

***EHA***



***Enlightened Health Alternative***

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## Assignment 1

### Client

#### Business Name

EHA - Enlightened Health Alternative

#### Description of client

EHA can be described as a small business. The purpose of the business is to provide alternative health care options to people in the community.

The business has one owner, and consists of a workforce consisting of only two people, namely a Health care Practitioner(the Owner) and a General Administrator.

EHA is an existing business, currently making use of a hand filing system and Microsoft Excel to service a number of existing customers and patients.

EHA conducts business by allowing patients to make appointments to see the Health Care practitioner, and also by selling supplements to the patients.

The owner wishes to expand the business at minimal cost, and also create an online presence.

#### Description of the proposed system

The system will be installed on a computer running a Windows 7 **operating system**. The system will be designed to compliment the existing workflows and integrate easily into the existing business.

The application system boundaries characterise the system into 3 major components:

1. The **Database**: this will be an open source **relational database**
2. **Administration**: Consists of a **Supplement Stock control** system and **Invoice** generation system
3. **MIS** - Management Information System

## Scope of the proposed system

### 1. The Database:

- **Main Function** - To organise, store and access data. This will be an open source relational database. A **Database interface** is needed to enter the current existing data into the database as the point of entry, so the client can immediately start using the system.

### 2. Administration: Supplement Stock control system

- **Main Function** - Managing information of the supplements, product information and stock levels. The purchase price of the supplement as well as the mark up price must be available. An invoice is created for each transaction or order. When an invoice is made, the HCP must have the option to change the cost for a supplement. Each invoice needs to have a unique number. This number is used as reference in EFT payments by the customer. If the customer is a patient, then the ID number of the patient needs to reflect on the invoice. The customers can pay either cash or EFT. At the end of each day the HCP/GA verifies the payment and updates the system. The stock levels are updated accordingly. Both the HCP and the GA can add and update the stock and stock levels. If the stock levels go down beyond a specific level then a warning needs to be created to alert the HCP or GA that new stock needs to be ordered. There are different warning levels for different supplements, as some supplements get ordered more regularly than others.

### 3. MIS (Management Information System)

- **Main Function** - To reflect an overview of the system at any given time. Displaying information such as: The names of the patients for the specific day. The upcoming birthdays for the patients. A list of the supplements that should be ordered (low stock levels). A summary of the number of patients that were seen for the month / year. A summary of the supplements sold during the last month / year. A list of the top 10 supplements sold during the last month / year

## Extended scope - User Roles

The following users have been defined and user privilege constraints will be enforced on the system:

- **Super User** - Has Full access to the database and code of the system.
- **HCP** - Does not have access to the database, the structures or the coding. All access and viewing must be through the GUI. The HCP can create invoices and add new products to the supplement stocks. Only the HCP can update the pricing structures for consultation fee, the percentage of mark up that should be used for new supplements and whether discount can be given to a specific patient. The MIS reports are only visible to the HCP.
- **GA** - No access to the database, the structures thereof or the coding. All access and viewing is done through the GUI. The GA can make appointments, create invoices and add products to the supplement stocks.
- **Patient** - The patient will be able to use the mobile application. Be able View his/her appointments as well as the supplements prescribed. He/she will receive, via the application and system a reminder of the next appointment as well as information on specials and general information; this can be done via a sms or e-mail.

# Community

## **Who is the community?**

Eldoraigne local community, Centurion, Pretoria.

## **Why this community?**

Access to affordable and efficient healthcare is a challenge in Southern Africa. The elderly struggle not only with gaining physical access to clinics and hospitals, but also with awareness of health conditions and access to healthy supplements to meet health care needs in their old age. Children and adults or pensioners need efficient alternative health care. There are various hospitals and doctors, but this community has very few alternative health practitioners. There are various retirement villages, schools and families in the area that can benefit from this system.

## **Describe the community**

The community is quite large, consisting of people of all ages - from children to pensioners. It consists of families or single individuals and couples, or even people living in retirement villages, apartment complexes and private houses. The demographic area covers about 5km<sup>2</sup> and includes many small neighbouring communities and suburbs, and all can benefit from alternative health care in this community. There are various schools in the area. The languages spoken are mainly English and Afrikaans, but it is a mixed community consisting of many different cultures and languages. Employment ranges from big companies in the area, to small businesses run by individuals in the community. There are shopping malls nearby, and there is public transport available and the Gautrain station is situated nearby. There is a community library and various community projects.

## **Why does the community need this software system?**

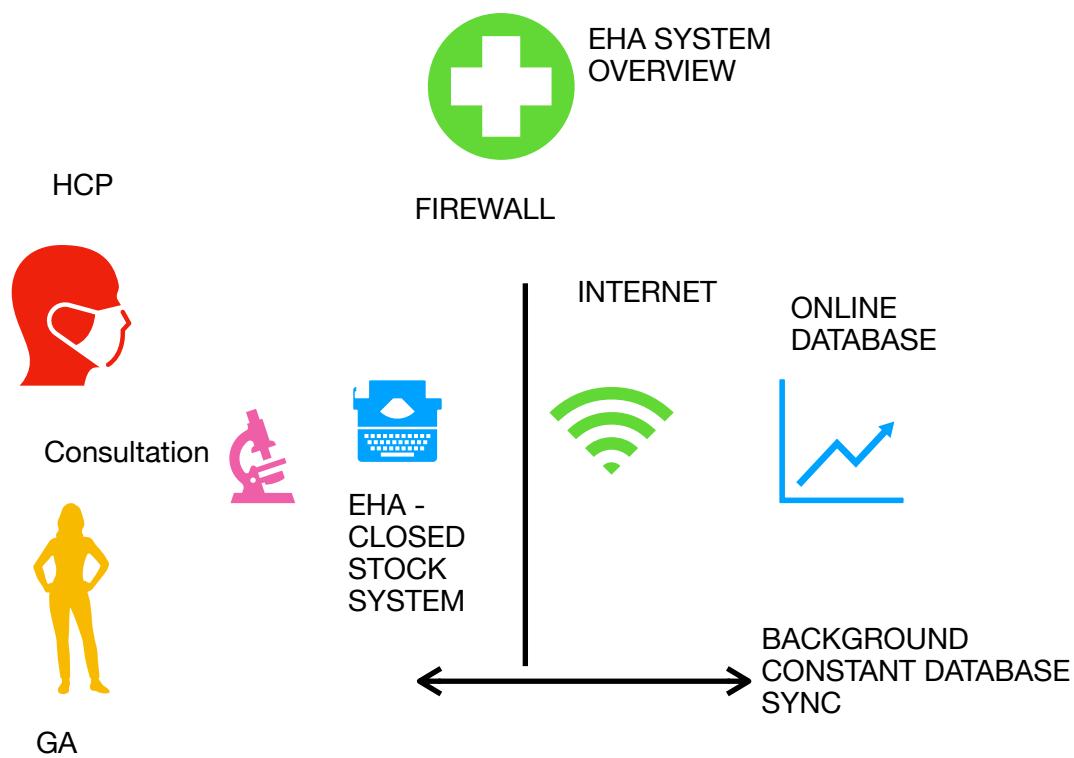
Alternative Health services should be age friendly and respond to the changing care needs of older women and men as they age. This includes the availability of medicine and supplements, health care workers that are trained and prepared, and the technology to provide the appropriate alternative health care. This software system can provide the support needed to aid the elderly in ageing with grace, dignity and excellent health. With access to a mobile app, patients have easy access to information to assist them with excellent health care. Families and individuals can benefit from having alternative health nearby in the community.

## Assignment 2

### Preliminary Literature Review

#### Introduction

The system is meant to ease the general administration for Health practitioners, and facilitate access to information for the patients. With the help of a database, the practitioners can easily store and view information about the patients and supplements, and an MIS (Management Information System) is used to easily view important information. A stock control system is used to manage information of the supplements, products and stock levels. Patients can use a mobile application to view information and supplements.



#### Justification

Through continued use of the system, Health practitioners will be able to increase productivity. Health practitioners can easily save, edit and view important information relevant to providing the customer with excellent care. The patient will have access to a mobile application, which will streamline the process of viewing information and receiving notifications.

**Past and current research [systems] in the community area.****1. back2health**

**Field of Medicine:** Practices alternative health in the fields of Chiropractic Care, Lifestyle & Nutrition, Chinese Medicine, Homeopathy and Biokinetics.

**Area:** Wierda Park, Centurion **Customer base:** includes all people of every age.

**Services offered:** in-person Services are offered only. No supplements or products are sold on the website.

**Technology used:**

- Basic website with information about the practice and contact details.
- Bookings are done via telephone, email, or a form used on the website to contact the doctor.

**2. HomeopathySA**

**Field of Medicine:** Practises Homeopathy **Area:** Wierda Park, Centurion

**Customer base:** Customers are adults

**Services offered:** Services are offered in person by appointment. Products are sold by the practitioner, but not on the website. The products are explained on the site but sales are made in person or via email/telephone.

**Technology used:**

- Basic website with information about the practice and contact details.
- Bookings are done via telephone, email, or a form used on the website to contact the doctor.

**3. Dischem Pharmacy/clinic**

**Field of Medicine:** Franchise, general health pharmacy. **Area:** Centurion, multiple branches

**Customer base:** Customers of all ages

**Services offered:** Fully online system, bookings, online products with deliveries.

**Technology used:**

- Enterprise size website, mobile app
- Large database.
- Online bookings, online purchases with card merchants
- Supplements and products sold online

**How does the system fit in the community?**

Dischem is an enterprise sized company, but they offer more general services. The other alternative health practises identified are not specifically in the Eldoraigne area. Although they are close enough to provide services to Eldoraigne, the technology used by them is not very advanced. There is place for improvement if the best health care is to be provided for the community of Eldoraigne.

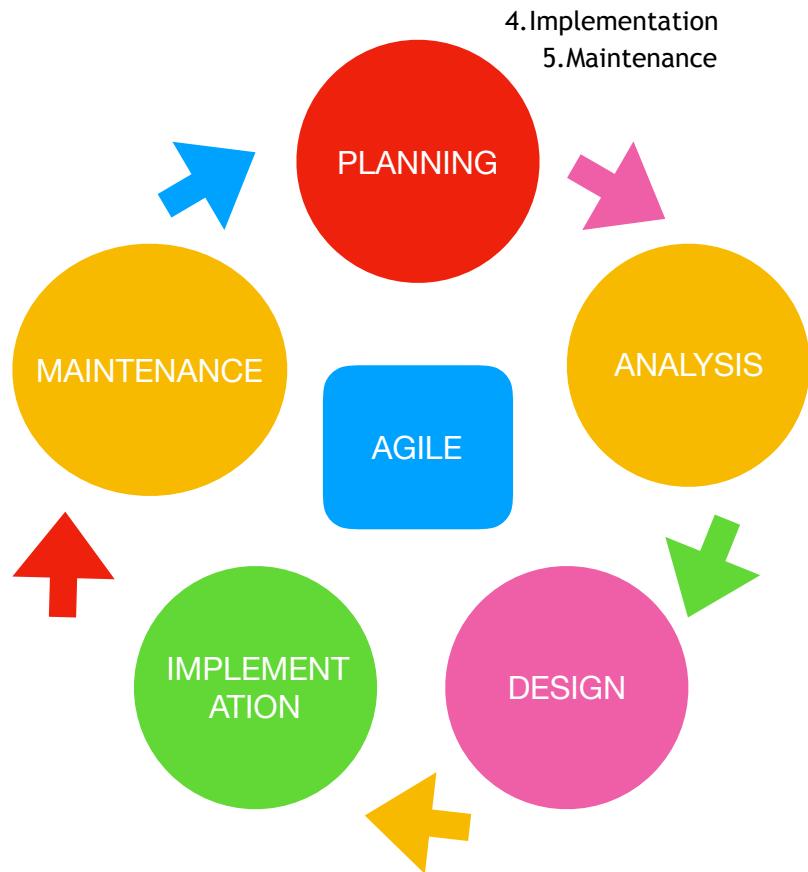
Our system will be better equipped to provide even more information and better service to the customers, with services aimed specifically at alternative health. Using technology like Dischem does, and combining the services of an Alternative Health care clinic, our system will be able to provide the best service to the community.

The aim of the system is to enhance the physical practise. The practise will also be closer to the patients in the area, so travel will become easier if needed.

### Development: what approach will be followed for the system?

Because this is a small to medium sized system, and the requirements have been clearly defined, an iterative AGILE approach will be used. The stages of the SDLC (Software Development Life Cycle) will be followed for each component, Namely:

1. Planning
2. Analysis
3. Design



The client currently uses Windows 7, this is an older system and could possibly have to be updated soon. To allow the customer freedom of choice to update to a system of their choice, like windows 10 or even Mac, we have decided to make use of an open source Java platform to make the system usable on any operating system. In doing so we hope to make it easier to expand the system and make future development easier. Using a Java servlet, the system can be duplicated on any operating system with ease, allowing future expansion of the business. We will develop the system using the oracle JavaFX libraries, and use an embedded database like the Derby platform for a local database on the desktop, coupled with an online MySql database which can be synced from an online PhpMyAdmin platform. This means there is an online database and also a desktop version for offline use. This also makes future development of the website easier, enabling us to expand on the existing system quickly. Using Java will also make the system very compatible with the mobile app, which will also be written in Java.

### How will the system be tested?

The system will be split into components and each component of the system will be developed and tested individually on its own, in phases, starting with the database. As a component is developed it will be tested rigorously. Once all the components have been developed and tested on their own, the components will then be tested together as a complete system. Each component will be introduced to different inputs to obtain and analyse its outputs and behaviour to monitor the way it functions. Each component will be tested to meet the project requirements.

**What would be the scope for future development for this system?**

There are ways that the system can be enhanced in the near future, namely:

1. Payment system - At the moment payment is done by EFT only, and the administration has to manually update the system. This can be enhanced by adding a Payment component to the system that is fully automated, allowing credit card payments, automatic notification and database updates.
2. Mobile App upgrades - the mobile app is developed primarily for the patient, but in the near future it could be updated to include functionality to be used by the HCP. For instance it could be used as a tool by the HCP to record information on the fly during a patient session, it could be used as a medical encyclopaedia providing information easily at hand, or it could record signatures used for authorisations to medical aids or scripts.
3. Customer Usability - the system caters for stock only, therefore the system needs functionality like a web page and online interface to be able to purchase supplements online to expand the business reach further into the community.
4. Biographical information & appointment booking system - to enhance the service to the patients and customers, the system needs added functionality to streamline the information and booking system. This will make it easier to make and cancel bookings, and also easier to manage customer information.

**Reference list**

... [\*make use of the Harvard Referencing Style]

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## Assignment 3

### System Proposal

#### Outcomes

The expected benefit of this system is to assist the community in increasing overall alternative health benefits by simplifying the process of delivering these benefits.

The system is meant to streamline the general administration for Health practitioners, and facilitate access for the patients to better health benefits and information.

#### Objectives

- All Health practitioners can immediately manage, store and view information about the customers, product information, stock levels and supplements.
- An HCP will immediately be able to view important information at a glance in one interface.
- A customer can immediately view bookings made, view supplement information and receive notifications.
- Health practitioners are immediately able to deliver information and advertising to customers, and deliver invoices to customers for every transaction made.

#### Outline deliverables

- A software GUI (Graphical User Interface) to access and update the database.
- A supplement interface - Allows the health practitioner to view information about the supplements.
- Add/update (Software component) - An interface allowing the Practitioner to change information about the supplements.
- An MIS interface allowing the HCP to view important information.
- An interface for a health practitioner to create and send an invoice
- Mobile application for patients to interact with the system.

## Scope

### System scope:

The system will be installed on the business's existing computer, currently using a Windows 7 Operating system.

The **database** requires an interface that will allow an administrator to add data to the database before the system is to be used. Current data must be easily entered so the system and can be used immediately.

The **Stock/Supplements Interface** will allow a practitioner access to general information such as patient name and ID number and birthday, stock levels, and the purchase price and mark up price of the supplement.

An **Add/update Software component** will allow a practitioner to edit stock on the system.

**Stock warning levels** are received if stock levels are low. Different warning levels exist for different types of stock, as some supplements get ordered more regularly than others.

An **Invoice Component** consists of an interface to create an Invoice for each transaction, once patient has made payment. When an invoice is made, the HCP must have the option to change the cost for a supplement. Each invoice needs to have a unique number. This number is used as reference in payments by the customer.

An **MIS (Management Information System)** acts as a Dashboard interface, providing an overview of the system at any given time, reflecting information such as: The names of the patients for the specific day. The upcoming birthdays for the patients. A list of the supplements that should be ordered (low stock levels). A summary of the number of patients that were seen for the month / year. A summary of the supplements sold during the last month / year. A list of the top 10 supplements sold during the last month / year

A **Mobile Application** will allows the patient to view his/her account, appointments and supplements prescribed. A pop-up message should display on the mobile device 24 hours before the next appointment. The HCP must be able to push notifications of special deals and general health care tips to the patient via the mobile application.

### User scope:

A **Super User** will have full access to the database and code of the system, he will only be needed onsite for maintenance or support.

The **HCP** will have access and viewing only through the GUI. He can create invoices and add/update products in the supplement stock. Only the HCP can update the pricing structures for consultation fee, the percentage of mark up that should be used for new supplements and whether discount can be given to a specific patient or customer, and view **MIS** reports.

The **GA** will also have all access and viewing done through the GUI. The GA can make appointments, create invoices and add products to the supplement stocks.

The **patient** will be able to use the mobile application only. Be able View his/her appointments as well as the supplements prescribed. He/she will receive, via the application and system a reminder of the next appointment as well as information on specials and general information; this can be done via a sms or e-mail.

Both the **HCP** and the **GA** can add and update the stock and stock levels. If the stock levels go down beyond a specific level then a warning needs to be created to alert the **HCP** or **GA** that new stock needs to be ordered. There are different warning levels for different supplements. The ID number of the **patient** needs to reflect on the invoice. The **patient** can pay either cash or EFT. At the end of each day the **HCP/GA** verifies the payment and updates the system. The stock levels are updated accordingly.

### Approach

Because this is a small to medium sized system, and the system needs to be built quickly by one developer, an iterative AGILE approach will be used. The stages of the SDLC (Software Development Life Cycle) will be followed for each component. This will give the client an idea of each component and the ability to immediately give feedback.

This approach emphasises the rapid delivery of an application in complete functional components. Rather than creating tasks and schedules, all time will be “time-boxed” into phases called “sprints.” Each sprint has a defined duration with a running list of deliverables, planned at the start of the sprint. As work is completed, it can be reviewed and evaluated through daily builds and end-of-sprint demos.

Using the open source JavaFX platform will allow us to expand the system easily and also make it available to any operating system the client chooses. An embedded database like the Derby platform will allow easy integration for the desktop app, coupled with an online MySQL database to sync data to and from the cloud will allow easy expansion of the system as the system grows.

### Exclusions

- The system currently will not cater for customers, only a patient will be able to use the mobile app to gain access to the system.
- No public website is yet available for patients and customers, only Health Practitioners have access to the GUI. Customers will not be able to order supplements online.
- The system will not cater for appointment bookings and biographical capturing. Only basic information, relevant to invoicing, will be available to Healthcare Practitioners on the system.

