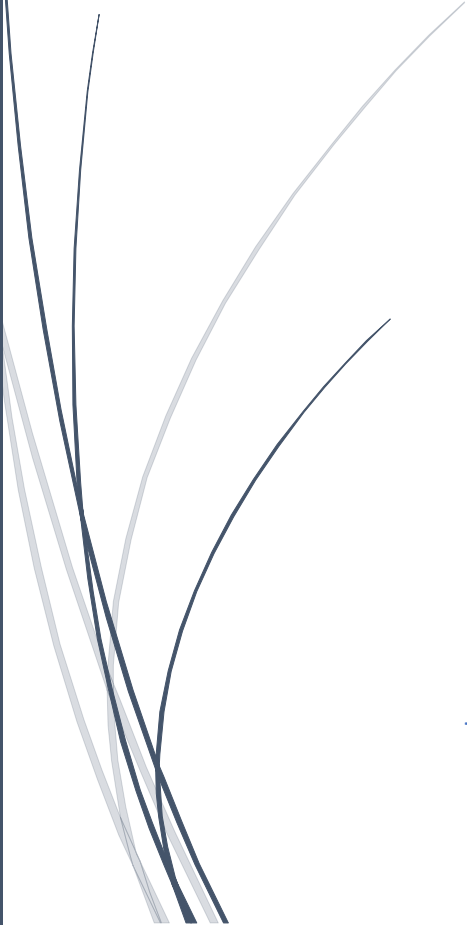




Version 1.2

User Manual



ICT3715
Student 5705-033-3
The AltHealth Database System

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General Information

1.1 System Overview

The AltHealth Database system is a web-based application which provides a graphical user interface (GUI) to manage a database based on the small business operations; such as processing and storing client (i.e. patients and/or consumers) information, supplement and supplier information, appointments and bookings, as well as statistics in the form of management information system (MIS) reports for the owner of the business.

The AltHealth Database System is part of a two-phase development for the complete system, consisting of two phases. The AltHealth Database System is designed for appointment bookings, recording of biographical data, recording and management of supplements and suppliers, as well as providing business statistics in MIS reports.

This system is designed for Microsoft Windows Operating Systems, making use of open source software to assist in the full functionality of the system. It is important to note that this system may be compatible on other operating systems such as Linux Ubuntu and MacOS, but testing is yet to commence by the time of publishing this document.

1.2 Organization of the Manual

This user manual consists of five sections, namely:

1. General Information (current section)
2. System Summary
3. Getting Started
4. Using the System
5. Troubleshooting

The General Information section provides a system overview by including the purpose of the system. This section also explains the organisation of the user manual, briefly explaining each section. This is to prepare the reader what to expect in this manual.

The System Summary section provides an explanation on the hardware and software that is being utilised on the installed system. This section reflects on the configuration that was performed during the installation of the system, the users of the system and their access to the database through the GUI, and the system's behaviour in case of any contingencies.

The Getting Started section assists the user in initialising the system. It guides the user to which links and shortcuts to make use of and a general orientation of the system. It is important to note that the system needs to be installed first before this section can be studied. The guide to assist in the installation is the Installation and Administration Manual.

In the Using the System section it provides a detailed description of the system, including its processes and functions and how the user can execute them by using the GUI. This section includes the functionality present for both end-users.

The Troubleshooting section provides basic information for the end-user in what to do if a simple error had to occur. These steps can be taken to prevent or to solve a possible error being faced. Examples of possible errors that can be troubleshooted includes errors in connecting to the database and/or localhost, scripts not displaying correctly and automatic backups not performed automatically due to intermittent Internet connectivity.



System Summary

2.1 System Configuration

The current version and installation (as defined in the installation and administration document) of The AltHealth Database System operates on Windows Microsoft Operating Systems, with the lowest supported operating system being Windows 7. The system is configured to function with the application of open source software, which includes XAMPP (an Apache web server hosted locally which includes database functionality using MySQL) and Backup & Sync from Google (for cloud backup implementation). The system requires the use of an Internet connection in order to load visualisation script which is used for the GUI and for the interactive MIS reports. This system can be accessed through devices, such as personal computers, notebooks and portable devices provided they are granted access onto the network in the business. The system is accessed through a web browser, as the system is web-based.

2.2 User Access Levels

The system has currently 4 applicable users who has access to the web-based system. These users are as follows:

1. The Healthcare Practitioner (HCP)
2. The General Administrative (GA)
3. The Super User (root)
4. The Public

2.2.1 The Healthcare Practitioner

The Healthcare Practitioner end-user has access to the following sections of the system:

- ✓ Clients – Adding, updating and reviewing client information
- ✓ Supplements – Adding, updating and reviewing supplements as well as suppliers
- ✓ Appointments – Scheduling and searching appointments. The HCP is also the only user who can initialise a consultation where patient notes are saved and viewed, as well as charging the patient for the consultation which results an invoice being created and sent to the client
- ✓ Invoices – The HCP can also update an invoice, applying an amount paid by the client/patient
- ✓ Reports – The HCP has exclusive rights in viewing MIS reports, which would assist him in taking informed decisions on the direction the business should continue. A Day to Day report is also viewed by the HCP, which allows him to keep track of day-to-day occurrences. Only the HCP can initiate an appointment from the day to day report

2.2.2 The General Administrative

The General Administrative end-user has access to the following sections of the system:

- ✓ Clients – Adding, updating and reviewing client information
- ✓ Supplements – Adding, updating and reviewing supplements as well as suppliers
- ✓ Appointments – Scheduling and searching appointments
- ✓ Invoices – Updating an invoice, applying an amount paid by the client/patient
- ✓ Day to day report – This report shows once the GA has logged into the system, displaying the patients scheduled for the day, the birthdays and the supplements needing attention (to be ordered from the supplier)

2.2.3 The Root User

The root user, which can also be known as the super user or system administrator, has access to the back end of the system, namely the coding used to provide a response with the user interaction. The access to the back end includes the database and the coding associated with the MySQL database. This user is also depended upon to troubleshoot if an error has to occur, which also includes recovery if needed.

