem later on.

### **5.2 Possible Improvements**

This system can be made better by introducing more functions such as appointment making system, auto-generate medical certificate system and data analytic function which could help doctor or staff to better perform their duties.

The database should also be designed in such a way that are easier to manage. All the relationships between the tables inside the database should be defined clearly and all the constrains should be put in placed to prevent faulty data from being stored into the database.



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