### Constraints

- The database will have to be manually updated, it is possible that this could be subject to human error.
- Supplement information needs to be updated manually by an administrator, therefore making it vulnerable to human error.
- The Operating system hardware and software, and Database management system (DBMS) are subject to updates or hardware failure. This could impact service delivery of the system.
- Users need to be trained how to handle system, to avoid problems that cause downtime, and to decrease human error while running the system.
- Slow Internet speeds or downtime could affect notifications from the system to the mobile app.

## Outline business case

**Needs:** As of a 2011 census, the suburb of Eldoraigne and its neighbouring communities cover a geographic area of around 5km<sup>2</sup>, carrying a Population of 3647 (1775.86 per km<sup>2</sup>) and 1331 Households (648.11 per km<sup>2</sup>). Two other holistic practises and various pharmacies have been identified nearby. It is clear that the community can benefit from excellent healthcare in the immediate area. As the owner wishes to expand the current business by gaining an online presence and saving money, this system is the first step to digitising the current workflow and paving the way forward to a full online presence.

Overall, the project offers the following **benefits**:

- Ability to monitor stock performance and react quickly to sales trends.
- Quick, easy access to information for planning and evaluation.
- Improvement in day-to-day internal communication.
- Low cost system maintenance. Improved management of assets, and Standardised processes and procedures

**Users** - Currently there are few users for this system. Consisting of two daily users (HCP&GA), and a super user to be called in only for support.

Patients will only have access to the mobile app. There is currently 445 registered patients on the system, and the number of patients is expected to grow as the business expands.

**Income generation** - The system will improve support and this means improved savings for the same amount of work. Carry cost of inventory is reduced through improved inventory management. An online system improves waste reduction through eliminating paper-based system. Resource savings are achieved through reduced duplication of processes and automation of tasks. Increased sales are achieved through improved service throughput. Accuracy of inventory counts increases sales.

**Funding sources** - Funding will be requested from the current owner.

**Marketing** - The business is situated in a small demographic area of about 5km<sup>2</sup>, carrying a Population of 3647 (1775.86 per km<sup>2</sup>). The target market in this population consists of men and women and families of various age groups. These people need health care all year round for various reasons ranging from being sick, to just wanting to be healthy. Reaching even a small percentage of this population will vastly improve the business.

**Budget** - As an open source system is to be used, the total project costs are estimated to be low for development and implementation. Thereafter, recurring annual costs will also be low. The initial costs include system design and development and system training for the staff. We will take advantage of the business's existing process flows, so that the system aids the business with little disruption during the change-over. The system will take over existing workflows so that business can continue as usual, with many advantages at no additional cost.

## Reasons for selecting this solution for the system

The typical costs for a software system can be quite high, and to meet the needs of the client of saving money for an initial system, an open source option has been chosen.

Once this system is in place there is room to easily grow the system and the business.

### Outline project plan

Deliverable/Milestone/Sprint	Deadline
Submit Initial proposal	16 April 2018
Design and develop database and database interface	21 May 2018
Design and develop MIS Dashboard (Management Information System)	25 June 2018
Develop Supplement and Invoice Control System	27 August 2018
Complete user manual and installation manual	01 October 2018
Develop Mobile app	01 October 2018
Implement System	22 October 2018

### Resources

A developer will build the system for a computer running on a Windows 7 operating system, and this will be installed on the business's existing computer. The business owner provides the hardware and Operating system for the system to run on. The business owner will also supply an internet connection and own hosting provider for the system to be connected to the internet. Software will be written for the client, and an open source database will be used so there will be no need for specific licenses or extra expenses on software.

### Quality expectations

When the project is completed we expect to have achieved the following performance targets:

#### Service measures:

- Response to supplement sales: acknowledge, record, and assign action on the same day as the sale.
- Response to request for standard information: sent electronically the same day or by mail the next day
- Staff access to system and information: fully electronic, on demand.

#### Mission measures:

- Monthly / Yearly analysis of trends in local management issues, activities and results.

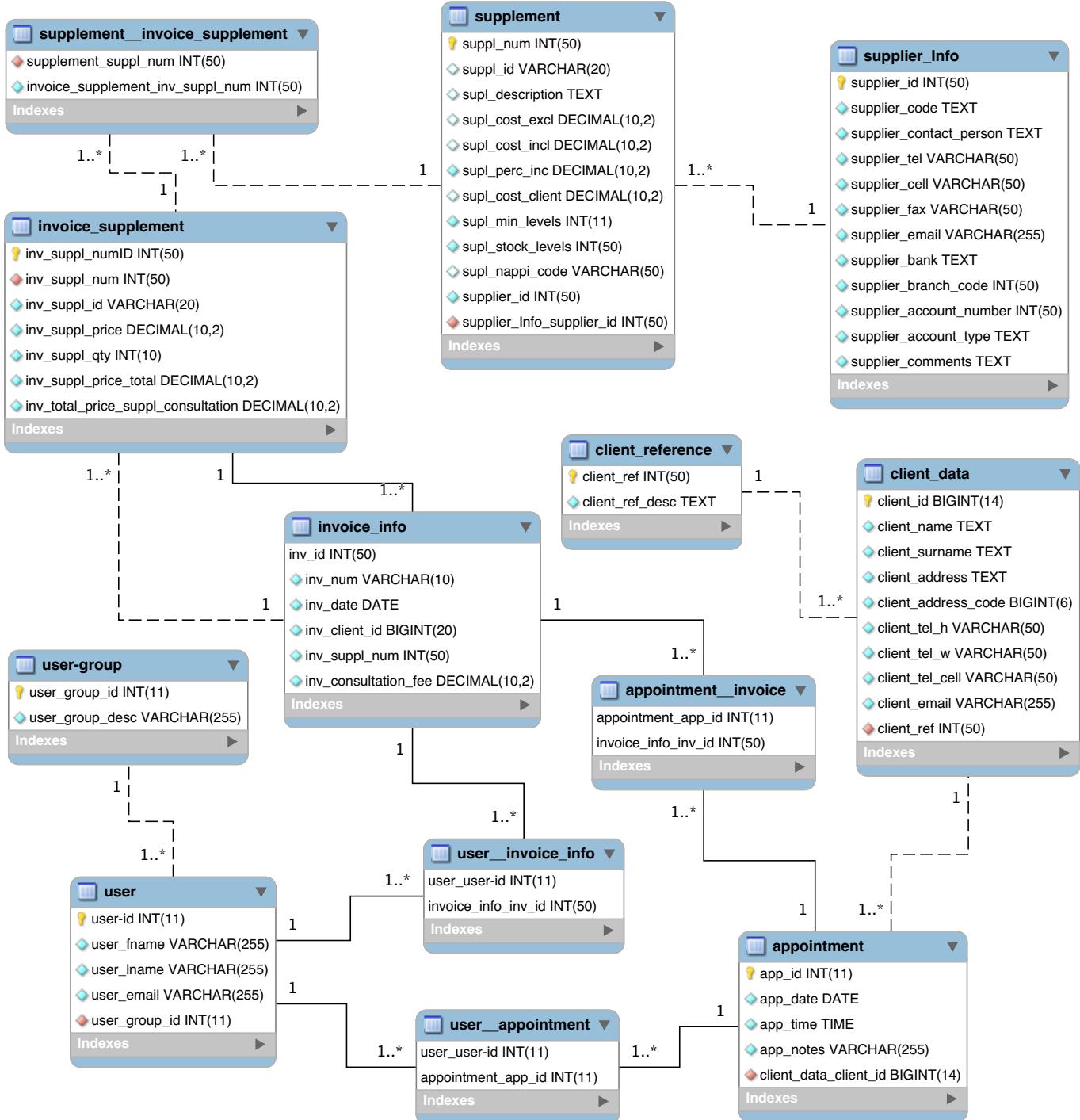
### Risk assessment

- The solution purchased is inadequate - If the Health Practitioners do not adjust to the new system right away, it could effect service delivery. To counter this problem, the client will be involved in every phase of development to ensure compatibility to the business need.
- Staff resistance to change - Most people do not react well to change, and learning a new system is always challenging. In order to reduce the effort of having to learn entirely new workflows, the proposed system is based on the current business processes. This will improve the transition from paper-based workflows to the new online system.
- Prolonged disruption to business operations - internet hosting outages in the area could cause the system to go offline for prolonged periods of time. An offline version will be available to counter the effects of downtime and ensure business delivery.

## Assignment 4

### Database

#### ERD



## Development | Database

```
CREATE TABLE `appointment` (
  `app_id` int(11) NOT NULL,
  `app_date` date NOT NULL,
  `app_time` time NOT NULL,
  `app_notes` varchar(255) NOT NULL,
  `client_data_client_id` bigint(14) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
```

```
CREATE TABLE `appointment__invoice` (
  `appointment_app_id` int(11) NOT NULL,
  `invoice_info_inv_id` int(50) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
```

```
CREATE TABLE `client_data` (
  `client_id` bigint(14) NOT NULL,
  `client_name` text NOT NULL,
  `client_surname` text NOT NULL,
  `client_address` text NOT NULL,
  `client_address_code` bigint(6) NOT NULL,
  `client_tel_h` varchar(50) NOT NULL,
  `client_tel_w` varchar(50) NOT NULL,
  `client_tel_cell` varchar(50) NOT NULL,
  `client_email` varchar(255) NOT NULL,
  `client_ref` int(50) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
```

```
CREATE TABLE `client_reference` (
  `client_ref` int(50) NOT NULL,
  `client_ref_desc` text NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
```

```
CREATE TABLE `invoice_info` (
  `inv_id` int(50) NOT NULL,
  `inv_num` varchar(10) NOT NULL,
  `inv_date` date NOT NULL,
  `inv_client_id` bigint(20) NOT NULL,
  `inv_suppl_num` int(50) NOT NULL,
  `inv_consultation_fee` decimal(10,2) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
```

```
CREATE TABLE `supplement__invoice_supplement` (
  `supplement_suppl_num` int(50) NOT NULL,
  `invoice_supplement_inv_suppl_num` int(50) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
```

```
CREATE TABLE `user` (
  `user_id` int(11) NOT NULL,
  `user_fname` varchar(255) NOT NULL,
  `user_lname` varchar(255) NOT NULL,
  `user_email` varchar(255) NOT NULL,
  `user_group_id` int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
```

```
CREATE TABLE `invoice_supplement` (
  `inv_suppl_numID` int(50) NOT NULL,
  `inv_suppl_num` int(50) NOT NULL,
  `inv_suppl_id` varchar(20) NOT NULL,
  `inv_suppl_price` decimal(10,2) NOT NULL,
  `inv_suppl_qty` int(10) NOT NULL,
  `inv_suppl_price_total` decimal(10,2) NOT NULL,
  `inv_total_price_suppl_consultation` decimal(10,2) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
```

```
CREATE TABLE `user__invoice_info` (
  `user_user_id` int(11) NOT NULL,
  `invoice_info_inv_id` int(50) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
```

```
CREATE TABLE `supplement` (
  `suppl_num` int(50) NOT NULL,
  `suppl_id` varchar(20) DEFAULT NULL,
  `supl_description` text,
  `supl_cost_excl` decimal(10,2) DEFAULT NULL,
  `supl_cost_incl` decimal(10,2) DEFAULT NULL,
  `supl_perc_inc` decimal(10,2) NOT NULL,
  `supl_cost_client` decimal(10,2) DEFAULT NULL,
  `supl_min_levels` int(11) NOT NULL,
  `supl_stock_levels` int(50) NOT NULL,
  `supl_nappy_code` varchar(50) DEFAULT NULL,
  `supplier_id` int(50) NOT NULL,
  `supplier_info_supplier_id` int(50) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
```

```
CREATE TABLE `supplier_Info` (
  `supplier_id` int(50) NOT NULL,
  `supplier_code` text NOT NULL,
  `supplier_contact_person` text NOT NULL,
  `supplier_tel` varchar(50) NOT NULL,
  `supplier_cell` varchar(50) NOT NULL,
  `supplier_fax` varchar(50) NOT NULL,
  `supplier_email` varchar(255) NOT NULL,
  `supplier_bank` text NOT NULL,
  `supplier_branch_code` int(50) NOT NULL,
  `supplier_account_number` int(50) NOT NULL,
  `supplier_account_type` text NOT NULL,
  `supplier_comments` text NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
```

```
CREATE TABLE `user__appointment` (
  `user_user_id` int(11) NOT NULL,
  `appointment_app_id` int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
```

```
CREATE TABLE `user-group` (
  `user_group_id` int(11) NOT NULL,
  `user_group_desc` varchar(255) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
```

## Screen shots of the database

### OVERALL DATABASE

**Tables:**

Table	Action	Rows	Type	Collation	Size	Overhead
appointment	Browse Structure Search Insert Empty Drop	7	InnoDB	utf8_general_ci	32 Kib	-
appointment_invoice	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8_general_ci	48 Kib	-
client_data	Browse Structure Search Insert Empty Drop	445	InnoDB	utf8_general_ci	144 Kib	-
client_reference	Browse Structure Search Insert Empty Drop	6	InnoDB	utf8_general_ci	16 Kib	-
invoice_info	Browse Structure Search Insert Empty Drop	1,516	InnoDB	utf8_general_ci	112 Kib	-
invoice_supplement	Browse Structure Search Insert Empty Drop	2,455	InnoDB	utf8_general_ci	256 Kib	-
supplement	Browse Structure Search Insert Empty Drop	245	InnoDB	utf8_general_ci	64 Kib	-
supplement_invoice_supplement	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8_general_ci	48 Kib	-
supplier_info	Browse Structure Search Insert Empty Drop	7	InnoDB	utf8_general_ci	16 Kib	-
user	Browse Structure Search Insert Empty Drop	4	InnoDB	utf8_general_ci	32 Kib	-
user-group	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8_general_ci	16 Kib	-
user_appointment	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8_general_ci	48 Kib	-
user_invoice_info	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8_general_ci	48 Kib	-

### APPOINTMENT TABLE

**Table structure:**

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	app_id	int(11)			No	None		AUTO_INCREMENT	Change  Drop  Primary  Unique  More
2	app_date	date			No	None			Change  Drop  Primary  Unique  More
3	app_time	time			No	None			Change  Drop  Primary  Unique  More
4	app_notes	varchar(255)	utf8_general_ci		No	None			Change  Drop  Primary  Unique  More
5	app_invoice_id	int(50)			Yes	NULL			Change  Drop  Primary  Unique  More
6	client_data_client_id	bigint(14)			No	None			Change  Drop  Primary  Unique  More

**Indexes:**

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit  Drop	PRIMARY	BTREE	Yes	No	app_id	4	A	No	
Edit  Drop	fk_appointment_client_data1_idx	BTREE	No	No	client_data_client_id	2	A	No	

### USER\_APPPOINTMENT TABLE

**Table structure:**

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	user_user_id	int(11)			No	None			Change  Drop  Primary  Unique  More
2	appointment_app_id	int(11)			No	None			Change  Drop  Primary  Unique  More

**Indexes:**

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit  Drop	PRIMARY	BTREE	Yes	No	user_user_id	0	A	No	
Edit  Drop	fk_user_has_appointment_appointment1_idx	BTREE	No	No	appointment_app_id	0	A	No	
Edit  Drop	fk_user_has_appointment_user1_idx	BTREE	No	No	appointment_app_id	0	A	No	

Create an index on 1 columns Go

**Partitions:**

No partitioning defined!

## CLIENT DATA TABLE

**phpMyAdmin**

Server: localhost » Database: EHA\_Database » Table: client\_data

Browse Structure SQL Search Insert Export Import Privileges Operations Triggers

Table structure Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	client_id	bigint(14)	utf8_general_ci	No	None				Change Drop Primary Unique More
2	client_name	text	utf8_general_ci	No	None				Change Drop Primary Unique More
3	client_surname	text	utf8_general_ci	No	None				Change Drop Primary Unique More
4	client_address	text	utf8_general_ci	No	None				Change Drop Primary Unique More
5	client_address_code	bigint(6)		No	None				Change Drop Primary Unique More
6	client_tel_h	varchar(50)	utf8_general_ci	No	None				Change Drop Primary Unique More
7	client_tel_w	varchar(50)	utf8_general_ci	No	None				Change Drop Primary Unique More
8	client_tel_cell	varchar(50)	utf8_general_ci	No	None				Change Drop Primary Unique More
9	client_email	varchar(255)	utf8_general_ci	No	None				Change Drop Primary Unique More
10	client_ref	int(50)		No	None				Change Drop Primary Unique More

Check all With selected: Browse Change Drop Primary Unique Index

Print Propose table structure Move columns Improve table structure

Add 1 column(s) after client\_ref Go

Indexes

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit	PRIMARY	BTREE	Yes	No	client_id	530	A	No	
Edit	client_id	BTREE	Yes	No	client_id	530	A	No	
Edit	FK_idx	BTREE	No	No	client_ref	12	A	No	

**phpMyAdmin**

Server: localhost » Database: EHA\_Database » Table: client\_data

Browse Structure SQL Search Insert Export Import Privileges Operations Triggers

Showing rows 0 - 29 (445 total). Query took 0.0008 seconds.