2.2.4 The Public

With this phase of the system, the public has limited access to the system. No login interface is necessary for the client if they are granted to access the network. The public (i.e. a patient) can browse through the website and navigate to the appointments section, where he/she can check on upcoming appointments scheduled and the appointments that occurred in the past. No patient notes are viewed.

2.3 Contingencies

Provision has been made for possible contingencies that might occur, such as power outages. Should these provisions not be available or implemented correctly, it is important to note the following errors that may exist.

It is important to note that the possibility exists of data corruption should a power failure occur whilst running a certain option, such as saving a client or adjusting supplement stocks. The corruption may cause incomplete data that is in the process of being added to the database, or the interruption of the task. The system cannot function if no power is available on the localhost (being a PC or a notebook).

In the case of no Internet connectivity, the system may not display the GUI as designed. The GUI sections that will be affected are as follows:

- The MIS Reports on the HCP side of the system – As Google Chart API's are implemented for the interactive interface, the data present will not be presented correctly due to the API being Internet based

- The navigation bar drop-arrows – The arrows makes use of a font-awesome cascading style sheet (CSS) script located online. These arrows will not show should no Internet connectivity be present
- The login page – The login page is styled with a Bootstrap CSS script located online. Should no Internet connectivity be present, the login page will not be displayed correctly, but functionality will still be running for the system

In the case that the localhost (i.e. XAMPP has not started the Apache and MySQL service modules), the system will not function at all. These services has to be running in order for the system to function as intended.

Getting Started

3.1 Installation of the System and Supported Software

It is important to install and configure The AltHealth Database System in accordance to the measures set in the Installation and Administration Manual of the system before continuing with this user guide. The Installation and Administration Manual deals with the installation and configuration of all software utilised and designed for the system to function.

3.2 Initialisation of the System

The system is easily initialised by following two steps once the main computer (also known as the localhost) is started. These steps are as follows:

1. Launching XAMPP with computer administrator privileges (if not already started once the user logged onto his/her user account on the computer)
2. Starting the Apache and MySQL modules (if not already started)

A shortcut would be created on the user's desktop where the user would right-click and select to run XAMPP as administrator. It is important to note that the user account privileges mentioned in this topic has no affiliation with The AltHealth Database System. Without these initialisations implemented at start-up (if not already started automatically on boot), the system will not be able to run or function as designed.

3.3 Starting the Graphical User Interface

Once the system has been initialised, the system can now be accessed through the use of a web browser, as the system is a web-based system. For this system Google Chrome has been recommended to access the localhost by simply entering into the address bar <http://localhost>.

On other devices and computers on the network, the system would be accessed by entering the IP-address of the localhost. For example, in Figure 2 an Android tablet device has used Chrome in order to log into the HCP user. This Android user entered the IP-address (192.168.8.107) into the address bar which immediately launched the system and logged in through the GUI as the HCP user.

Once the home page has been accessed, a bookmark on the bookmark bar of the browser can be set for ease of access to the system once the browser is opened, as illustrated in Figure 1.

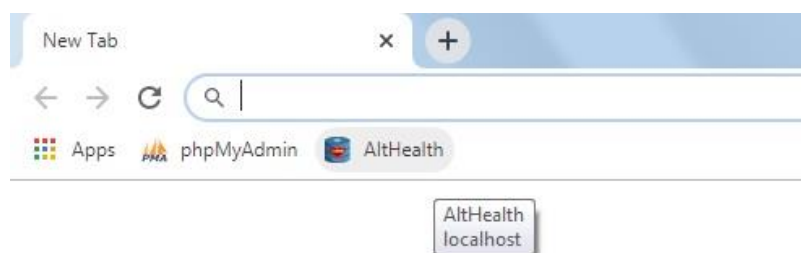


Figure 1: Bookmark created for <http://localhost>

Client Name	Surname	Time of Appointment
1311240354085	Donald Sethole	
2011240231088	Nhloso Schoeman	
2811240555087	Rene Makhonza	

Supplement	Current Level	Minimal Level	Supplier
SUPPLEMENT-107	6	9	SUPPLIER A
SUPPLEMENT-108	1	6	SUPPLIER B
SUPPLEMENT-109	3	6	SUPPLIER 0
SUPPLEMENT-118	6	7	SUPPLIER B
SUPPLEMENT-124	5	8	SUPPLIER A
SUPPLEMENT-143	5	10	SUPPLIER B
SUPPLEMENT-151	4	9	SUPPLIER A
SUPPLEMENT-153	3	5	SUPPLIER B

Figure 2: Android device connected on the network logged in as HCP

A shortcut would be created on the user's desktop where the user would right-click and select to run XAMPP as administrator. It is important to note that the user account privileges mentioned in this topic has no affiliation with The AltHealth Database System. Without these initialisations implemented at start-up (if not already started automatically on boot), the system will not be able to run or function as designed.

3.4 The Home Page

Figure 3 displays the home page of The AltHealth Database System. This page is opened once the <http://localhost> or the system's IP-address is opened in the web browser.

Welcome to AltHealth!