SELECT \* FROM `client\_data`

Profile Edit inline | Edit | Explain SQL | Create PHP code | Refresh

Show all Number of rows: 25 Filter rows: Search this table Sort by key: None

client_id	client_name	client.surname	client_address	client_address_code	client_tel_h	client_tel_w	client_tel_cell	client_email	client_ref
3426545455	Chippa	Shange	398 Kwane Avenue Motherwell Nu 6	0	(071)-(182)-(9769)	(051)-(034)-(0247)	(081)-(041)-(0799)	Chippa @volsec.co.za	3
47027206087	Itumeleng	Makapela	569 Block P Soshangwe	6211	(046)-(606)-(3750)	(022)-(073)-(7626)	(096)-(417)-(7121)	Itumeleng@mweb.co.za	2
47120630388	Wouter	Burger	2119 Thiphi Avenue Cleverdene	152	(081)-(027)-(1284)	(087)-(084)-(9774)	(062)-(400)-(2276)		2
82032206087	Shaun	Leshch	21 Martinton Rd, Two Pieke Unit 83 Mostertshof	1513	(081)-(027)-(1284)	(087)-(084)-(9774)	(062)-(400)-(2276)		1
151021036088	Sandiso	Naidoo	88 Towerbridge Gardens Stone Bridge	7600	(028)-(699)-(2379)	(071)-(070)-(0810)	(033)-(057)-(6105)	Sandiso@abrahamkriel.org	1
290611026087	Goratamang	Owens	5 Mosilihi Katlehong	1931	(031)-(042)-(0432)	(045)-(084)-(6194)	(046)-(058)-(3745)	Goratamang @telkommsa.net	2
341216047088	Adriano	Fourie	208 Wattie Avenue Alveda Park Ext 2	9068	(036)-(261)-(4393)	(010)-(089)-(1524)	(033)-(058)-(6428)	Sandiso@abrahamkriel.org	2
40042205085	Adrian	Maxwell	P O Box 3939 Witvlei	2091	(090)-(079)-(0383)	(094)-(031)-(1218)	(084)-(015)-(6587)		2
451201090585	Wisani	Ayanda	3681 Bellville Avenue Goodwood	1230	(023)-(068)-(9875)	(017)-(082)-(3211)	(039)-(720)-(005)	Wisani @andrewmiller.co.za	2
49101022088	Dambusa	Wendy	9 Wester Convent Penlyn Estate Lansdowne	7960	(081)-(040)-(0854)	(015)-(085)-(0403)	(020)-(050)-(0803)	Kivan@icon.co.za	3
510523036088	Feezie	Nkabinde	81 Tucson Waters Gie Road Parklands	7780	(028)-(682)-(6169)	(017)-(082)-(3477)	(011)-(089)-(8994)		3
560512061088	China	Malemone	7 Nursey Street	7991	(028)-(682)-(6169)	(017)-(082)-(3477)	(011)-(089)-(8994)		3
570315039082	Crofty		7 Nursey Street	0	(082)-(600)-(1913)	(093)-(002)-(0811)	(028)-(196)-(7457)	China@standardbank.co.za	3
511127046082	Edwin	Olmann	Hansine laan	0	(081)-(075)-(2418)	(041)-(081)-(4846)	(092)-(285)-(4922)	Edwin@telkommsa.net	2
531023020281	Edwin	Nkune	21 Gilchrist Close Phoenix Longcroft	9068	(074)-(078)-(8457)	(025)-(236)-(4819)	(033)-(046)-(1699)		1
530628013085	Modisa	Van Rensburg	P O Box 356 Umkomasia	9170	(058)-(153)-(944)	(029)-(085)-(1426)	(019)-(088)-(2915)		2
531127024084	Shaun	Naidoo	200 Heron Avenue Khanwestan	9092	(016)-(054)-(7714)	(017)-(058)-(6142)	(081)-(082)-(0948)	Shaun@intekom.co.za	1
560512061088	Bernhardt	Magutshwa	Postbus 1122 JEFFREYSBAY	0	(078)-(471)-(8574)	(049)-(195)-(2355)	(056)-(058)-(1618)	Bernhardt@yahoo.com	2
563910012387	François	Moseneke	3 Lagoon Road Hilltop	9099	(029)-(100)-(8445)	(011)-(054)-(2727)	(041)-(070)-(9749)		2
640428020286	Shane	Matshazini	939 Mitaliz Avenue Mamelodi West	122	(011)-(059)-(0850)	(029)-(114)-(2426)	(087)-(054)-(0226)	Shane @westsidebrokers.co.za	2
650422050801	Pudwanhan	Khuluse	3035A Extension 10 Naturena	2095	(091)-(020)-(1011)	(013)-(037)-(1182)	(071)-(016)-(0880)		1
660520025406	Cliff	Kunene	2682 Ext 398 Nelmapus Pretoria	2	(038)-(099)-(9879)	(039)-(070)-(7777)	(036)-(073)-(0357)		2
670305077081	Shephard	Klitnya	P13963 Section 39 Madadeni	2951	(019)-(143)-(0520)	(056)-(096)-(8974)	(099)-(400)-(1295)	Shephard @esmartgroup.co.za	2
681014062082	Louis	Kearley	19 Limrose Avenue Crosby	2092	(067)-(073)-(1274)	(037)-(052)-(2801)	(030)-(039)-(6437)	Louis @icon.co.za	4
700823030086	Ngagu	Horwell	Private Bag X1998 Zeerust	2865	(013)-(149)-(0953)	(085)-(037)-(0229)	(080)-(058)-(9701)	Ngagu@gmail.com	5
740501094088	Mondli	Mokwebo	693 Block Dd Dudzane Avenue Soshangwe Block Dd	152	(042)-(041)-(8345)	(058)-(198)-(0264)	(059)-(031)-(9812)	Mondli @idcp.co.za	2
770124076088	Simphive	Madia	Unit 9 Parkside Flats Durban Road Oakdale Ldg	7530	(083)-(218)-(0988)	(044)-(069)-(6761)	(031)-(038)-(0946)	Simphive @insuredco.co.za	3
771109035087	Otsile	Mshaiwa	P O Box 412 Polokwane	0	(059)-(056)-(7735)	(068)-(025)-(4805)	(079)-(050)-(1278)	Otsile@gmail.com	2
780622020088	Nkosikhona	Nkgapele	P O Box 1905 Ga-Kgapeane	838	(014)-(280)-(7521)	(068)-(726)-(4642)	(018)-(769)-(6044)	Nkosikhona @UNIGRAIN.CO.ZA	2
820305040087	William	Sifiso	52 Rusticana General Bayers Avenue Pentagonpark	9301	(016)-(051)-(4853)	(049)-(084)-(4261)	(047)-(098)-(7411)	William@sabc.co.za	3

Show all Number of rows: 25 Filter rows: Search this table Sort by key: None

**CLIENT REFERENCE TABLE**

The screenshot shows the MySQL Workbench interface. On the left, the database tree shows the 'client\_reference' table under the 'EHA\_Database'. The main panel displays the 'Table structure' tab for the 'client\_reference' table. The table has two columns: 'client\_ref' (int(50)) and 'client\_ref\_desc' (text). An index named 'PRIMARY' is defined on the 'client\_ref' column. Below the table structure, there are buttons for printing, proposing table structure, moving columns, and improving table structure. A search bar at the bottom allows adding new rows.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	client_ref	int(50)			No	None			Change  Drop  Primary  Unique  Index
2	client_ref_desc	text	utf8_general_ci		No	None			Change  Drop  Primary  Unique  Index

**phpMyAdmin**

The screenshot shows the phpMyAdmin interface. The left sidebar shows the database tree with 'client\_reference' selected under 'EHA\_Database'. The main area shows the 'Structure' tab for the 'client\_reference' table. It displays the same two columns: 'client\_ref' and 'client\_ref\_desc'. Below the structure, a query window shows the result of the SQL query 'SELECT \* FROM `client\_reference`', which returns 6 rows. The results are displayed in a grid:

	client_ref	client_ref_desc
1	Website	
2	WORD OF MOUTH	
3		
4	Mother in Law	
5	Myself	
6	QWT	

**INVOICE INFO TABLE**

**phpMyAdmin**

Server: localhost » Database: EHA\_Database » Table: invoice\_info

**Table structure** **Relation view**

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	inv_id	int(50)			No	None		AUTO_INCREMENT	Change  Drop  More
2	inv_num	varchar(10)	utf8_general_ci		No	None			Change  Drop  More
3	inv_date	date			No	None			Change  Drop  More
4	inv_client_id	bigint(20)			No	None			Change  Drop  More
5	inv_consultation_fee	decimal(10,2)			No	None			Change  Drop  More

**Indexes**

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit  Drop	PRIMARY	BTREE	Yes	No	inv_id	1025	A	No	

Create an index on 1 columns Go

**Partitions**

No partitioning defined!

**Information**

Space usage		Row statistics	
Data	112 KIB	Format	Compact
Index	0 B	Collation	utf8_general_ci
Total	112 KIB	Next autoindex	1,517
		Creation	Jun 18, 2018 at 06:20 PM

**phpMyAdmin**

Server: localhost » Database: EHA\_Database » Table: invoice\_info

**Structure**

Showing rows 0 - 29 (1516 total, Query took 0.00006 seconds.)

SELECT \* FROM `invoice\_info`

**Rows**

Number of rows: 25 Filter rows: Search this table Sort by key: None

	inv_id	inv_num	inv_date	inv_client_id	inv_consultation_fee
	1	INV0001	2010-01-28	2012190284086	300.00
	2	INV0002	2010-04-07	7309060944088	0.00
	3	INV0003	2010-05-06	9003280235085	0.00
	4	INV0004	2010-07-10	7212170290085	300.00
	5	INV0005	2010-07-19	8807130418086	300.00
	6	INV0006	2010-08-01	4708110702087	300.00
	7	INV0007	2010-08-05	8610120779086	300.00
	8	INV0008	2010-08-13	9003280235085	300.00
	9	INV0009	2010-12-22	4104200140083	0.00
	10	INV0010	2011-01-01	650402056081	320.00
	11	INV0011	2011-01-06	5212190473083	0.00
	12	INV0012	2011-01-11	270308094088	0.00
	13	INV0013	2011-01-11	2011240231088	0.00
	14	INV0014	2011-01-14	2808250506083	320.00
	15	INV0015	2011-01-16	4804180882084	320.00
	16	INV0016	2011-01-17	2008190919082	0.00
	17	INV0017	2011-01-21	8612040918085	0.00
	18	INV0018	2011-01-28	5008230824086	0.00
	19	INV0019	2011-02-05	9202010527088	320.00
	20	INV0020	2011-02-05	1512140600088	320.00
	21	INV0021	2011-02-10	2809270394087	0.00
	22	INV0022	2011-02-19	4003100886084	0.00
	23	INV0023	2011-02-26	6204260308088	0.00
	24	INV0024	2011-03-02	7902150410084	320.00
	25	INV0025	2011-03-04	2007100717086	0.00
	26	INV0026	2011-03-05	740501094086	0.00
	27	INV0027	2011-03-06	630710012087	320.00
	28	INV0028	2011-03-10	9710230788081	320.00
	29	INV0029	2011-03-14	1908150375082	320.00
	30	INV0030	2011-03-17	6607010903082	0.00

## INVOICE SUPPLEMENT TABLE

**phpMyAdmin**

Server: localhost - Database: EHA\_Database - Table: invoice\_supplement

**Table structure** **Relation view**

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	inv_suppl_numID	int(50)			No	None		AUTO_INCREMENT	Primary Unique Index Spatial More
2	inv_suppl_num	int(50)			No	None			Primary Unique Index Spatial More
3	inv_suppl_id	varchar(20)	utf8_general_ci		No	None			Primary Unique Index Spatial More
4	inv_suppl_price	decimal(10,2)			No	None			Primary Unique Index Spatial More
5	inv_suppl_qty	int(10)			No	None			Primary Unique Index Spatial More
6	inv_suppl_price_total	decimal(10,2)			No	None			Primary Unique Index Spatial More
7	inv_total_price_suppl_consultation	decimal(10,2)			No	None			Primary Unique Index Spatial More

**Indexes**

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
	PRIMARY	BTREE	Yes	No	inv_suppl_numID	2231	A	No	
	FK_INV	BTREE	No	No	inv_suppl_num	2231	A	No	

Create an index on 1 columns

**Partitions** No partitioning defined!

**Information**

Space usage	Row statistics
Data 192 KB Index 64 KB Total 256 KB	Format Compact Collation utf8_general_ci Next autoindex 2,456 Creation Jun 16, 2018 at 04:26 PM

**phpMyAdmin**

Server: localhost - Database: EHA\_Database - Table: invoice\_supplement

Showing rows 0 - 29 (2455 total, Query took 0.0000 seconds.)

**Structure**

inv_suppl_numID	inv_suppl_num	inv_suppl_id	inv_suppl_price	inv_suppl_qty	inv_suppl_price_total	inv_total_price_suppl_consultation
1	1	Supplement-65	65.00	3	195.00	495.00
2	1	Supplement-156	80.00	2	160.00	160.00
3	2	Supplement-150	150.00	3	450.00	450.00
4	2	Supplement-147	120.00	5	600.00	600.00
5	3	Supplement-104	320.00	5	1600.00	1600.00
6	3	Supplement-180	115.00	4	460.00	460.00
7	3	Supplement-18	45.00	4	180.00	180.00
8	3	Supplement-39	170.00	5	850.00	850.00
9	3	Supplement-169	170.00	2	340.00	340.00
10	4	Supplement-32	65.00	1	65.00	365.00
11	4	Supplement-146	130.00	3	390.00	390.00
12	5	Supplement-70	135.00	2	270.00	570.00
13	5	Supplement-42	300.00	1	300.00	300.00
14	6	Supplement-24	110.00	4	440.00	740.00
15	6	Supplement-243	100.00	1	100.00	100.00
16	7	Supplement-187	90.00	2	180.00	480.00
17	7	Supplement-224	170.00	4	680.00	680.00
18	7	Supplement-241	100.00	2	200.00	200.00
19	7	Supplement-125	80.00	2	160.00	160.00
20	8	Supplement-14	150.00	3	450.00	750.00
21	8	Supplement-245	205.20	4	820.80	820.80
22	8	Supplement-22	60.00	2	120.00	120.00
23	9	Supplement-181	121.13	5	605.63	605.63
24	9	Supplement-77	150.00	2	300.00	300.00
25	10	Supplement-197	236.60	4	946.40	1266.40
26	10	Supplement-28	181.18	3	543.54	543.54
27	11	Supplement-172	100.42	5	502.10	502.10
28	12	Supplement-132	221.34	3	664.02	664.02
29	12	Supplement-227	216.08	4	864.32	864.32
30	12	Supplement-177	110.68	1	110.68	110.68

**SUPPLIER INFO TABLE**

**phpMyAdmin**

Server: localhost » Database: EHA\_Database » Table: supplier\_info

**Table structure** **Relation view**

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	supplier_id	int(50)	utf8_general_ci		No	None			Change
2	supplier_code	text	utf8_general_ci		No	None			Change
3	supplier_contact_person	text	utf8_general_ci		No	None			Change
4	supplier_tel	varchar(50)	utf8_general_ci		No	None			Change
5	supplier_cell	varchar(50)	utf8_general_ci		No	None			Change
6	supplier_fax	varchar(50)	utf8_general_ci		No	None			Change
7	supplier_email	varchar(255)	utf8_general_ci		No	None			Change
8	supplier_bank	text	utf8_general_ci		No	None			Change
9	supplier_branch_code	int(50)			No	None			Change
10	supplier_account_number	int(50)			No	None			Change
11	supplier_account_type	text	utf8_general_ci		No	None			Change
12	supplier_comments	text	utf8_general_ci		No	None			Change

**Add** 1 column(s) after supplier\_comments **Go**

**Indexes**

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit  Drop	PRIMARY	BTREE	Yes	No	supplier_id	7	A	No	

**Browse** **Structure** **SQL** **Search** **Insert** **Export** **Import** **Privileges** **Operations** **Triggers**

**Print** **Propose table structure** **Move columns** **Improve table structure**

Show all | Number of rows: 25 Filter rows: Search this table Sort by key: (None)

**Supplier Info Data**

supplier_id	supplier_code	supplier_contact_person	supplier_tel	supplier_cell	supplier_fax	supplier_email	supplier_bank	supplier_branch_code	supplier_account_number	supplier_account_type	supplier_comments
1	SUPPLIER A	John Adams	(011)-863-(0056)	(011)-863-(0051)		johnadams@supplera.co.za	Standard Bank	11813	1887092	Cheque	
2	SUPPLIER B	Mary Nkosi	(011)-894-(9020)	(011)-894-(9020)		mary@webmail.com	Standard Bank	23460	420315985	Cheque	
3	SUPPLIER C	Ben	(012)-(456)-(2345)	(012)-(456)-(2345)			Capitec	470010	2147483647	Cheque	
4	SUPPLIER D	Freddy Nell	(012)-(456)-(1234)	(012)-(456)-(1234)				0	0		
5	SUPPLIER E	Linda	(011)-(543)-(1136)	(011)-(543)-(1136)			ABSA	0	2147483647	Cheque	
6	SUPPLIER F	John or Gert	(012)-(766)-(3333)	(012)-(766)-(3333)		johnmoran@mweb.co.za	ABSA	0	2147483647	Cheque	

**USER\_INVOICE\_INFO TABLE**

**phpMyAdmin**

Server: localhost » Database: EHA\_Database » Table: user\_invoice\_info

**Table structure** **Relation view**

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	user_user-id	int(11)			No	None			Change  Drop  Primary  Unique  More
2	invoice_info_inv_id	int(50)			No	None			Change  Drop  Primary  Unique  More

**Add** 1 column(s) after invoice\_info\_inv\_id **Go**

**Indexes**

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit  Drop	PRIMARY	BTREE	Yes	No	user_user-id	0	A	No	
Edit  Drop	fk_user_has_invoice_info_invoice_info1_idx	BTREE	No	No	invoice_info_inv_id	0	A	No	
Edit  Drop	fk_user_has_invoice_info_user1_idx	BTREE	No	No	user_user-id	0	A	No	

Create an index on 1 columns Go

**Partitions**

No partitioning defined!

## USER TABLE

**phpMyAdmin**

Server: localhost | Database: EHA\_Database | Table: user

Browse Structure SQL Search Insert Export Import Privileges Operations Triggers

Table structure Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	user_id	int(11)	utf8_general_ci		No	None		AUTO_INCREMENT	
2	user_fname	varchar(255)	utf8_general_ci		No	None			
3	user_lname	varchar(255)	utf8_general_ci		No	None			
4	user_email	varchar(255)	utf8_general_ci		No	None			
5	user_group_id	int(11)			No	None			

Check all With selected: Browse Change Drop Primary Unique Index

Print Propose table structure Move columns Improve table structure

Add 1 column(s) after user\_group\_id Go

Indexes

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
	PRIMARY	BTREE	Yes	No	user_id	4	A	No	
	FK_USER_GROUP_idx	BTREE	No	No	user_group_id	4	A	No	

Create an index on 1 columns Go

**phpMyAdmin**

Server: localhost | Database: EHA\_Database | Table: user

Browse Structure SQL Search Insert Export Import Privileges Operations Triggers

Showing rows 0 - 3 (4 total, Query took 0.0007 seconds.)