We are a small business running in the Johannesburg community providing alternative health care solutions to our people. Our supplements ordering section is still under construction. Clients who wishes to check for their appointments may do so by navigating to Appointments and selecting Search Appointment from the drop-down list.

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Figure 3: The Homepage

This homepage is accessible to all users of the system. All users has access to attempt to login by hovering over the “Welcome” tab and clicking on “Login”. The appointments search functionality can be accessed by hovering over “Appointments” and selecting “Search a Booking”. A field will appear where the user can enter his/her 13-digit ID number. The field, as illustrated in Figure 4, is subject to validation. An appropriate error message will appear if one of these conditions occurs:

- Input in the field are not completely numerical
- The ID number is not valid (date of birth is not valid)
- The patient does not exist in the database

Should the field be error-free, the query will be executed, and the patient’s appointments will be viewed in a table, as showed in Figure 5. The table will be empty if the patient has no appointments.

[Search Booking with Patient ID](#)

Patient ID Number

Figure 4: The Patient ID Number Field

[Bookings for Patient with ID Number 9204240981082](#)

Booking Number	Date of Appointment	Time of Appointment	Appointment End Time
24	2011-08-27	13:00	14:00
162	2013-04-28	14:00	15:00
381	2014-08-15	8:00	10:00
616	2016-05-22	7:00	9:00

Figure 5: The Results in table form

3.5 The Login Page

The login page allows the allocated users (namely the GA and the HCP) to access the system and to perform granted actions, working with the database. The login page is illustrated in Figure 6.



The AltHealth Database System

The AltHealth Database System

Please fill in your username and password to continue.

Username

Password

Don't have an account? Please contact the system administrator for more information.

Figure 6: The Login Page

Validation is performed on the username and password fields. These validations are as follows:

- ✓ The username is a valid user
- ✓ The password is matched with the password that is entered into the database

Appropriate error messages will display when if the username and/or password is incorrect.

When the correct username and password combination is entered, the user will be redirected to their appropriate screen, which act as their welcome screen. Both HCP and GA users use the day to day report as their welcome screen, as this screen shows the appointments for the day, clients who celebrates a birthday and the supplements which requires attention as they are falling below minimum levels. The welcome page is shown below in Figure 7.

The AltHealth Database System

Home Clients Supplements Appointments Invoices Reports Welcome, HCP

Appointments for Today

Client Name	Surname	Time of Appointment	
Johann	Swanepeel	17:00 - 18:00	Start Consultation

Birthday(s) Today

Client ID Number	Client Name
1311240354085	Donald Sethole
2011240231088	Nhloso Schoeman
2811240555087	Rene Makhonza

[Email Birthday Message to All](#)

Supplements Requiring Attention

Supplement	Current Level	Minimal Level	Supplier		
SUPPLEMENT-107	6	9	SUPPLIER A	Supplier Info	Update Supplement
SUPPLEMENT-108	1	6	SUPPLIER B	Supplier Info	Update Supplement
SUPPLEMENT-109	3	6	SUPPLIER 0	Supplier Info	Update Supplement
SUPPLEMENT-118	6	7	SUPPLIER B	Supplier Info	Update Supplement
SUPPLEMENT-124	5	8	SUPPLIER A	Supplier Info	Update Supplement
SUPPLEMENT-143	5	10	SUPPLIER B	Supplier Info	Update Supplement
SUPPLEMENT-151	4	9	SUPPLIER A	Supplier Info	Update Supplement
SUPPLEMENT-153	3	5	SUPPLIER B	Supplier Info	Update Supplement

Figure 7: The Home Page

Using the System

After the correct user has signed into the system, the user lands on the home page, which displays the day to day reports, such as the appointments for today, birthdays of clients and supplements requiring attention as stocks are running low.

Throughout the system, the following tabs are present in the navigation bar located underneath The AltHealth Database System Logo:

- ✓ Clients – Adding, updating and searching for clients
- ✓ Supplements – Adding, updating and searching for supplements, as well as suppliers
- ✓ Appointments – Making a booking and searching for a booking
- ✓ Invoices – An update functionality which updates the invoice with the amount the client has paid
- ✓ Reports¹ – Displaying and interacting with day to day and MIS reports
- ✓ User tab – Allowing the user to logout or reset his/her password

4.1 The Clients Tab

This section of the system allows the user to work with the business' clients. Adding, updating and searching actions can be performed. For adding a client, the form the user needs to fill out is illustrated in Figure 8. Validation is also performed to determine that the correct user input is inserted, as not to create any data redundancies and/or anomalies when saving the data into the database.

Add a New Client/Patient

Identity Number	<input type="text" value="13 Digit SA ID Number"/>	*
First Name	<input type="text" value="Enter First Name of Client"/>	*
Surname	<input type="text" value="Enter Surname of Client"/>	*
Address	<input type="text" value="Enter Physical Address of Client"/>	*
Postal Code	<input type="text" value="Enter Client's Postal Code"/>	*
Home Telephone	<input type="text" value="0123456789"/>	
Work Telephone	<input type="text" value="0123456789"/>	
Cellphone Number	<input type="text" value="0812345678"/>	*
E-Mail Address	<input type="text" value="example@example.co.za"/>	*
Reference	<input type="text" value="Mother In Law"/>	
<input type="button" value="Submit"/>		

The red asterisks (*) indicates the fields the user needs to provide as these are key data fields that will be used throughout the system.

Appropriate error messages will display to inform the user that the inserted data is incorrect, and that the data needs to be corrected before the data can be added to the system.

Once no errors are present, the data is recorded to the database and the information entered is then displayed in a table for the user to view. An example is shown in Figure 9.