SELECT \* FROM `user`

Show all Number of rows: 25 Filter rows: Search this table Sort by key: None

+ Options

				user_id	user_fname	user_lname	user_email	user_group_id
<input type="checkbox"/>				1	sean	liebenberg	seansound@gmail.com	1
<input type="checkbox"/>				2	karen	liebenberg	seansound@gmail.com	2
<input type="checkbox"/>				3	john	stevens	john@test.com	3
<input type="checkbox"/>				5	piet	pompies	piet@me.com	3

Check all With selected: Edit Copy Delete Export

Show all Number of rows: 25 Filter rows: Search this table Sort by key: None

Query results operations

Print Copy to clipboard Export Display chart Create view

## SUPPLEMENT TABLE

**phpMyAdmin**

Server: localhost | Database: EHA\_Database | Table: supplement

[Browse](#) [Structure](#) [SQL](#) [Search](#) [Insert](#) [Export](#) [Import](#) [Privileges](#) [Operations](#) [Triggers](#)

[Table structure](#) [Relation view](#)

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	suppl_num	int(50)			No	None		AUTO_INCREMENT	<a href="#">Change</a> <a href="#">Drop</a> <a href="#">More</a>
2	suppl_id	varchar(20)	utf8_general_ci		Yes	NULL			<a href="#">Change</a> <a href="#">Drop</a> <a href="#">More</a>
3	supl_description	text	utf8_general_ci		Yes	NULL			<a href="#">Change</a> <a href="#">Drop</a> <a href="#">More</a>
4	supl_cost_excl	decimal(10,2)				NULL	Unicode, case-insensitive		<a href="#">Change</a> <a href="#">Drop</a> <a href="#">More</a>
5	supl_cost_incl	decimal(10,2)			Yes	NULL			<a href="#">Change</a> <a href="#">Drop</a> <a href="#">More</a>
6	supl_perc_inc	decimal(10,2)			No	None			<a href="#">Change</a> <a href="#">Drop</a> <a href="#">More</a>
7	supl_cost_client	decimal(10,2)			Yes	NULL			<a href="#">Change</a> <a href="#">Drop</a> <a href="#">More</a>
8	supl_min_levels	int(11)			No	None			<a href="#">Change</a> <a href="#">Drop</a> <a href="#">More</a>
9	supl_stock_levels	int(50)			No	None			<a href="#">Change</a> <a href="#">Drop</a> <a href="#">More</a>
10	supl_nappi_code	varchar(50)	utf8_general_ci		Yes	NULL			<a href="#">Change</a> <a href="#">Drop</a> <a href="#">More</a>
11	supplier_id	int(50)			No	None			<a href="#">Change</a> <a href="#">Drop</a> <a href="#">More</a>
12	supplier_info_supplier_id	int(50)			No	None			<a href="#">Change</a> <a href="#">Drop</a> <a href="#">More</a>

[Check all](#) [With selected:](#) [Browse](#) [Change](#) [Drop](#) [Primary](#) [Unique](#) [Index](#)

[Print](#) [Propose table structure](#) [Move columns](#) [Improve table structure](#)

[Add](#) [1](#) column(s) after supplier\_info\_supplier\_id [Go](#)

**Indexes**

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
<a href="#">Edit</a> <a href="#">Drop</a>	PRIMARY	BTREE	Yes	No	suppl_num	299	A	No	
<a href="#">Edit</a> <a href="#">Drop</a>	fk_supplement_supplier_info1_idx	BTREE	No	No	supplier_info_supplier_id	2	A	No	

**phpMyAdmin**

Server: localhost | Database: EHA\_Database | Table: supplement

[Browse](#) [Structure](#) [Search](#) [Insert](#) [Export](#) [Import](#) [Privileges](#) [Operations](#) [Triggers](#)

[Showing rows 0 - 29 \(245 total, Query took 0.00007 seconds.\)](#)

[SELECT \\* FROM "supplement"](#)

[Profiling](#) [Edit inline](#) [Edit](#) [Explain SQL](#) [Create PHP code](#) [Ref](#)

	suppl_num	suppl_id	supl_description	supl_cost_excl	supl_cost_incl	supl_perc_inc	supl_cost_client	supl_min_levels	supl_stock_levels	supl_nappi_code	supplier_id	supplier_info_supplier_id
1	1	Supplement-1	00	315.00	356.00	30.00	suppl_excl	10	20		1	0
2	2	Supplement-2	60	215.00	245.10	40.00	285.10	1	41		2	0
3	3	Supplement-3	60	216.81	247.16	35.00	282.16	1	22		3	0
4	4	Supplement-4	60	222.00	253.08	15.00	268.08	10	13		2	0
5	5	Supplement-5	60	201.00	229.14	40.00	269.14	8	1		2	0
6	6	Supplement-6	60	259.00	295.26	20.00	315.26	5	36		1	0
7	7	Supplement-7	60	221.00	251.94	35.00	286.94	1	34		3	0
8	8	Supplement-8	60	171.00	194.94	40.00	234.94	1	27		2	0
9	9	Supplement-9	90	326.00	371.64	15.00	386.64	8	33		1	0
10	10	Supplement-10	180g powder	195.88	223.28	60.00	283.28	4	2		3	0
11	11	Supplement-11	147.85	168.55	60.00	228.55	7	49		3	0	
12	12	Supplement-12	128.00	160.00	26.00	298.68	1	13		0	0	
13	13	Supplement-13	130.00	155.04	15.00	170.00	8	44		0	0	
14	14	Supplement-14	113g	278.13	317.07	25.00	342.07	6	37		0	0
15	15	Supplement-15	330.00	376.20	15.00	391.20	7	37		0	0	
16	16	Supplement-16	245.00	279.30	15.00	294.30	5	25		0	0	
17	17	Supplement-17	118ml	230.33	262.58	25.00	287.58	8	36		0	0
18	18	Supplement-18	30	153.00	174.42	40.00	214.42	3	38		2	0
19	19	Supplement-19	750ml	107.00	121.98	40.00	161.98	4	40		2	0
20	20	Supplement-20	60	173.00	197.22	40.00	237.22	4	18		2	0
21	21	Supplement-21	30 one month supply	263.00	299.82	30.00	329.82	6	17		1	0
22	22	Supplement-22	60	163.00	185.82	40.00	225.82	6	36		2	0
23	23	Supplement-23	240	500.00	570.00	40.00	610.00	9	29		2	0
24	24	Supplement-24	30	202.31	230.63	60.00	290.63	1	10		3	0
25	25	Supplement-25	90	275.00	313.50	40.00	353.50	7	35		2	0
26	26	Supplement-26	120	248.00	282.72	25.00	307.72	6	17		1	0
27	27	Supplement-27	200	208.00	233.70	30.00	263.70	3	8		1	0
28	28	Supplement-28	60	263.00	299.82	30.00	329.82	8	29		4	0
29	29	Supplement-29	60	210.00	239.40	25.00	264.40	9	33		2	0
30	30	Supplement-30	40g	298.00	339.72	20.00	359.72	7	28		1	0

[Check all](#) [With selected:](#) [Edit](#) [Copy](#) [Delete](#) [Export](#)

**SUPPLEMENT\_INVOICE TABLE**

**Table structure** **Relation view**

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	supplement_suppl_num	int(50)			No	None			Primary
2	invoice_supplement_inv_suppl_num	int(50)			No	None			Primary

**Indexes**

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
	fk_supplement_has_invoice_supplement_invoice_supplement1_idx	BTREE	No	No	invoice_supplement_inv_suppl_num	0	A	No	
	fk_supplement_has_invoice_supplement_supplement1_idx	BTREE	No	No	supplement_suppl_num	0	A	No	

Create an index on 1 columns Go

**Partitions**

No partitioning defined!

**APPOINTMENT\_INVOICE TABLE**

**Table structure** **Relation view**

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	appointment_app_id	int(11)			No	None			Primary
2	invoice_info_inv_id	int(50)			No	None			Primary

**Indexes**

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
	PRIMARY	BTREE	Yes	No	appointment_app_id	0	A	No	
	fk_appointment_has_invoice_info_invoice_info1_idx	BTREE	No	No	invoice_info_inv_id	0	A	No	
	fk_appointment_has_invoice_info_appointment1_idx	BTREE	No	No	appointment_app_id	0	A	No	

Create an index on 1 columns Go

**Partitions**

**USER\_GROUP TABLE**

**Table structure** **Relation view**

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	user_group_id	int(11)			No	None		AUTO_INCREMENT	
2	user_group_desc	varchar(255)	utf8_general_ci		No	None			

**Indexes**

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
	PRIMARY	BTREE	Yes	No	user_group_id	0	A	No	

Create an index on 1 columns Go

**Partitions**

No partitioning defined!

## Assignment 5

### MIS Reporting

#### Query writing

##### Names of Patients to be seen today

```
SELECT client_data.client_name, client_data.client_surname, appointment.app_time
FROM client_data
INNER JOIN appointment
ON client_data.client_id = appointment.client_data_client_id
WHERE appointment.app_date = CURRENT_DATE
ORDER BY appointment.app_time ASC;
```

(?) Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Showing rows 0 - 2 (3 total, Query took 0.00006 seconds.) [app\_time: 07:00:00... ~ 09:00:00...]

```
SELECT client_data.client_name, client_data.client_surname, appointment.app_time FROM client_data INNER JOIN appointment ON client_data.client_id = appointment.client_data_client_id WHERE appointment.app_date = CURRENT_DATE ORDER BY appointment.app_time ASC
```

Profiling [Edit inline] [ Edit ] [ Explain SQL ] [ Create ]

<input type="checkbox"/> Show all	Number of rows:	25	Filter rows:	Search this table	Sort by key:	None												
+ Options <table border="1"> <thead> <tr> <th>client_name</th> <th>client_surname</th> <th>app_time</th> </tr> </thead> <tbody> <tr> <td>Brandon</td> <td>Van Rooyen</td> <td>07:00:00</td> </tr> <tr> <td>Bernard</td> <td>Dinna</td> <td>08:00:00</td> </tr> <tr> <td>Amukelani</td> <td>Naick</td> <td>09:00:00</td> </tr> </tbody> </table>							client_name	client_surname	app_time	Brandon	Van Rooyen	07:00:00	Bernard	Dinna	08:00:00	Amukelani	Naick	09:00:00
client_name	client_surname	app_time																
Brandon	Van Rooyen	07:00:00																
Bernard	Dinna	08:00:00																
Amukelani	Naick	09:00:00																

##### The upcoming birthdays for the patients this month

```
SELECT `client_id`, `client_name`, `client_surname` FROM client_data WHERE SUBSTRING(`client_id`, 3,2) = SUBSTRING(CURRENT_DATE,6,2);
```

phpMyAdmin

Server: localhost » Database: EHA\_Database » Table: client\_data

Show query box

Showing rows 0 - 29 (37 total, Query took 0.0048 seconds.)

```
SELECT `client_id`, `client_name`, `client_surname` FROM client_data WHERE SUBSTRING(`client_id`,3,2) = SUBSTRING(CURRENT_DATE,6,2)
```

Profiling [Edit inline] [ Edit ] [ Explain SQL ] [ Create ]

<input type="checkbox"/> Show all	Number of rows:	25	Filter rows:	Search this table	Sort by key:	None																																										
+ Options <table border="1"> <thead> <tr> <th>client_id</th> <th>client_name</th> <th>client_surname</th> </tr> </thead> <tbody> <tr> <td>47072706087</td> <td>Chippa</td> <td>Shange</td> </tr> <tr> <td>490705046088</td> <td>Ayanda</td> <td>Mlawuli</td> </tr> <tr> <td>630710012087</td> <td>Francois</td> <td>Mosehane</td> </tr> <tr> <td>1007230144085</td> <td>Mduduzi</td> <td>Mugerri</td> </tr> <tr> <td>1107230618084</td> <td>Timothy</td> <td>Mugagadeli</td> </tr> <tr> <td>1307090536085</td> <td>Matome</td> <td>Khomola</td> </tr> <tr> <td>1807070505082</td> <td>Livhuwani</td> <td>Ndlovu</td> </tr> <tr> <td>2007100717086</td> <td>Warren</td> <td>Piroe</td> </tr> <tr> <td>2207010632083</td> <td>Nyakallo</td> <td>Kupke</td> </tr> <tr> <td>2707050803087</td> <td>Marc</td> <td>Baloyi</td> </tr> <tr> <td>2707140905083</td> <td>Nokukhanya</td> <td>Ndou</td> </tr> <tr> <td>2807090965085</td> <td>Michiel</td> <td>Mathabatha</td> </tr> <tr> <td>2907080814082</td> <td>Tumelelo</td> <td>Molepo</td> </tr> </tbody> </table>							client_id	client_name	client_surname	47072706087	Chippa	Shange	490705046088	Ayanda	Mlawuli	630710012087	Francois	Mosehane	1007230144085	Mduduzi	Mugerri	1107230618084	Timothy	Mugagadeli	1307090536085	Matome	Khomola	1807070505082	Livhuwani	Ndlovu	2007100717086	Warren	Piroe	2207010632083	Nyakallo	Kupke	2707050803087	Marc	Baloyi	2707140905083	Nokukhanya	Ndou	2807090965085	Michiel	Mathabatha	2907080814082	Tumelelo	Molepo
client_id	client_name	client_surname																																														
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2807090965085	Michiel	Mathabatha																																														
2907080814082	Tumelelo	Molepo																																														

**Low Stock Levels:**

```
SELECT `suppl_num`, `suppl_id`, `supl_description`, `supl_min_levels`, `supl_stock_levels`
FROM `supplement` WHERE `supl_stock_levels` <= `supl_min_levels`;
```

Showing rows 0 - 29 (33 total, Query took 0.0015 seconds.)

SELECT `suppl\_num`, `suppl\_id`, `supl\_description`, `supl\_min\_levels`, `supl\_stock\_levels` FROM `supplement` WHERE `supl\_stock\_levels` <= `supl\_min\_levels`

Profiling [Edit inline] [ Edit ] [ Explain SQL ] [ Create PHP code ]

1 > >> |  Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None

+ Options

		suppl_num	suppl_id	supl_description	supl_min_levels	supl_stock_levels
<input type="checkbox"/>		5	Supplement-5	60	8	1
<input type="checkbox"/>		10	Supplement-10	180g powder	4	2
<input type="checkbox"/>		34	Supplement-34	60	6	3
<input type="checkbox"/>		35	Supplement-35	60	10	4
<input type="checkbox"/>		37	Supplement-37	60	8	2
<input type="checkbox"/>		40	Supplement-40	90	10	5
<input type="checkbox"/>		43	Supplement-43	60	5	5
<input type="checkbox"/>		45	Supplement-45	90	9	2
<input type="checkbox"/>		46	Supplement-46	60	10	3
<input type="checkbox"/>		66	Supplement-66	Powder	2	1
<input type="checkbox"/>		71	Supplement-71	60	5	3
<input type="checkbox"/>		82	Supplement-82	60	10	7
<input type="checkbox"/>		84	Supplement-84	30	6	6
<input type="checkbox"/>		91	Supplement-91		6	3
<input type="checkbox"/>		96	Supplement-96	300mg	10	6

**Number of patients that were seen for the last year:**

```
SELECT COUNT(client_data.client_name) AS "patients_total"
FROM client_data
INNER JOIN appointment
ON client_data.client_id=appointment.client_data_client_id
WHERE appointment.app_date BETWEEN DATE_SUB(CURRENT_DATE, INTERVAL 1 YEAR) AND CURRENT_DATE;
```

Browse Structure SQL Search Insert Export Import Privileges Operations Triggers

Show query box

Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Your SQL query has been executed successfully.

SELECT COUNT(client\_data.client\_name) AS "patients\_total" FROM client\_data INNER JOIN appointment ON client\_data.client\_id=appointment.client\_data\_client\_id WHERE appointment.app\_date BETWEEN DATE\_SUB(CURRENT\_DATE, INTERVAL 1 YEAR) AND CURRENT\_DATE

Profiling [Edit inline] [ Edit ] [ Explain SQL ] [ Create PHP code ]

+ Options

patients_total	3
----------------	---

**Number of patients seen in last month**

```
SELECT COUNT(client_data.client_name) AS "patients_total"
FROM client_data
INNER JOIN appointment
ON client_data.client_id=appointment.client_data_client_id
WHERE appointment.app_date BETWEEN DATE_SUB(CURRENT_DATE, INTERVAL 1 MONTH) AND
CURRENT_DATE;
```

Show query box

Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Your SQL query has been executed successfully.

```
SELECT COUNT(client_data.client_name) AS "patients_total" FROM client_data INNER JOIN appointment ON client_data.client_id=appointment.client_data_client_id WHERE appointment.app_date BETWEEN DATE_SUB(CURRENT_DATE, INTERVAL 1 MONTH) AND CURRENT_DATE
```

Profiling [Edit inline] [ Edit ] [ Explain SQL ] [ Create PHP code ]

+ Options

patients_total
3

**Supplements sold during the last year:**

```
SELECT `inv_suppl_id` AS "supplement", SUM(`inv_suppl_qty`) AS "qty_sold"
FROM invoice_supplement
INNER JOIN invoice_info
ON invoice_supplement.inv_suppl_num = invoice_info.inv_id
WHERE invoice_info.inv_date BETWEEN DATE_SUB(CURRENT_DATE, INTERVAL 1 YEAR) AND
CURRENT_DATE
GROUP BY `inv_suppl_id` ORDER BY qty_sold DESC;
```

Showing rows 0 - 6 (7 total, Query took 0.0033 seconds.)

```
SELECT `inv_suppl_id` AS "supplement", SUM(`inv_suppl_qty`) AS "qty_sold" FROM invoice_supplement INNER JOIN invoice_info ON invoice_supplement.inv_suppl_num = invoice_info.inv_id WHERE invoice_info.inv_date BETWEEN DATE_SUB(CURRENT_DATE, INTERVAL 1 YEAR) AND CURRENT_DATE GROUP BY `inv_suppl_id` ORDER BY qty_sold DESC
```

Profiling [Edit inline] [ Edit ] [ Explain SQL ] [ Create PHP code ]

Show all | Number of rows: 25  Filter rows: Search this table

+ Options

supplement	qty_sold
Supplement-85	5
Supplement-99	5
Supplement-236	4
Supplement-67	3
Supplement-121	3
Supplement-124	2
Supplement-179	1

**Supplements sold during the last month:**

```
SELECT `inv_suppl_id` AS "supplement", SUM(`inv_suppl_qty`) AS "qty_sold"
FROM invoice_supplement
INNER JOIN invoice_info
ON invoice_supplement.inv_suppl_num = invoice_info.inv_id
WHERE invoice_info.inv_date BETWEEN DATE_SUB(CURRENT_DATE, INTERVAL 1 MONTH) AND
CURRENT_DATE
GROUP BY `inv_suppl_id` ORDER BY qty_sold DESC;
```

phpMyAdmin

Server: localhost • Database: EHA\_Database • Table: invoice\_supplement

Browse Structure SQL Search Insert Export Import Privileges Operations Triggers

Show query box

Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Showing rows 0 - 0 (1 total, Query took 0.0066 seconds.)

```
SELECT `inv_suppl_id` AS "supplement", SUM(`inv_suppl_qty`) AS "qty_sold" FROM invoice_supplement INNER JOIN invoice_info ON invoice_supplement.inv_suppl_num = invoice_info.inv_id WHERE invoice_info.inv_date BETWEEN DATE_SUB(CURRENT_DATE, INTERVAL 1 MONTH) AND CURRENT_DATE GROUP BY `inv_suppl_id` ORDER BY qty_sold DESC
```

Show all | Number of rows: 25 Filter rows: Search this table

+ Options supplement qty\_sold

Supplement-39	5
---------------	---

Show all | Number of rows: 25 Filter rows: Search this table

Query results operations

Print Copy to clipboard Export Display chart Create view

**Top 10 supplements sold during the last year:**

```
SELECT `inv_suppl_id` AS "supplement", SUM(`inv_suppl_qty`) AS "qty_sold"
FROM invoice_supplement
INNER JOIN invoice_info
ON invoice_supplement.inv_suppl_num = invoice_info.inv_id
WHERE invoice_info.inv_date BETWEEN DATE_SUB(CURRENT_DATE, INTERVAL 1 YEAR) AND
CURRENT_DATE
GROUP BY `inv_suppl_id` ORDER BY qty_sold DESC limit 10;
```