Figure 8: Adding a Client

¹ Only available to the HCP user

Showing details of Josaya Chabvonga

ID Number	Name	Surname	Address	Postal Code	Home	Work	Cell	E-Mail	Reference		
1308190287088	Josaya	Chabvonga	P O Box 60918 Karenpark	0118	0796448637	0825745772	0833030923	Josaya@liberty.co.za	Website	Patient Notes	Update Client

Figure 9: Result of a client when adding or searching

It is important to note that the same table is displayed when a client is searched and after the client has been updated. Note that Figure 9 contains the “Patient Notes” button. This button is not available on the GA side as the user does not have the privileges to view the patient’s notes. When a client is being updated, the same form appears as illustrated in Figure 8, but pre-populated with the client’s details, ready to accept any changes. It is always important to press “Submit” or “Update” as these inputs performs the actions required to manage the client.

Search for Client/Patient

Identity Number

Figure 10 illustrates when a search is performed, using the “Search and Update” option in the navigation bar for the Clients section.

Figure 10: Form for searching a client

4.2 The Supplements Tab

This section of the system allows the user to work with the business’ supplements and their suppliers. Adding, updating and searching actions can be performed for both supplements and suppliers.

For adding a supplement, the form the user needs to fill out is illustrated in Figure 11. Validation is also performed to determine that the correct user input is inserted, as not to create any data redundancies and/or anomalies when saving the data into the database.

Add a New Supplement

Supplement ID

Description

Cost Excluding VAT (in R)

Cost Including VAT (in R)

Client Markup (in R)

Cost to Client (in R)

Supplier

Minimum Level

Current Level

NAPPI Code

The red asterisks (*) indicates the fields the user needs to provide as these are key data fields that will be used throughout the system. The blue asterisks indicates a selection of fields where at least one of the fields needs to be entered. This is to allow either the VAT inclusive or VAT exclusive amounts to be calculated automatically by the system. Alternatively, the user may enter their own values, but which will be validated by the system. The green asterisk next to cost of client may also be omitted as the field is calculated automatically as well.

Figure 11: Adding a Supplement

Appropriate error messages will display to inform the user that the data inserted is incorrect, and that the data needs to be corrected before the data can be added to the system.

Once no errors are present, the data is recorded to the database and the information entered is then displayed in a table for the user to view. An example is shown in Figure 12.

Showing details of Supplement-102

Supplement	Description	Cost Excl.	Cost Incl.	Markup	Client Cost	Supplier	Minimum Level	Current Level	NAPPI Code		
SUPPLEMENT-102	60's	R199.00	R226.86	R25.00	R251.86	SUPPLIER A	1	33	No NAPPI Provided	<button>Update</button>	<button>Show Supplier</button>

Figure 12: Result of a supplement when adding or searching

It is important to note that the same table is displayed when a supplement is searched and after the supplement has been updated. Note that Figure 11 contains the “View Supplier” button. This button redirects the user to view the supplier’s information who supplies the supplement. When a supplement is being updated, the same form appears as illustrated in Figure 12, but pre-populated with the supplement’s details, ready to accept any changes. It is always important to press “Submit” or “Update” as these inputs performs the actions required to manage the product.

Search for a Supplement

Supplement ID

Figure 13 illustrates when a search is performed, using the “Search Supplement” option in the navigation bar for the Supplements section.

Figure 13: Form for searching a supplement

For adding a supplier, the form the user needs to fill out is illustrated in Figure 14. Validation is also performed to determine that the correct user input is inserted, as not to create any data redundancies and/or anomalies when saving the data into the database.

Add a New Supplier

Supplier ID

Contact Person

Telephone Number

Cellphone Number

Fax

E-Mail Address

Bank

Branch Code

Account Number

Account Type

Comments

The red asterisks (*) indicates the fields the user needs to provide as these are key data fields that will be used throughout the system. The blue asterisks indicates a selection of fields where at least one of the fields needs to be entered. This is to allow that the contact person has to have at least one contact method.

Appropriate error messages will display to inform the user that the inserted data is incorrect, and that the data needs to be corrected before the data can be added to the system.

Figure 14: Adding a Supplier

Once no errors are present, the data is recorded to the database and the information entered is then displayed in a simple structure for the user to view. An example is shown in Figure 15.

Showing details of SUPPLIER D

Supplier Contact Information

Supplier ID	Contact Person	Telephone	Fax	Cellphone	Email
SUPPLIER D	Freddy Nell			0813451268	

No banking details is on file for this supplier.

Comments:
No comments are on file.

[Update](#) [View Supplements](#)

Figure 15: Result of a supplier when adding or searching

It is important to note that the same structure is displayed when a supplement is searched and after the supplement has been updated. Note that Figure 15 contains the “View Supplements” button. This button redirects the user to view the supplier’s supplements who he/she supplies. When a supplier is being updated, the same information structure appears as illustrated in Figure 14, but pre-populated with the supplier’s details, ready to accept any changes. It is always important to press “Submit” or “Update” as these inputs performs the actions required to manage the product.

View a Supplier

Supplier

[Search Supplement](#)

Figure 16 illustrates when a search is being performed, using the “View Supplier” option in the navigation bar for the Supplements section. A supplier can be selected from a drop list to view his/her information

Figure 16: Form for viewing a supplier

4.3 The Appointments Tab

This section of the system allows the user to schedule appointments with patients.

The user is required to select a date by either entering the date in a yyyy/mm/dd format, or by simply choosing a date from the date picker. If a date is an earlier date (as in a date before today), the system would reject the date and request the user to select another date. Figure 17 below illustrates the date function.

Once a valid date has been submitted, the user may then choose the desired timeslot, or the timeslot open for the patient to consult with the HCP. Each time slot is one hour in length, and should the duration required be more than one hour, two bookings would need to be created.

Search for Available Booking Slots

Select Appointment Date

[Search](#)

November 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Figure 17: The date function for the schedule booking page

An occupied booking slot is indicated as **red** in the selection list, as illustrated in Figure 18. If the appropriate slot is found, the user may proceed to enter the patient's ID number into the field, which will be validated upon submission. The user will receive an error message if more than 13 digits are entered into the field. As the field is a number field, this ensures that no foreign characters can be entered, which may cause data anomalies in the system.

Appointment Booking for the 2019-11-24

The screenshot shows a web interface for booking an appointment for the date 2019-11-24. It includes a dropdown menu for selecting a time slot. The available slots are listed from 07:00 to 18:00. The slot 12:00 - 13:00 is currently selected and highlighted in blue. The slot 17:00 - 18:00 is highlighted in red, indicating it is occupied. There are buttons for 'Book Appointment' and 'Back to Date Selection'.

Figure 18: Choosing a booking slot

If no slots are available, the user may return back to the date selection by pressing on the “Back to Date Selection” button.

Once the user has an appropriate slot and the ID number is registered on the system as a patient, the booking is then processed. During this process, the booking is made into the database. Once the booking is performed, an email is then automatically sent to the patient confirming the date and time of the appointment. Figure 19 shows the booking information and confirmation that the email has been sent to the patient.

Booking Confirmed for 2019-11-24

Booking Number	Patient ID	Date of Appointment	Time of Appointment	Appointment End Time	
782	1308190287088	2019-11-24	07:00	08:00	Cancel Booking

A confirmation email has been sent to the patient.

Figure 19: Appointment confirmation

Note that the “Cancel Booking” button is present. This is to allow the end-user to cancel the booking. A similar output is shown when the search is performed through the “Search a Booking” page. A patient's ID number is used to search for his/her bookings and to allow the booking to be cancelled.

When a booking is cancelled, the slot that was occupied is deleted, making it free for another patient to book. A note is then added to the patient's notes that the appointment is cancelled.

On the day of the appointment, on the day to day dashboard of the HCP, the patients who are booked for today is displayed. This provides the HCP with an option to select the patient to start the consultation. Once the consultation is initialised, the notes of the patient's previous visits are displayed. It is important to note that the previous notes are not editable, and only the notes section for the day is available to be edited (i.e. notes being added). Figure 20 illustrates an example.

Once the consultation is done, the HCP is then directed to the “Apply Charge” page, where he is allowed to apply a new charge or an older charge from a list of charges that was applied previously. If the HCP applies a new charge, the “Apply New Charge” needs to be pressed in order to apply the new charge. If the HCP selects a previous charge from the list, the “Apply Selected Charge” needs to be selected. Figure 21 illustrates the page.

Patient Record of Josaya Chabvonga

Appointment Date	Notes
2019-11-24	<div>New Patient No symptoms reported. General checkup and supplements advice</div>

Save and Continue

Figure 20: Patient Record

Consultation Charge for this Appointment

Enter a Charge

Enter a New Charge (in R):

e.g. 500.00

Apply New Charge

Select a Charge

Select a Previous Charge:

R250.00 ▼

Apply Selected Charge

Figure 21: Applying an appropriate charge for the consultation

Once the charge has been applied, the invoice is compiled. The invoice is stored in the database and an email is sent to the patient. This email is in HTML format which displays the patient's invoice. Feedback is then returned to the HCP that the consultation has been finalised and the invoice was compiled, displaying the invoice number, and that the invoice has been sent to the client.

4.4 The Invoices Tab

This section of the system allows the user to record patient payments, which effectively updates the database with the amount the patient has paid and calculates the amount still due.

The "Update Invoice" page asks for the user to provide the invoice number to update. This information is available once the client/patient provides proof of payment to the practice. Figure 22 illustrates the user input field.

Search Invoice with Invoice Number

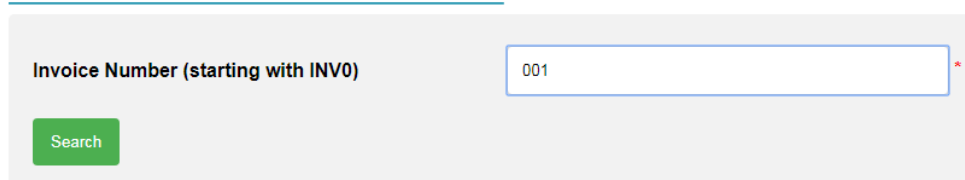


Figure 22: Searching for Invoice with Invoice Number

Once the system receives the invoice number, the system returns a form that allows the user to record the payment that was made, as illustrated in Figure 23. User input is validated with the number format to ensure that the amount is correctly entered and not more than 2 decimal places.