Showing rows 0 - 6 (7 total, Query took 0.0019 seconds.)

```
SELECT `inv_suppl_id` AS "supplement", SUM(`inv_suppl_qty`) AS "qty_sold" FROM invoice_supplement INNER JOIN invoice_info ON invoice_supplement.inv_suppl_num = invoice_info.inv_id WHERE invoice_info.inv_date BETWEEN DATE_SUB(CURRENT_DATE, INTERVAL 1 YEAR) AND CURRENT_DATE GROUP BY `inv_suppl_id` ORDER BY qty_sold DESC limit 10
```

Profiling [Edit inline] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

+ Options

supplement	qty_sold
Supplement-85	5
Supplement-99	5
Supplement-236	4
Supplement-67	3
Supplement-121	3
Supplement-124	2
Supplement-179	1

**Top 10 supplements sold during the last month:**

```
SELECT `inv_suppl_id` AS "supplement", SUM(`inv_suppl_qty`) AS "qty_sold"
FROM invoice_supplement
INNER JOIN invoice_info
ON invoice_supplement.inv_suppl_num = invoice_info.inv_id
WHERE invoice_info.inv_date BETWEEN DATE_SUB(CURRENT_DATE, INTERVAL 1 MONTH) AND
CURRENT_DATE
GROUP BY `inv_suppl_id` ORDER BY qty_sold DESC limit 10;
```

The screenshot shows the phpMyAdmin interface. The left sidebar displays the database schema with the 'invoice\_supplement' table selected. The main area shows the results of the executed SQL query:

```
SELECT `inv_suppl_id` AS "supplement", SUM(`inv_suppl_qty`) AS "qty_sold" FROM invoice_supplement INNER JOIN invoice_info ON invoice_supplement.inv_suppl_num = invoice_info.inv_id WHERE invoice_info.inv_date BETWEEN DATE_SUB(CURRENT_DATE, INTERVAL 1 MONTH) AND CURRENT_DATE GROUP BY `inv_suppl_id` ORDER BY qty_sold DESC limit 10
```

The results table shows one row:

supplement	qty_sold
Supplement-39	5

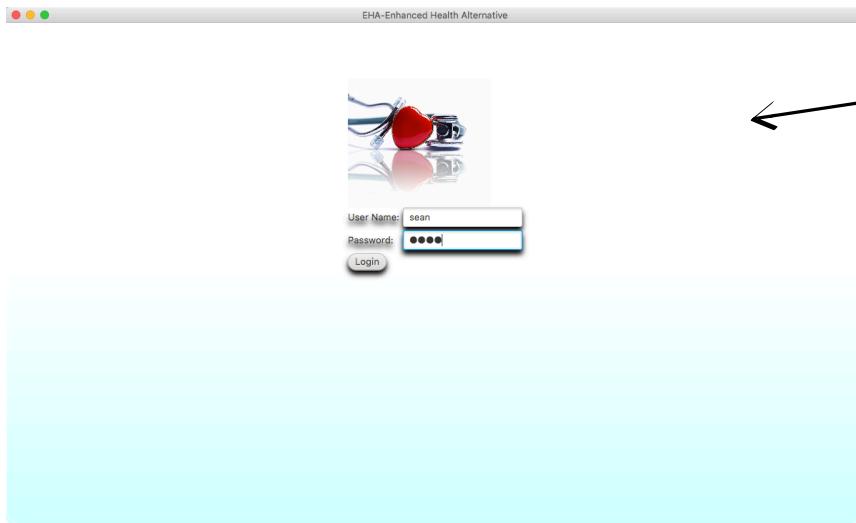
Below the results, there are options for 'Query results operations' including Print, Copy to clipboard, Export, Display chart, and Create view.

## Assignment 6

### Analysis and Design Documentation

#### Screenshots

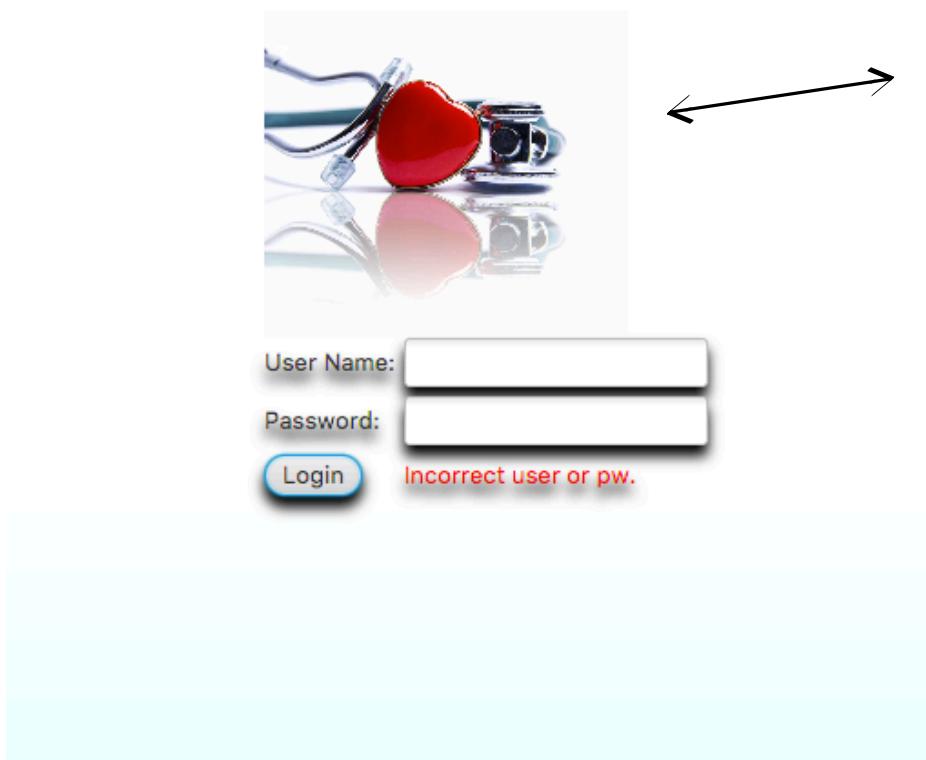
##### Login Screen:



##### **Login Screen**

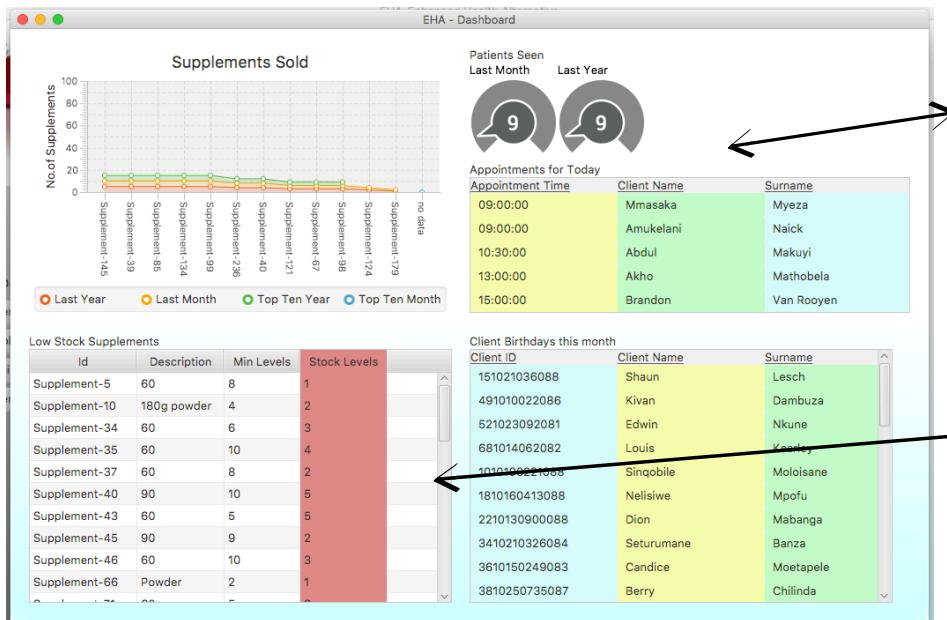
This is the entry to the system for all users. Open design with a “less is more” approach.

##### Login Screen Validation:



##### **Login Screen Validation**

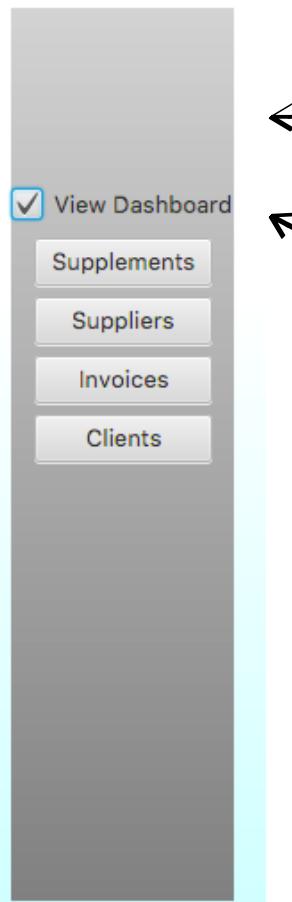
This is a small system , meant for in-house use. Therefore an administrator has to grant a username and password to the user. (This Stock System is meant for administration use only and is not open to the public.)

Dashboard:**Dashboard Screen**

If HCP logs in, the dashboard displays immediately in a separate screen, the user can keep this screen displayed at all times, move it around, or close/bring it back at any time using a checkbox.

Toolips installed on all screens to help the user.

HCP can interact with dashboard, a scrollbar allows to view more info in a small space. Double-Clicking on a supplement opens the supplement dialog.

SideMenu**SideMenu**

Used for Navigation throughout the system. A user clicks one of these buttons to navigate to the specified component.

**View Dashboard checkbox**

HCP can click dashboard checkbox to view / close the dashboard at any time.

Main Landing page, with Supplement View & TopMenu

**Top Menu Navigation**  
User clicks here to logout, view help or options.

**Supplement View component**  
Once a supplier is selected, user can view or Edit or delete the selected supplement.

**Supplement List component**  
Once a supplier is selected, user can click on the button at the bottom to view or Edit the selected supplier. Or create new / or even delete Supplier .

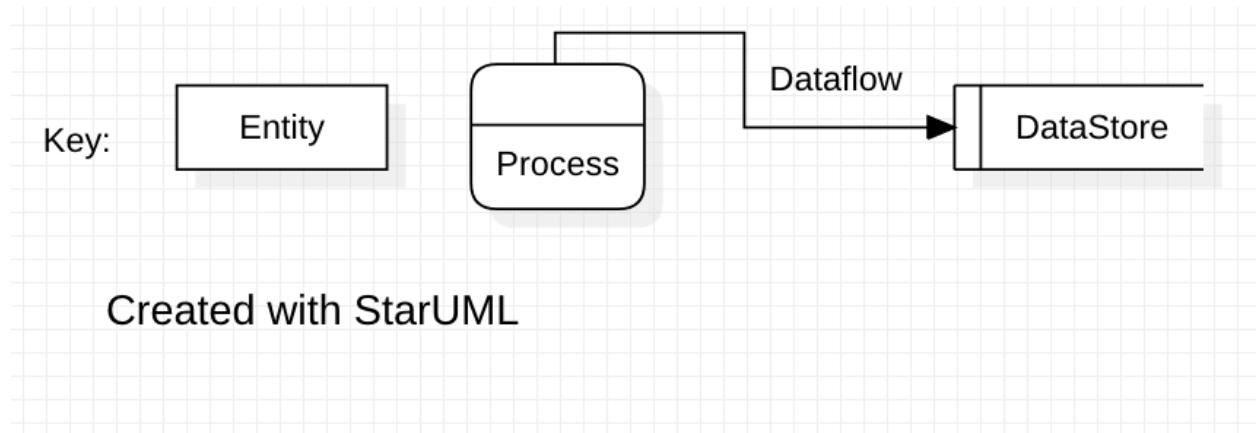
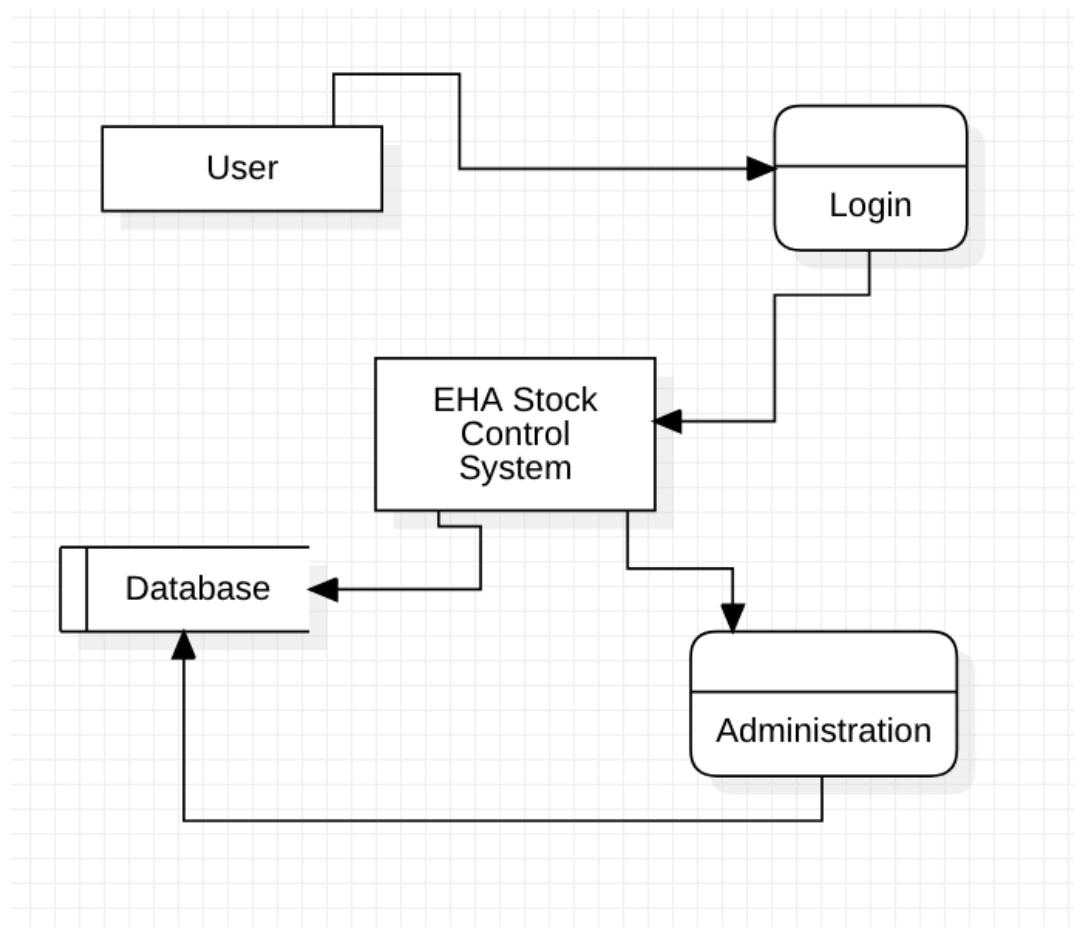
Number	Id	Description	Cost Excl	Cost Incl	Perc Incl	Cost to Client
1	Supplement-1	90	313.0	356.82	30.0	386.82
2	Supplement-2	60	215.0	245.1	40.0	285.1
3	Supplement-3	60	216.81	247.16	35.0	282.16
4	Supplement-4	60	222.0	253.08	15.0	268.08
5	Supplement-5	60	201.0	229.14	40.0	269.14
6	Supplement-6	60	259.0	295.26	20.0	315.26
7	Supplement-7	60	221.0	251.94	35.0	286.94
8	Supplement-8	60	171.0	194.94	40.0	234.94
9	Supplement-9	90	326.0	371.64	15.0	386.64
10	Supplement-10	180g powder	195.86	223.28	60.0	283.28
11	Supplement-11					
12	Supplement-12					
13	Supplement-13					
14	Supplement-14	113g	278.13	317.07	25.0	342.07

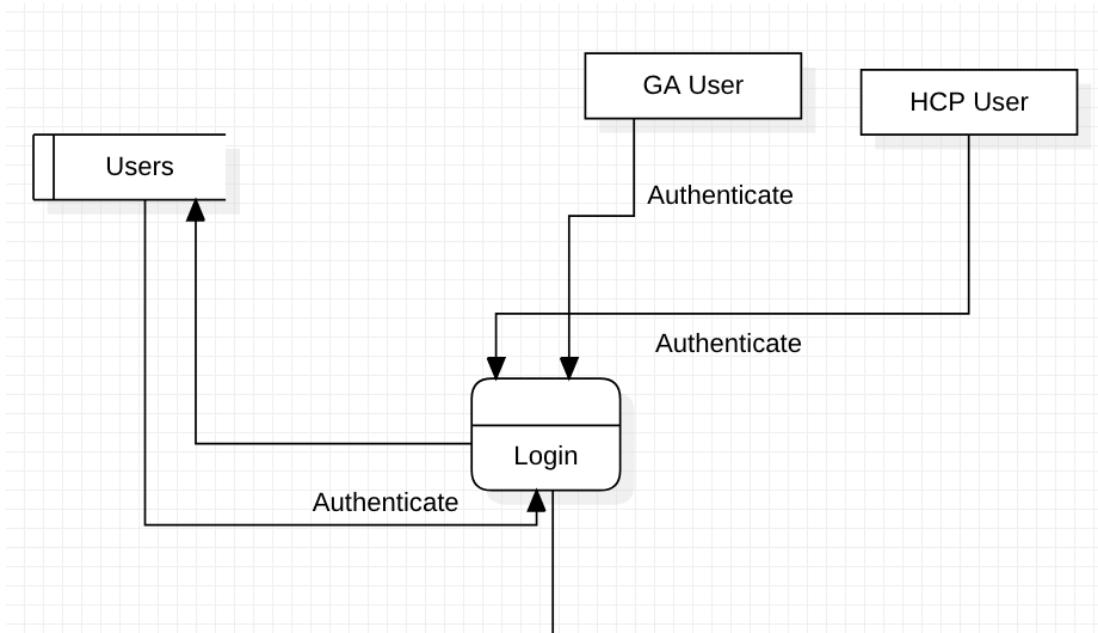
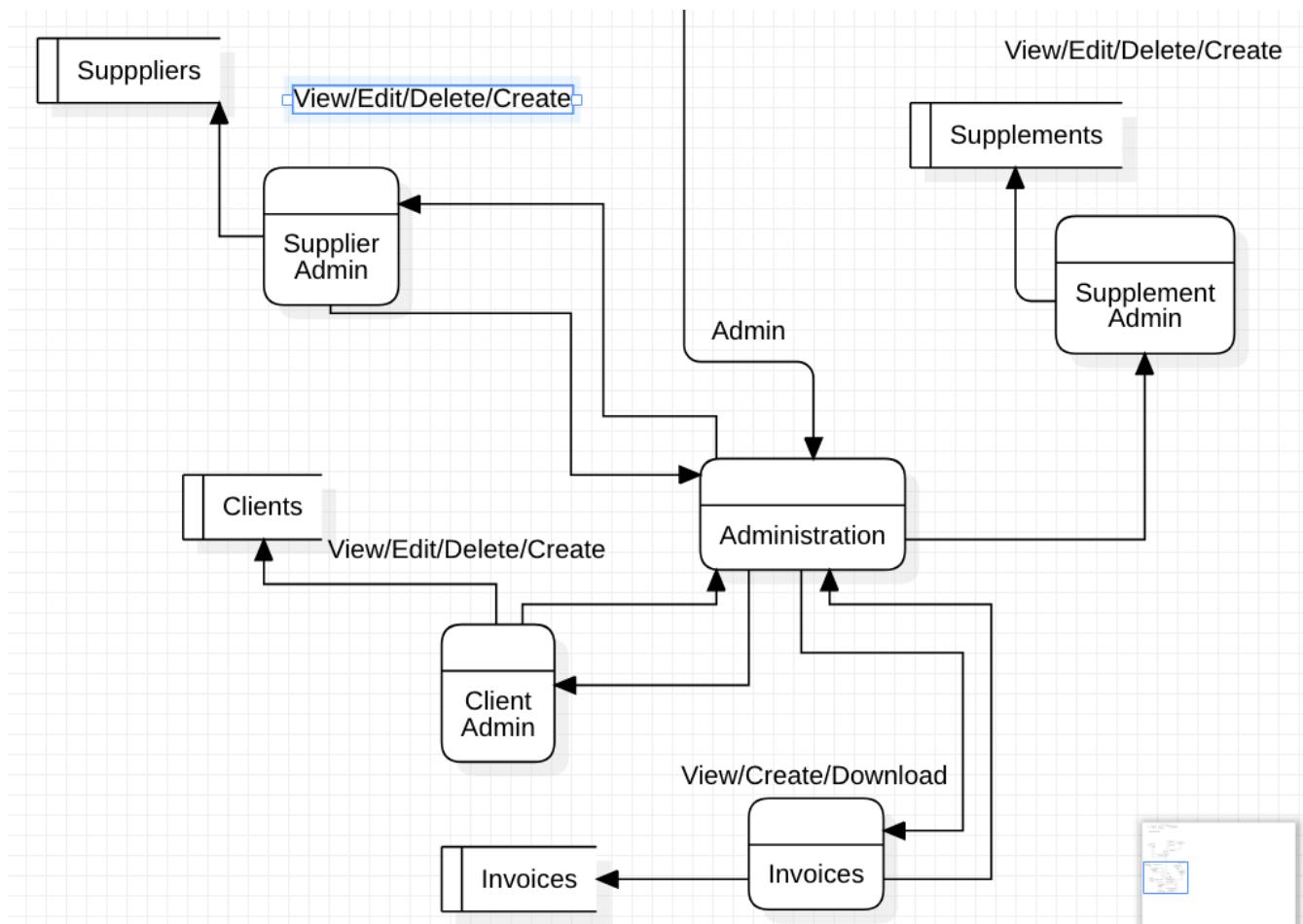
**System Clock**  
Current System Time and Date