Displaying information of Invoice INV0001

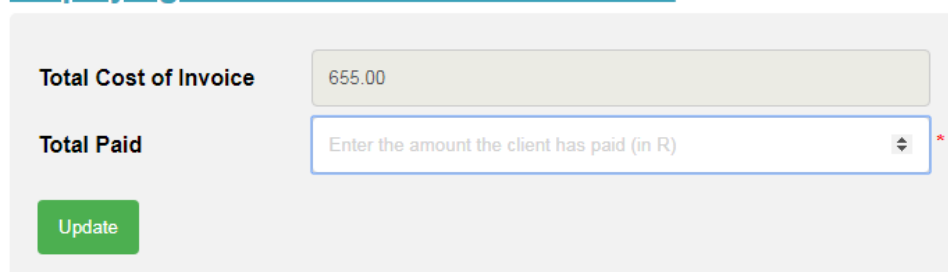
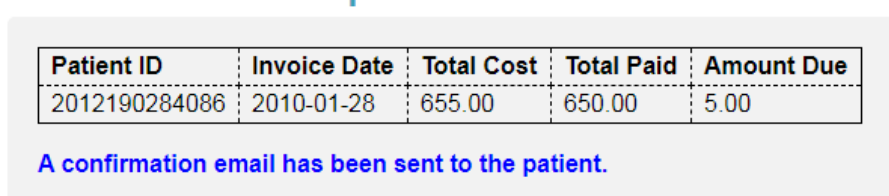


Figure 23: Form to enter the amount the client has paid

Once the form is submitted, the payment is reflected in the database and an updated invoice is sent to the client, thanking him/her for the payment that has been made. The updated invoice information is then displayed for the user as shown in Figure 24.

INV0001 has been updated



Patient ID	Invoice Date	Total Cost	Total Paid	Amount Due
2012190284086	2010-01-28	655.00	650.00	5.00

A confirmation email has been sent to the patient.

Figure 24: Updated invoice information displayed, acknowledging email sent

4.5 The Reports Tab

This section of the system is exclusively available for the HCP to not only track current business activities (the day to day reports), but also a summative display of Management Information Reports. The HCP may choose the report he wishes to display. As a default, the day to day report is always the home page. As this information is important for day to day operations, the day to day report is also available to the GA, but only on the home page and not as a Reports tab on the navigation bar. All the information showed in the reports are live and are not delayed.

4.5.1 Day to Day Reports

The AllHealth Database System

Home Clients Supplements Appointments Invoices Reports Welcome, HCP

Appointments for Today

Client Name	Surname	Time of Appointment	Action
Johann	Swanepoel	17:00 - 18:00	Start Consultation
Josaya	Chabvonga	07:00 - 08:00	Start Consultation

Birthdays Celebrated Today

Client ID Number	Client Name
1311240354085	Donald Sethole
2011240231088	Nhloso Schoeman
2811240555087	Rene Makhonzwa

Email Birthday Message to All

Supplements Requiring Attention

Supplement	Current Level	Minimal Level	Supplier	Supplier Info	Update Supplement
SUPPLEMENT-107	6	9	SUPPLIER A	Supplier Info	Update Supplement
SUPPLEMENT-108	1	6	SUPPLIER B	Supplier Info	Update Supplement
SUPPLEMENT-109	3	6	SUPPLIER D	Supplier Info	Update Supplement
SUPPLEMENT-118	6	7	SUPPLIER B	Supplier Info	Update Supplement
SUPPLEMENT-124	5	8	SUPPLIER A	Supplier Info	Update Supplement
SUPPLEMENT-143	5	10	SUPPLIER B	Supplier Info	Update Supplement
SUPPLEMENT-151	4	9	SUPPLIER A	Supplier Info	Update Supplement
SUPPLEMENT-153	3	5	SUPPLIER B	Supplier Info	Update Supplement
SUPPLEMENT-180	4	6	SUPPLIER A	Supplier Info	Update Supplement
SUPPLEMENT-186	4	5	SUPPLIER B	Supplier Info	Update Supplement
SUPPLEMENT-193	2	10	SUPPLIER D	Supplier Info	Update Supplement
SUPPLEMENT-196	7	10	SUPPLIER A	Supplier Info	Update Supplement
SUPPLEMENT-207	1	4	SUPPLIER D	Supplier Info	Update Supplement

Figure 25: Day to Day Reports

The day to day reports consists of 3 reports. These reports are:

- ✓ Appointments for today
- ✓ Birthdays celebrated today
- ✓ Supplements requiring attention

Appointments for Today

This report displays the appointments that are scheduled for today. It is from the day to day report, or the HCP's homepage, where the consultation can be initiated. This feature is not available for the GA.

Birthdays Celebrated Today

This report displays the birthdays being celebrated today. By clicking on the "Email Birthday Message to All", this enables the system to send a personalised email to each client who celebrates a birthday today. The HCP may view the ID number of the client, whereas the GA has no access to the ID number.

Supplements Requiring Attention

This report displays the supplements who needs to be ordered as soon as possible, as they have fallen below the minimal level set in the database. The supplier of the supplement is displayed to assist the user in determining who the supplier is. Furthermore, shortcuts have been provided to show the supplier's details or to update the specific supplement.

4.5.2 Management Information System Reports

The MIS reports are viewed as a horizontal-scrollable dashboard which has default query parameters set to view the report with live data. Each MIS report can be accessed and viewed individually. Two MIS reports can also be edited to display data graphically for a given timeframe.