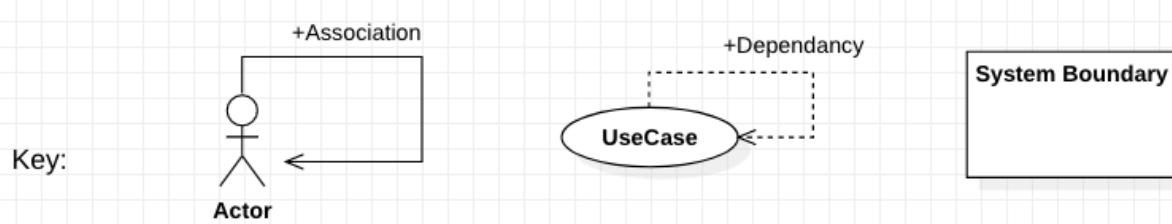
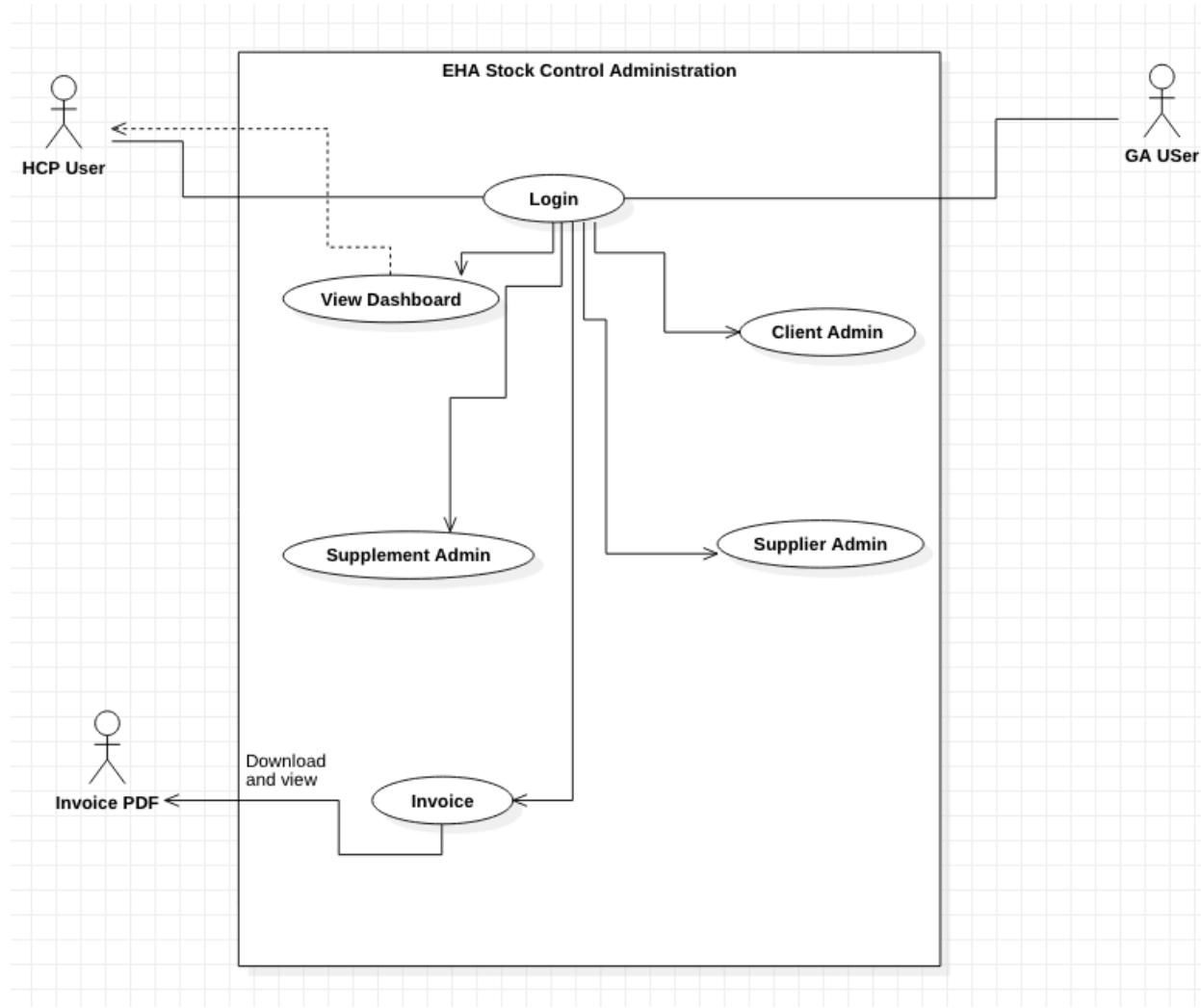
**Logout Dialog**  
User clicks account menu to logout

**Supplement List page**  
All current supplements are displayed in the main landing page. A user can select one and then navigate to view / edit / delete supplements.

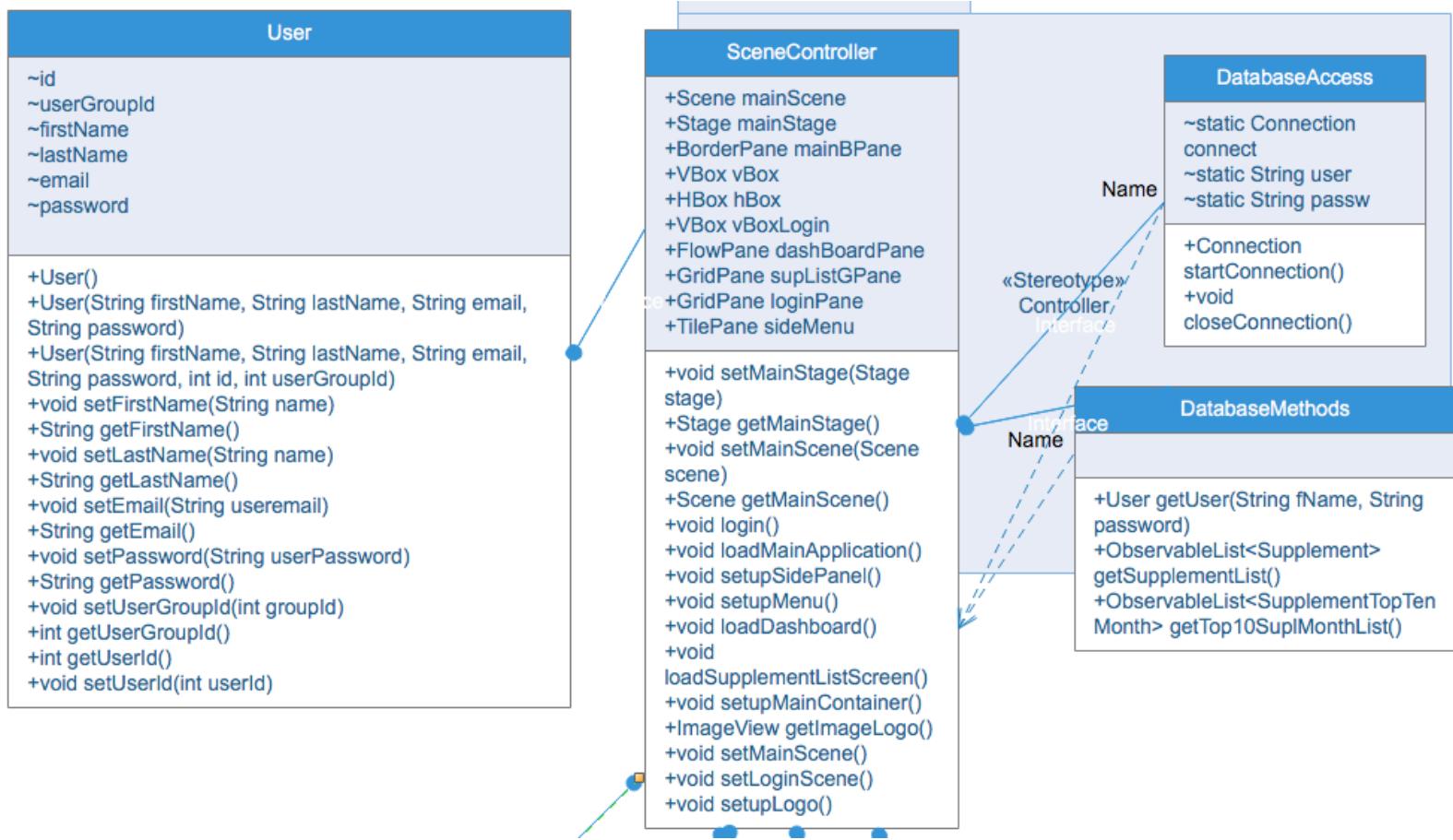
Number	Id	Description	Cost Excl	Cost Incl	Perc Incl	Cost to Client
1	Supplement-1	90	313.0	356.82	30.0	386.82
2	Supplement-2	60	215.0	245.1	40.0	285.1
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5	Supplement-5	60	201.0	229.14	40.0	269.14
6	Supplement-6	60	259.0	295.26	20.0	315.26
7	Supplement-7	60	221.0	251.94	35.0	286.94
8	Supplement-8	60	171.0	194.94	40.0	234.94
9	Supplement-9	90	326.0	371.64	15.0	386.64
10	Supplement-10	180g powder	195.86	223.28	60.0	283.28

**Dataflow diagrams**Context DFD of EHA Stock Control System

Level 1 DFD - Login ProcessLevel 2 DFD - Administration View

**UML's diagrams**UML Use Case Diagram:

Created with StarUML

User Class and Package - Controller:

Package - Supplier, Client Invoice and Dashboard:

Supplier	Client	Dashboard
<pre> ~IntegerProperty supplierId ~StringProperty supplierCode ~StringProperty supplierContact ~StringProperty supplierTel ~StringProperty supplierCell ~StringProperty supplierFax ~StringProperty supplierEmail ~StringProperty supplierBank ~IntegerProperty supplierBranch ~IntegerProperty supplierAccNum ~StringProperty supplierAccType ~StringProperty supplierComment </pre>	<pre> ~IntegerProperty clientId ~StringProperty clientName ~StringProperty clientSurname ~StringProperty clientAddress ~IntegerProperty clientAddrCode ~StringProperty clientTelHome ~StringProperty clientTelWrk ~StringProperty clientTelCell ~StringProperty clientEmail ~IntegerProperty clientRef </pre>	<pre> ~GridPane dashBoardPane ~FlowPane dashFlowPane </pre>
<pre> +void setSupplierId(Integer value) +int getSupplierId() +void setSupplierCode(String value) +String getSupplierCode() +void setSupplierContact(String value) +String getSupplierContact() +void setSupplierTel(Double value) +double getSupplierTel() +void setSupplierCell(Double value) +double getSupplierCell() +void setSupplierFaxDouble value) +double getSupplierFaxl() +void setSupplierEmail(Double value) +double getSupplierEmail() +void setSupplierBank(Integer value) +int getSupplierBank() +void setSupplierBranchInteger value) +int getSupplierBranch() +void setSupplierAccNum(String value) +String getSupplierAccNum() +void setSupplierAccType(Integer value) +int getSupplierAccType() +void setSupplierCommentInteger value) +int getSupplierComment() </pre>	<pre> +void setClientId(Integer value) +int getClientId() +void setClientName(String value) +String getClientName() +void setClientSurnameString value) +String getClientSurname() +void setClientAddress(String value) +double getClientAddress() +void setClientAddrCode(Double value) +double getClientAddrCode() +void setClientTelHome(String value) +void getClientTelHome() +double getClientTelWrk() +void setClientTelWrk(String value) +int getClientTelCell() +void setClientTelCell(String value) +int getClientEmail() +void setClientEmailString value) +String getClientRef() +void setClientRef(Integer value) </pre>	<pre> +Dashboard() +Dashboard(GridPane pane) +GridPane getDashbpard() +void setupDashBoard() +FlowPane createDashboard() </pre>
		<p>Stereotype»</p> <p>Edit</p>
		<p>Invoice</p> <pre> ~IntegerProperty invoiceId ~StringProperty invoiceNum ~StringProperty invoiceDate ~IntegerProperty invoiceClientId ~DoubleProperty invoiceConsultFee </pre>
		<pre> +void setInvoiceId(Integer value) +int getInvoiceId() +void setInvoiceNum(String value) +String getInvoiceNum() +void setInvoiceDate(String value) +String getInvoiceDate() +void setInvoiceClientId(Double value) +double getInvoiceClientId() +void setInvoiceConsultFee(Double value) +double getInvoiceConsultFee() </pre>

**Package - Supplements:**

InvoiceSupplement	Supplement
<pre> ~IntegerProperty invSupplementId ~StringProperty invSupplementNum ~StringProperty invSupplementId ~StringProperty invSupplementPrice ~StringProperty invSupplementQty ~StringProperty invSupplementPriceTotal ~StringProperty invSupplementTotalPriceConsult  +void setInvSupplementId(Integer value) +int getInvSupplementId() +void setInvSupplementNum(String value) +String getInvSupplementNum() +void setInvSupplementId(String value) +String getInvSupplementId() +void setInvSupplementPrice(Double value) +double getInvSupplementPrice() +void setInvSupplementQty(Double value) +double getInvSupplementQty() +void setInvSupplementPriceTotal(Double value) +double getInvSupplementPriceTotal() +void setInvSupplementTotalPriceConsult(Doubl e value) +double getInvSupplementTotalPriceConsult() </pre>	<pre> ~IntegerProperty suplNum ~StringProperty suplId ~StringProperty suplDesc ~DoubleProperty suplCostExcl ~DoubleProperty suplCostIncl ~DoubleProperty suplPerIncl ~DoubleProperty suplCostClient ~IntegerProperty suplMinLevels ~IntegerProperty suplStockLevels ~StringProperty suplNappiCode ~IntegerProperty suplSupplierId  +void setSupplNum(Integer value) +int getSupplNum() +void setSupplId(String value) +String getSupplId() +void setSupplDesc(String value) +String getSupplDesc() +void setSupplCostExcl(Double value) +double getSupplCostExcl() +void setSupplCostIncl(Double value) +double getSupplCostIncl() +void setSupplPerIncl(Double value) +double getSupplPerIncl() +void setSupplCostClient(Double value) +double getSupplCostClient() +void setSupplMinLevels(Integer value) +int getSupplMinLevels() +void setSupplStockLevels(Integer value) +int getSupplStockLevels() +void setsuplNappiCode(String value) +String getsuplNappiCode() +void setSupplSupplierId(Integer value) +int getSupplSupplierId() </pre>

## Implementation Methodology

### Implementation and Requirements document

#### Requirements

Operational Concepts:

#### A. Description

A GUI interface will be developed using JavaFX, for the user to interact and navigate the system. Each interface will be modular in nature. A controller class is used in the background to navigate easily between the front end and backend of the system. The system is designed for ease of use for the user. Database sync between the master and slave databases (ie Live website database and the Remote System) is managed with SymmetricDS Software. This allows for seamless use of the system with all sync happening in the background. If the system goes offline, it can still be used as normal, and once it comes back online the database sync happens automatically.

#### B. Development

1. Front-end software Development: Java - JavaFX, Maven for dependency management, Netbeans IDE, JUnit unit testing. VirtualBox software for Windows 7 virtualisation, development and testing running WAMP server.
2. Back-end software: MySQL, using MAMP stack for apache, MySQL server. SymmetricDS Backend database sync for seamless background syncing and backups. JDBC drivers for the Software to interact with the database.
3. Hardware: Macbook Pro 13 inch
  - running Apple OS High Sierra, with 2.7Ghz Intel Core I7, 16GB DDR3 Memory

#### C. Implementation

1. Software: Windows 7, WAMP server, MySQL database, SymmetricDS.
2. Latest version of Java needs to be installed on computer to allow interaction with the desktop application GUI.

#### D. COMMUNICATION INTERFACES

Internet access is required for online interaction with the master database.

3. Once JAVA and the Stock system is installed, the user will be able to login and access using the JavaFX interface GUI on a local machine using Windows 7.
4. The JavaFX application makes use of JDBC drivers to interact with the database.

#### Technical performance

##### A. Operational requirements:

#### Authenticate

1. User details and passwords will be setup by the administrator. This means that individual users of the system will be given an account and password, and they do not have access to change or create user details themselves. The administrator decides by assigning a user to a user group in the database, and this will determine if a user gets Super user credentials or normal user credentials.