The MIS reports for The AltHealth Database System are as follows:

- ✓ Percentage of Client Referrals – Based on the type of referral
- ✓ Representation of the 10 Areas most clients reside in
- ✓ Number of supplements sold for the past 4 months (editable)
- ✓ Area representation of patients seen over the past 4 months (editable)²

Percentage of Client Referrals

Percentage of Client Referrals (Based on Type of Referral)

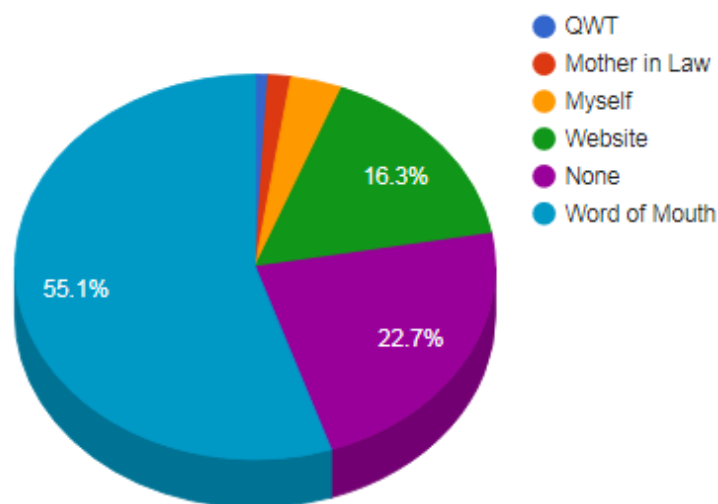


Figure 26: MIS Report 1

² Currently being debugged due to an issue in generating the graph with the API

This report displays a graphical representation of the references of clients and the percentage (segment) of the type of referral. This can assist the HCP in making future decisions to improve a certain reference segment, for example improving the business' website in order to reduce the amount of no referrals. The graphical representation is in the form of a pie chart.

Representation of the 10 Areas most Clients Reside In

Representation of the 10 Areas Most Clients Reside In



Figure 27: MIS Report 2

This report displays a graphical representation (in the form of a column chart) of the ten areas (postal codes) where most clients reside in. The HCP can keep track where most of his clients reside and take future decisions in focusing on other areas to increase revenue, such as having consultation rooms closer to clients.

Number of Supplements Sold

Amount of Supplements Sold between 2012-01-01 and 2012-02-01

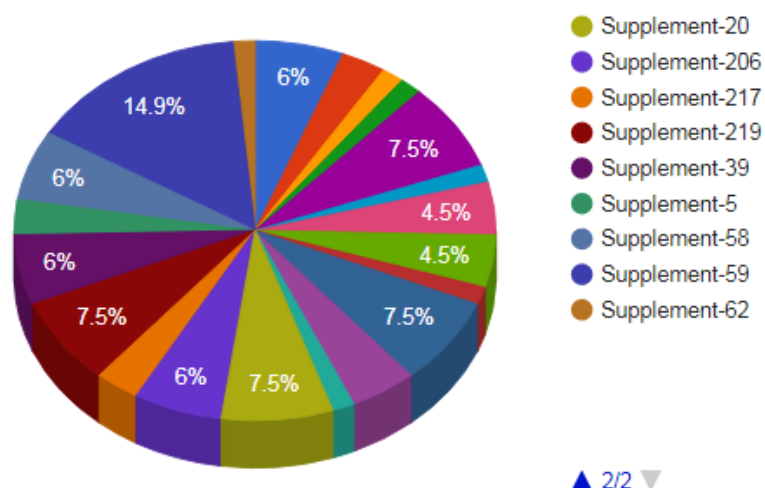


Figure 28: MIS Report 3

This report displays a graphical representation of the supplements that were sold in a given timeframe. This effectively allows the HCP to see which supplements are the most popular and less popular in a given period. This assists the HCP in taking future decisions to increase sales of other supplements, to take decisions in replacing some supplements with new or improved supplements, or to cease in selling specific supplements that aren't selling at all.

Area Representation of Patients Seen

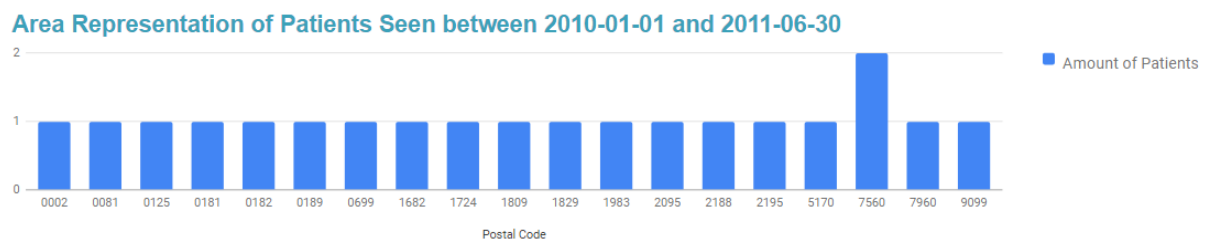


Figure 29: MIS Report 4

This report displays a graphical representation of the postal codes of clients who has seen the HCP in a given timeframe. This allows the HCP to keep track of the spread of potential illnesses, such as the flu, that might have led to a consultation with the HCP. This data may assist in future health studies in determining the root source or cause of an acute illness and any potential steps that may be taken in the future to minimize or eliminate the cause. The HCP has the option to query the frequency by providing two dates of which he would like to display the data. The graphical representation of the data is in the form of a column chart.

On all reports, when more information is requested from the dashboard, the HCP has the option to view the data in a tabular form. This enables the HCP to print out the data in a table format that he can use for his records, or which he could use for further research and/or part of his business plan to illustrate the growth of the business and the impact it has on the community.

4.6 The User Tab

The user tab enables the user to log out of the system safely, which will close the session of the user. Additionally, the user can also reset his/her password once he/she has logged into the system, by simply navigating to the "Reset Password" page. Password validation will be performed in this form to ensure the user has entered the same password twice, and the password is more than 6 characters. Once the new password has been set, the session is immediately closed, and the user would need to login again by using the new password. Figure 30 illustrates the password reset form for the user.

Reset Password

Please fill out this form to reset your password.