## Manipulate / Extract Data

2. Once a user has successfully logged into the system, they will then be able to create, or view or edit or delete information regarding supplements, suppliers, clients and Invoices. The system is designed to allow the user to easily navigate between these screens in the system.

3. Startup requires the WAMP server to be active and running. User access already needs to be granted by administrator.

Shortcut keys will be used if user chooses (enter, ctrl - S, etc) Database synchronisation and backup happens in the background with no user interaction necessary. The system will run uninterrupted irrespective of Online / Offline status.

### B. Functional requirements:

Authenticate

Ensure Only Authenticated users have access to the system

Manipulate Data

Easily View and Manipulate data

Assist / Notify Users

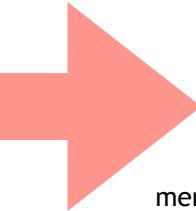
Retrieve reports and use Management Information systems to make better business decisions

Better Business Decision making

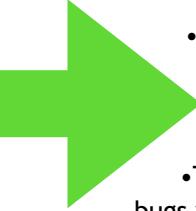
Assist the users in the daily business routines

Extract Data

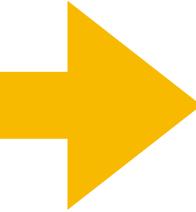
Extract reports and invoices

**In serves support****System Training**

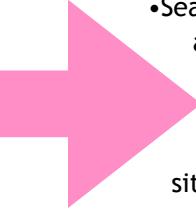
Once the system is ready for production, a training session will be held with the client. The installation procedure, setup, backup procedure and daily use of the system will be explained to the administrative staff members. The client will be shown how to login to the system, and how to view and edit all the data as required by the system specifications.

**Software maintenance and Monitoring:**

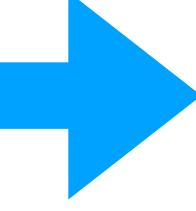
- Monitoring will be done regularly at fixed intervals, and will focus on assessing implementation performance in areas such as client/user satisfaction and performance indicators evaluation.
- The developers will periodically check the system and any bugs will be eliminated or new features will be added as necessary. Developers can work remotely and update the software on the website server as needed. Updates will be systematically applied and added to documentation. Training on the new feature can be done telephonically or training sessions can be arranged if necessary.

**Roles**

- Development Team lead - Sean Liebenberg, will be primary contact for any enquiries or escalations. The Client consists of users, any of the staff at EHA.

**User Support & Incident**

- Sean Liebenberg, the lead developer for this project, will be available at any time as the main support liaison to the client. Any problems will be reported directly to him, and telephonic assistance will be given. If larger problems are escalated, he will be dispatched to the site to assist if necessary.

**Timeline**

- User support - immediate, telephonic.
- Minor escalations - 1 to 3 days turnaround time.
- Major escalations - 1 week or more depending on nature of the escalation.

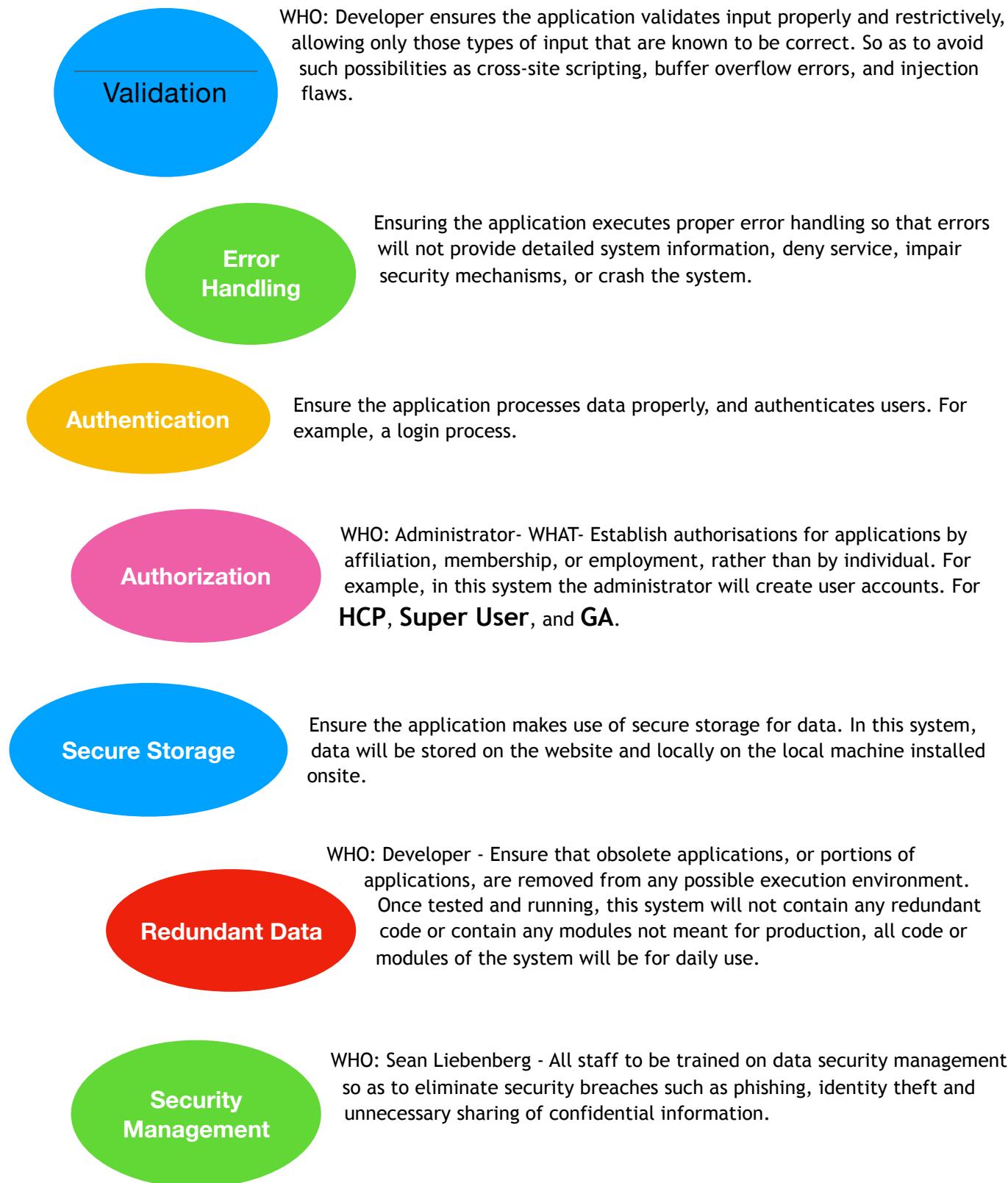
## Software Quality KPI's:

- 
- AVAILABILITY:** The system should be available at any time so staff can retrieve or store important information.
  - CORRECTNESS:** The system should always reflect accurate information.
  - MAINTAINABILITY:** The system should give as few errors as possible, and any errors must always be easily correctable.
  - USABILITY:** Better control of stock. Reduction in staff time required to collect, process, analyse and report information generated by the system

- **CLIENT/USER SATISFACTION**
- The client should be able to easily and quickly navigate through the system to find, create or store information.

## Security

The following security standards will be adhered to, in order to maintain confidentiality and strict security for this system:



**Backup procedure**

**A. DATA:** The entire database, along with all the data such as usernames and passwords and supplement information will be backed up periodically by the administrator in case of catastrophic failure or data loss. Database sync will happen periodically and automatically between the Master and slave databases.

WHO

WHERE

WHEN

WHO

STEPS

**B.LOCATION:** The database will be backed up in the cloud - on the website server. The backups will also be stored on the main computer of the Business so that the HCP has a copy of the backups at all times in case of any problems or data loss. Historical data will also be saved in both locations.

**C.FREQUENCY:** As the nature of the business calls for the possibility of new data being created every day, such as new clients being saved or supplement changes, Data will therefore be backed up incrementally at the end of every day, so as to minimise data loss. As this is quite frequent and to save hard-drive space, the backups will only be stored for a maximum of two months, thereafter the data will be overwritten by the newer data. For historical backup purposes, a snapshot of the database will be saved at the end of the two-month period. So there will be historical data saved in a separate backup folder.

**D.BACKUP DUTIES:** The developer in charge of the project, Sean Liebenberg, will ensure the smooth transition on first backup of the system, and monitor the backups for the first three months. Thereafter the client will be responsible for ensuring backups are being saved appropriately by the system.

**E.MAINTENANCE:** The client will ensure that an administrator is appointed to monitor the system, test the backups, and monitor or create backups as necessary in the future.

**F.RECOVERY:** If there is extensive damage to a wide portion of the database due to catastrophic failure, such as a disk crash, the recovery method restores a past copy of the database that was backed up to archival storage and reconstructs a more current state by reapplying or redoing the operations of committed transactions from the backed up log, up to the time of failure.

1st Backup  
(Manually)Following  
backups -  
(Automatic)

Maintain

## Testing and evaluation of system

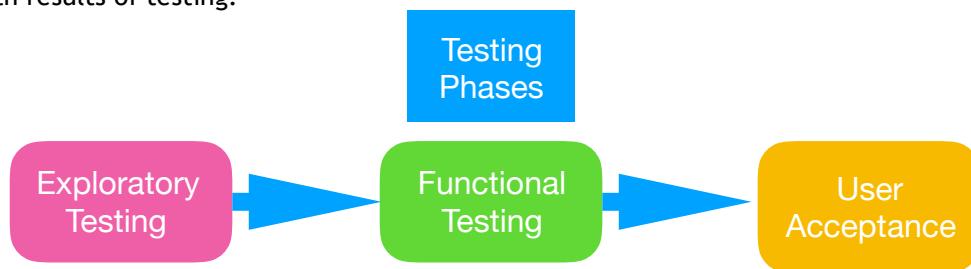
### A. Description:

The EHA Stock system is primarily a Graphical User Interface tool. It is a powerful tool providing EHA users with information and allowing users to change information easily. The system will be modularised, & controlled by a central navigational module for quick navigation between the other modules. The functionality of the system spans across the entire system, making information available anywhere, anytime.

### B. Audience:

Project team members will consist of the technical developer team - Sean Liebenberg

Client Stakeholder representatives(EHA staff members) will participate in UAT test to ensure business is aligned with results of testing.



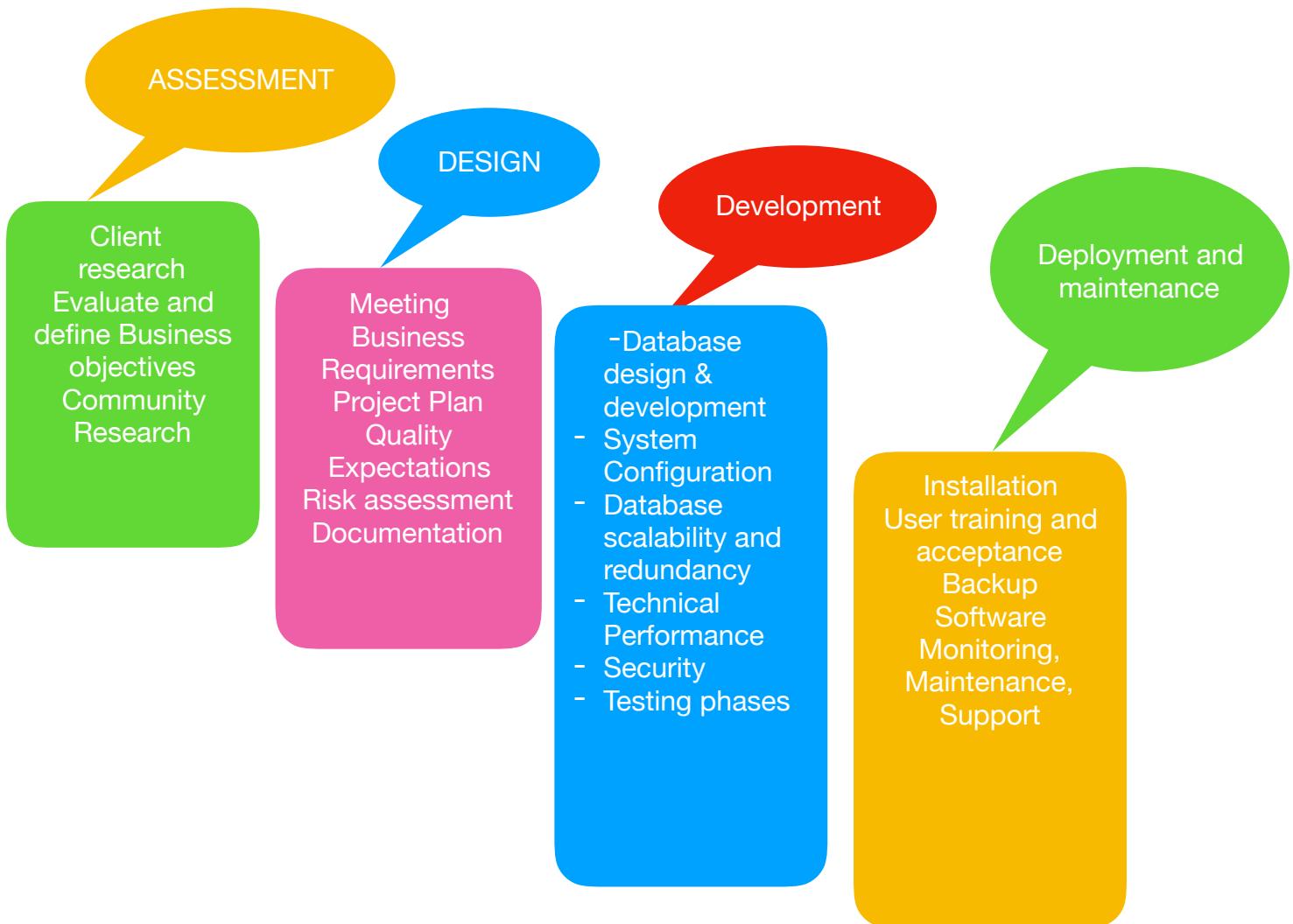
### C. Test Strategy:

- Objectives - The main objective of the test is to ensure that the functionality of the EHA Stock system works according to the project specifications. Testing will be focused on meeting business objectives efficiently and with high quality.
- Scope - The system is modularised so every module will be tested individually for input vs output validation. CRUD operations are used in most modules of the system so every module will need to be tested to validate system functionality on the database. User Privileges can be tested by testers logging in with different User group levels to ensure the privileges are enforced as per the business rules.
- **Exploratory Testing** - This test is to ensure all critical defects are removed before the next testing phase can start. This phase will be carried out during development by the software team to ensure the application is ready for production as soon as possible. The developer will also run unit testing during development to test functionality of the system while it is being built. This will allow for fewer bugs before critical testing can begin
- **Functional Testing** - Functional testing will be performed to check the functions of the system. This testing will be carried out according to specific use cases, by feeding input into the system and validating the output from the application. Test data will be used on all inputs of the system, and the output will be monitored. Testing will be done on each module of the system, starting with the login module, until all the modules have been tested and found to meet the system requirements and acceptable outputs.
- **UAT(User Acceptance Testing)** - This testing phase will be carried out by the client. End users will provide support and feedback regarding accuracy of business needs being met by system functionality. This phase will focus on meeting the business logic. End users will use test data and provide input and feedback. This allows one final review before the product can be released for production.

### D. Test Environment

- Windows 7 Environment, with the latest version of Java, and the EHA stock system installed. Internet explorer 8 (or Higher), Firefox 60(or Higher) as well as Google chrome should be available to every tester.

## Implementation



**A. The EHA stock system Components:**

- Application GUI interface (jar file), and installation script (to install local database)
- Latest java version installed on a Windows 7 computer (downloaded from [www.oracle.com](http://www.oracle.com))
- MySQL database (installed on the EHA website) and Any web browser (preferably Google Chrome)

**B. Timeline:**

- Once the product has been developed and tested, it will be ready for installation on the client premises. The client is responsible to make sure that the windows 7 pc is setup and working properly for the installation to commence.
- The current deadline for installation on client premises is 22 October 2018.

**C. Installation:**

- First time use will require a fresh installation on the client computer.
- **Support:** Sean Liebenberg will be available to assist with the onsite installation and Future support.
- **Report to:** The HCP will need to be notified of all status regarding the installation and implementation.
- **Time:** The client will be present for the installation on premises. In order to ensure current business flow, implementation will take place outside business hours, preferably on a weekend.
- **Place:** Installation will be on the client windows 7 pc, on the client premises. Installed from the website. Internet access is required. The website must be ready & implemented for this purpose.
- **Backup:** A first backup will need to take place as part of installation procedure so as to ensure future backups occur, and this will also aid in user training. Once the client is fully trained on the system functionality they will be able to immediately switch over to the system for normal daily business use.
- **Rollback:** The database will be backed up to csv files for easy rollback to previous versions, also to aid the process of installing on local machine. The csv files can be easily used to manually restore the database if necessary. A sql file will also be backed up regularly which stores a snapshot of the entire database. An extra two weeks has been budgeted for, in case of catastrophic failure of the installation, this will allow time to fix any major problems with the system if the need arises.
- **Testing:** Once the installation process is complete, a user will be able to run the software, login and test if everything is working as it should. All inputs and output of all modules of the system will be tested. (This will mark the final stage in the UAT - User Acceptance testing) An installation manual, and user help files will be provided to the user. This will include any changes to the system.
- **User Sign-off:** Once installation is complete and tested, the user will sign off to acknowledge that the system is working and installation is complete.

**D. Implementation Procedure:**

1. Testing - Exploratory, functional and UAT
2. Website and database implementation and Testing
3. Documentation and installation scripts
4. Installation at Client premises
5. Client Sign-off
6. Monitoring, maintenance and Support

**Assignment 7**

**User manual**

# **Enlightened Health Alternative**

## **Stock System Software User Manual**

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Software v1.01 - 01 October 2018



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# Preface

**THIS SOFTWARE GUIDE IS INTENDED FOR EHA USERS WHO WANT TO BE QUICKLY FAMILIARISED WITH THE SOFTWARE, CONFIGURE IT AND USE ITS FEATURES.**  
**FOR DETAILED INSTRUCTIONS ON HOW TO INSTALL AND CONFIGURE ALL ASPECTS OF THE SYSTEM:**  
**PLEASE REFER TO THE ACCOMPANYING INSTALLATION MANUAL - EHA STOCKSYSTEM SOFTWARE V1.0 - 2018**

**PLEASE CONTACT YOUR ADMINISTRATOR FOR FURTHER DETAILED INSTRUCTIONS AND TO COLLECT YOUR LOGIN DETAILS AND INSTALLATION PACKAGE.**

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# 1.0 GENERAL INFORMATION

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## 1.0 - Intended Audience



This document is intended equally for use by Administrators, Business Management, and general users of the system who want to be quickly familiarised with the software, configure it and use its features.

### 1.1 - System Overview



EHA Stock System is an application that allows collecting and managing information of the EHA Supplement Stock, EHA Clients, Invoices, appointments, and EHA Supplement Suppliers. The application provides an easy and user-friendly way to manage information. This version of the Stock system is currently intended to operate on a Windows 7 operating system, running the latest version of Java, and a WAMP server.