New Password

Confirm Password

Submit

Figure 30: Reset Password Page

Troubleshooting

In the event of the system being slow or not functioning to the correct set standards, the system administrator needs to be contacted as soon as possible in order to perform maintenance, as well as corrective and preventative maintenance should any bugs or errors be reported.

The following basic errors can easily be fixed within a few moments:

5.1 Database Connectivity and Localhost Availability

Should the following message appear: *“There was an error connecting to the database. This may be due to a system error or the database (MySQL) is not running.”*, a common troubleshoot is to check the XAMPP control panel. Check to see if the Apache and MySQL modules are started and running, as indicated in Figure 31. Should the modules be running, contact the administrator to investigate further.

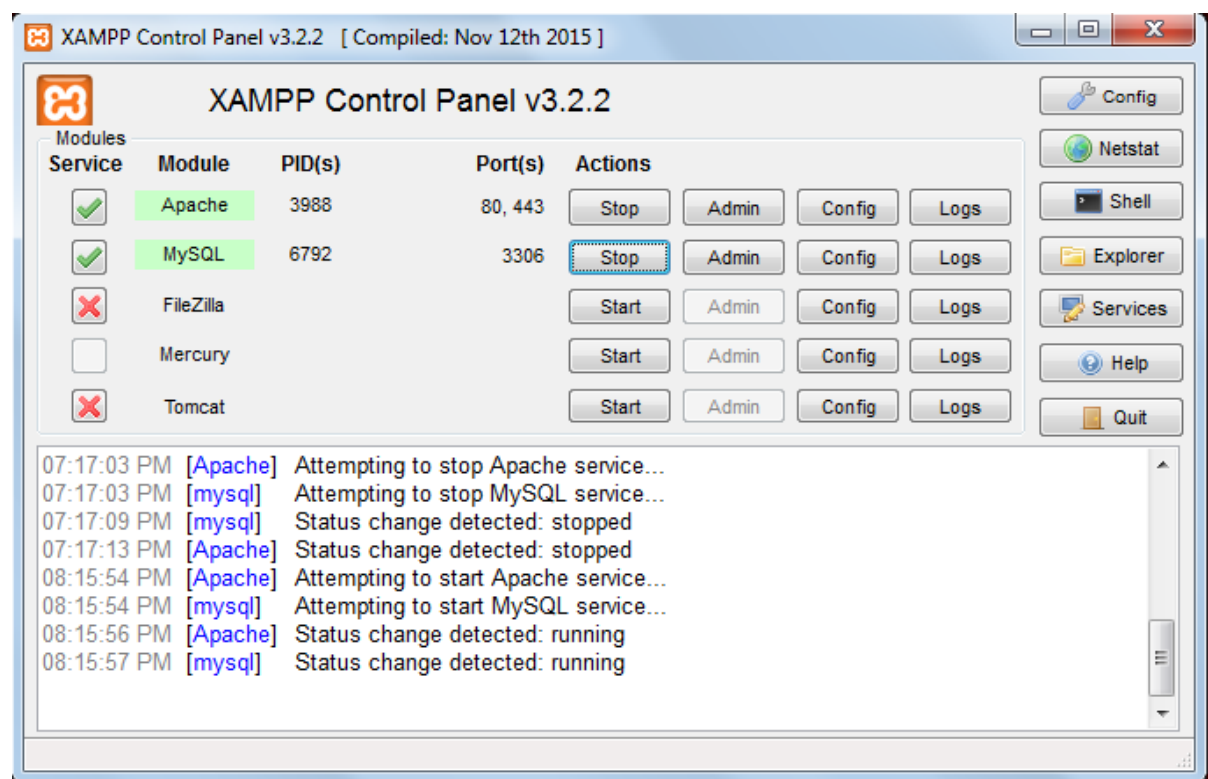


Figure 31: XAMPP Control Panel

By ensuring the above modules are running, this ensures that the localhost is active and retrievable on the network. Should these modules not be active, simply press “Start” for both Apache and MySQL, as it would initialise the system. This may take a few moments for the system to be active.

5.2 Pressing the Back Button on the Browser

It is advisable not to use the back button in the browser for navigation. Please ensure to use the links as provided in the navigation bar, as well as the shortcut buttons that has been implemented. By pressing the back button, this may trigger the message on the browser to “Resubmit form submission”. This will affect database integrity should this occur as it may duplicate data entries into the database. If the action did occur, notify the system administrator to clean the data in the database

5.3 Internet Connectivity

A loss of Internet connectivity may cause a few displays not to view properly, especially the login page, as well as the cloud backups that are automatically synchronised. Should there be a loss in internet connectivity temporarily, proceed with the system as the integrity of the system still remains intact. Contact your Internet Service Provider (ISP) to rectify the issue as soon as possible. Once connection has been restored, the session would return to normal and any automatic backups that were performed, will be uploaded to the Google Drive.

5.4 Errors in Data Input

The AltHealth Database System validates the input received from the GUI provided by the user in order to avoid any possible redundancies. Any error message that displays next to the field needs to be adhered as the information cannot be saved to the database if the error message is active. For user convenience, light text inside the form inputs displays what information should be entered into the field.

5.5 Other Possible Errors

For any other possible errors that are not mentioned in this troubleshoot section, do not hesitate to contact the system administrator for further investigation and explanation into the possible error at hand.

5.6 Current Issues in Debugging Phase

Due to unforeseen circumstances with the changes in email accounts and API synchronization, the following functionalities have been temporarily disabled:

1. MIS Report 4 (graphical representation not being correctly established)
2. Email functionality (all emails – currently troubleshooting email account permissions at the time of releasing this user manual)