### 1.2 - Organisation of the Manual

This user's manual consists of five sections:

1. **The General Information section:** which explains in general terms the system and the purpose for which it is intended.
2. **System Summary:** provides a general overview of the system and outlines the uses of the system's hardware and software requirements, system's configuration, user access levels and system's behavior in case of any contingencies.
3. **Getting Started section:** explains how to get The Stock System installation file and once installed - how to get it running and login to the system.
4. **Using the System section** provides a detailed description of system functions.
5. **Admin and Management** describes further features which are only available to Administrators and Management of EHA. And describes in what way information collected by the application is presented and how to access or use the information.

#### 1.2.1 - Colour Key to this document

- Blue: General features for every user
- Orange: Privileged features meant for management of EHA
- Red: General Help and Warnings

## 2.0 SYSTEM SUMMARY

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### 2.1 - System Configuration



This EHA Stock System software operates on a Windows 7 operating system.

The application requires connection to the Internet in order to save data to database. The latest version of Java also needs to be installed, along with the latest version of WAMP (for offline use). Please refer the Installation manual for detailed installation instructions. After installation of all aspects of this system is complete on the computer, this stock System software can be used immediately without any further configuration.

### 2.2 - User Access Levels



Only employees of EHA - Enlightened Health Alternative can use application.

Please contact your administrator to receive a username and password for login purposes.

### 2.3 - Contingencies

In case of no Internet connection available, data can be saved in local database located on WAMP server of the operating system. Once failover has been initiated to the server - normal operation can commence on the system. Data will be automatically synced back to the online server once the internet connection is restored.

## 3.0 GETTING STARTED

---

This section provides an overview of the main components, and how to get the system up and running quickly.

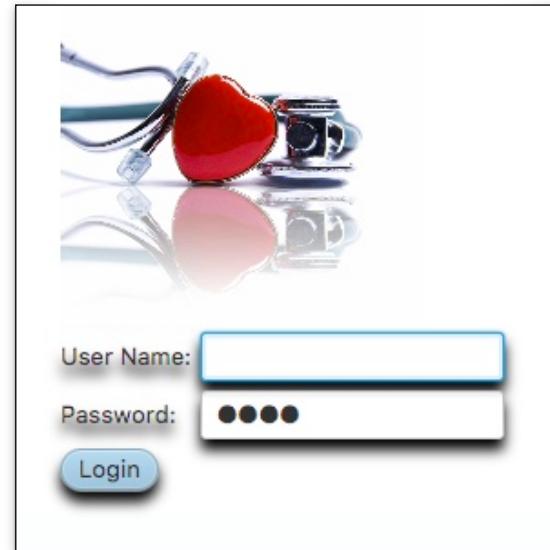
### 3.1 - Installation and Logging In



The newest installation version currently available, can be downloaded from the EHA website, or delivered to the user together with User ID and password as an installation package. For specific instruction on how to install application refer to EHA Stock System Installation Manual, or speak to your administrator. Once installed, please startup the application by clicking on the exe file. This loads the login screen

### 3.2 - System Login Screen

EHA Stock System is designed for ease of use, and to be fast and reliant. All controls are easily accessible. The very first screen you will see is the login screen (Figure 1). Enter your username and password and click the enter button.



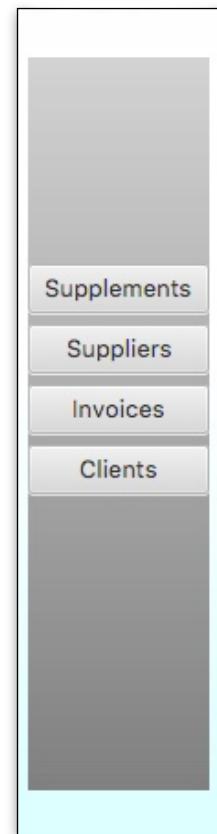
**Figure 1. Login Screen for EHA Stock System Application**

### 3.3 - Main Landing page

The main landing screen is your central hub to all of the information in the system. You will immediately see a list of all the supplements and you will also be able to navigate anywhere in the system from this point. You can navigate further to view or change Supplier Information, Invoice Information, or Client information.

### 3.4 - Side menu Tab

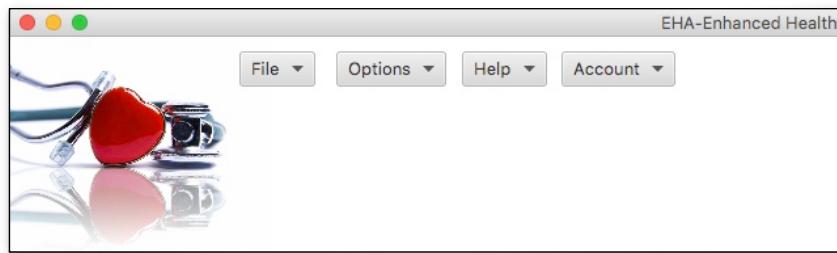
The side Menu Tab (Figure 2) is your main navigation tab between the major components of the system in the Landing Page. Simply clicking on one of the buttons will load the relevant component for you. You can navigate using this tab to the Client component, Supplier component, Invoice component or Supplement component.



**Figure 2. Side Menu Buttons**

### 3.5 - Top Settings Menu

The Top menu (Figure 3) allows you further configuration options. You are provided with an Options Menu, File Menu, Help Menu, and an account Menu which allows you to logout.



**Figure 3. Top Settings Menu**

### 3.6 - Exit System

EHA Stock System Software can be closed by simply closing the main window.

## 4.0 USING THE SYSTEM

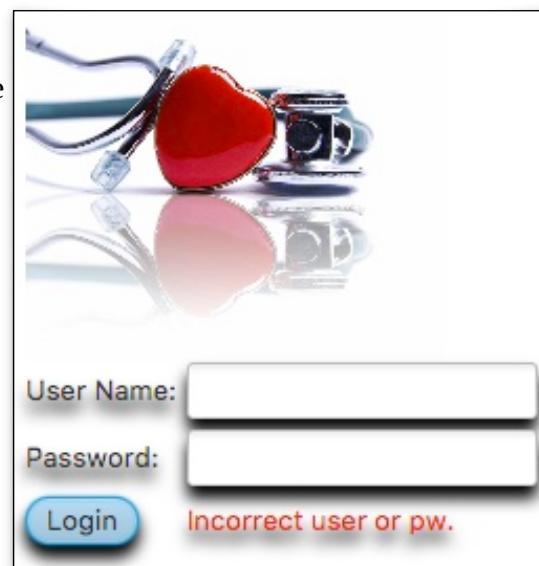
This section provides a detailed description of system functions.

### 4.0.0 - System Login

Once the application is started, you will see the Login screen (Figure 5). Type in your user name and password (provided to you by the system administrator). If you typed incorrectly (Password is case sensitive) you will see a notification that login was unsuccessful, please try again. If successful you will be navigated to the main landing page of the application. From here you can navigate to the desired component by clicking on the Side Menu Tab.

If, for some reason you are unable to login using the provided user name and password, please contact your administrator.

**Figure 5. Login screen showing error**



#### 4.1.0 - Supplement Component

The default view of the Main Landing page is the Supplement Component (Figure 6). You will see a detailed list of all the supplements currently in the system. You can easily scroll and search the list and select a supplement to view or edit. Once selected from the list, you can click Edit Supplement or View Supplement to open a form with the selected supplement details.

**Figure 6. Supplement List Component**

Supplements					
Number	Id	Description	Cost Excl	Cost Incl	
1	Supplement-1	90	313.0	356.82	
2	Supplement-2	60	215.0	245.1	
3	Supplement-3	60	216.81	247.16	
4	Supplement-4	60	222.0	253.08	
5	Supplement-5	60	201.0	229.14	
6	Supplement-6	60	259.0	295.26	
7	Supplement-7	60	221.0	251.94	
8	Supplement-8	60	171.0	194.94	
9	Supplement-9	90	326.0	371.64	
10	Supplement-10	180g powder	195.86	223.28	
11	Supplement-11		147.85	168.55	
12	Supplement-12		262.0	298.68	
13	Supplement-13		136.0	155.04	
14	Supplement-14	113g	278.13	317.07	

#### 4.1.1 - How to View, Edit or Delete a Supplement

1. First search for and select a supplement from the list screen.
2. Once a supplement is selected from the list, you can now click <<View Supplement>> button to view the supplement details.
3. From the Supplement View screen you can now also click <<Edit Supplement>>, or <<Delete Supplement>> to change the supplement details.
4. To Edit a Supplement - You will be able to Edit data for the following fields :
  - Supplement ID: The Id associated with the supplement
  - Supplement Description: A brief description of the supplement
  - Supplement Cost (Excl): The cost Excluding vat
  - Supplement Cost (Inc): The cost including vat
  - Supplement Perc (Incl): The markup price of the supplement
  - Supplement cost to client: The total cost the client pays
  - Supplement min levels: A threshold to describe the min value of stock allowed
  - Supplement stock levels: The actual amount of the stock item in the inventory
  - Supplement Nappi code: Code of the stock item
  - Supplement supplier ID: The Id of the supplier associated with this item

5. If you made a mistake, click <<Clear Fields>> button and all fields will be set blank.
6. Click <<Save>> button, if correct data is entered, the supplement details will be saved to the database and you will receive a notification. Else you will see a notification that incorrect data was entered and be redirected to the incorrect field (**highlighted in red**). Enter the data in the correct format, and click <<Save>> again.
7. To Delete, simply click the <<Delete Supplement>> button and the current supplement will be deleted from the database.
8. Click <<Close>> button to close the current window and return to the main landing page of the application.

*If you Delete, Make sure you delete the correct supplement! This cannot be undone and Data will be lost*

View Supplement	
Supplement Number:	10
Supplement ID:	Supplement-10
Supplement Description:	180g powder
Supplement Cost (Excl):	195.86
Supplement Cost (Incl):	223.28
Supplement Perc (Incl):	60.0
Supplement Cost to Client:	283.28
Supplement Min Levels:	4
Supplement Stock Levels:	2
Supplement Nappi Code:	
Supplement Supplier ID:	3

**Delete**      **Edit Supplement**

**Figure 7. Supplement Component (with data fields)**

#### 4.1.1 - How to Save a new Supplement

1. Click <<Create Supplement>> button
2. Fill in the data in the fields
3. You will be able to Edit data for the following fields :
  - Supplement ID: The Id associated with the supplement
  - Supplement Description: A brief description of the supplement
  - Supplement Cost (Excl): The cost Excluding vat
  - Supplement Cost (Inc): The cost including vat
  - Supplement Perc (Incl): The markup price of the supplement
  - Supplement cost to client: The total cost the client pays
  - Supplement min levels: A threshold to describe the min value of stock allowed
  - Supplement stock levels: The actual amount of the stock item in the inventory
  - Supplement Nappi code: Code of the stock item
  - Supplement supplier ID: The Id of the supplier associated with this item

4. If you made a mistake, click <<Clear Fields>> button and all fields will be set blank.
  5. Click <<Save>> button, if correct data is entered, the supplement details will be saved to the database and you will receive a notification. Else you will see a notification that incorrect data was entered and be redirected to the incorrect field (**highlighted in red**). Enter the data in the correct format, and click <<Save>> again.
  6. Click <<Close>> button to close the current window and return to the main landing page of the application.

#### 4.2.0 - Suppliers Component

Click the <<Suppliers>> button on the side tab to navigate to the Suppliers component (Figure 8). You will see a detailed list of all the

suppliers currently in the system. You can easily scroll and search the list and select a supplier to view or edit. Once selected from the list, you can click <<Edit Supplier>> or <<View Supplier>> to open a form with the selected Supplier details.

## **Figure 8. Supplier List Component**

#### 4.2.1 - How to View, Edit or Delete a Supplier

1. First search for and select a supplier from the list screen.
  2. Once a supplier is selected from the list, you can now click <<View Supplier>> button to view the supplier details.
  3. From the Supplier View screen you can now also click <<Edit Supplier>>, or <<Delete Supplier>> to change the Supplier details.

4. To Edit a Supplier - You will be able to Edit data for the following fields :
  - Supplier Code: The code of the specific supplier
  - Supplier Contact: The supplier name
  - Supplier Tel: The contact telephone number
  - Supplier Cell: The contact cellphone number
  - Supplier Fax: The contact fax number
  - Supplier Email: The contact email address
  - Supplier Bank: The Supplier Bank name
  - Supplier Branch code: The Supplier Bank code
  - Supplier account number: The Supplier Bank account number to pay the supplier
  - Supplier account type: The Supplier Bank account type
  - Supplier comments: General comments to note about the supplier
5. If you made a mistake, click <<Clear Fields>> button and all fields will be set blank.
6. Click <<Save>> button, if correct data is entered, the supplier details will be saved to the database and you will receive a notification. Else you will see a notification that incorrect data was entered and be redirected to the incorrect field (**highlighted in red**). Enter the data in the correct format, and click <<Save>> again.
7. To Delete, simply click the <<Delete Supplier >> button and the current supplier will be deleted from the database.
8. Click <<Close>> button to close the current window and return to the main landing page of the application.

*If you Delete, Make sure you delete the correct supplier! This cannot be undone and Data will be lost*

The screenshot shows a Windows-style dialog box titled "Supplier Edit Component". The form contains the following data:

Supplier ID:	6
Supplier Code:	SUPPLIER A
Contact:	John Adams
Tel:	011-863-0056
Cell:	
Fax:	011-863-0051
Email:	johnadams@suppliera.co
Bank:	Standard Bank
Branch code:	11813
Account:	1887092
Account Type:	Cheque
Comments:	

At the bottom of the dialog are two buttons: "Delete" and "Edit Supplier".

**Figure 9. Supplier Edit Component (with data fields)**

#### 4.2.2 - How to Save a new Supplier

1. Click <<Create Supplier >> button
2. Fill in the data in the fields
3. You will be able to Edit data for the following fields :
  - Supplier Code: The code of the specific supplier
  - Supplier Contact: The supplier name
  - Supplier Tel: The contact telephone number
  - Supplier Cell: The contact cellphone number
  - Supplier Fax: The contact fax number
  - Supplier Email: The contact email address
  - Supplier Bank: The Supplier Bank name
  - Supplier Branch code: The Supplier Bank code
  - Supplier account number: The Supplier Bank account number to pay the supplier
  - Supplier account type: The Supplier Bank account type
  - Supplier comments: General comments to note about the supplier
4. If you made a mistake, click <<Clear Fields>> button and all fields will be set blank.
5. Click <<Save>> button, if correct data is entered, the supplement details will be saved to the database and you will receive a notification. Else you will see a notification that incorrect data was entered and be redirected to the incorrect field (**highlighted in red**). Enter the data in the correct format, and click <<Save>> again.
6. Click <<Close>> button to close the current window and return to the main landing page of the application.

#### 4.3.0 - Client Component

Click the << Client >> button on the side tab to navigate to the Client component (Figure 10).

You will see a detailed list of all the Clients currently in the system. You can easily scroll and search the list and select a Client to view or edit. Once selected from the list, you can click <<Edit Client >> or <<View Client >> to open a form with the selected Client details.

Clients			
Client ID	First Name	Last Name	Address
34565454555			
47072706087	Chippa	Shange	398 Kwane Avenue Mother
47120603088	Itumeleng	Makapela	569 Block P Soshangwe
82032206087	Wouter	Burger	2119 Tlaphi Avenue Clove
151021036088	Shaun	Lesch	21 Martinson Rd Twee Pie
290611026087	Goratamang	Owens	5 Mosiliki Katlehong
341216047088	Sandiso	Naidoo	88 Towerbridge Gardens
400422050085	Adriaan	Fourie	208 Wattle Avenue Alved
451201089085	Wisani	Naidoo	P O Box 3939 Witvrivier
490705046088	Ayanda	Mlawuli	39 Wellington Avenue Go
491010022086	Kivan	Dambuza	6 Weber Crescent Penlyn
510523033088	Fezile	Nkabinde	61 Tuscan Waters Gie Ro
510915039082	Chrisna	Malemone	7 Nurney Street Crosby
511127046082	Edwin	Dlamini	Hortense laanFlorida Glen

Create Client | Edit Client | View Client

Figure 10. Client List Component

#### 4.3.1 - How to View, Edit or Delete a Client

1. First search for and select a Client from the list screen.
2. Once a Client is selected from the list, you can now click <<View Client >> button to view the Client details.
3. From the Supplier View screen you can now also click <<Edit Client >>, or <<Delete Client >> to change the Client details.
4. To Edit a Client - You will be able to Edit data for the following fields :
  - Client First Name: The client's first name
  - Client Last Name: The client's last name
  - Client Address: The address of the client
  - Client Address Code: The postal code of the client
  - Client Tel: The client contact telephone number
  - Client Work: The client work telephone number
  - Client Cell: The client cell number
  - Client Email: The client email address
  - Client Reference: A description of how the client heard of our services?
5. If you made a mistake, click <<Clear Fields>> button and all fields will be set blank.
6. Click <<Save>> button, if correct data is entered, the Client details will be saved to the database and you will receive a notification. Else you will see a notification that incorrect data was entered and be redirected to the incorrect field (**highlighted in red**). Enter the data in the correct format, and click <<Save>> again.
7. To Delete, simply click the <<Delete Client >> button and the current Client will be deleted from the database.
8. Click <<Close>> button to close the current window and return to the main landing page of the application.

*If you Delete, Make sure you delete the correct client! This cannot be undone and Data will be lost*

The screenshot shows a modal window titled 'Client'. It contains a form with the following data:

Client ID:	400422050085
First Name:	Adriaan
SurName:	Fourie
Address:	208 Wattie Avenue Alver
Address Code:	2091
Tel Home:	090-749-3083
Work:	094-931-1216
Cell:	084-115-6587
Email:	[Empty]
Client Reference:	2

At the bottom right of the window are three buttons: 'Delete', 'Edit Client Details', and 'Close'.

**Figure 11. Client Edit Component (with data fields)**

#### 4.3.2 - How to Save a new Client

1. Click <<Create Client >> button
2. Fill in the data in the fields
3. You will be able to Edit data for the following fields :
  - Client ID: The 13 Digit ID number of the client.
  - Client First Name: The client's first name
  - Client Last Name: The client's last name
  - Client Address: The address of the client
  - Client Address Code: The postal code of the client
  - Client Tel: The client contact telephone number
  - Client Work: The client work telephone number
  - Client Cell: The client cell number
  - Client Email: The client email address
  - Client Reference: A description of how the client heard of our services?
4. If you made a mistake, click <<Clear Fields>> button and all fields will be set blank.
5. Click <<Save>> button, if correct data is entered, the Client details will be saved to the database and you will receive a notification. Else you will see a notification that incorrect data was entered and be redirected to the incorrect field (**highlighted in red**). Enter the data in the correct format, and click <<Save>> again.
6. Click <<Close>> button to close the current window and return to the main landing page of the application.

#### 4.4.0 - Invoice Component

Click the << Invoice >> button on the side tab to navigate to the Invoice component.

You will see a detailed list of all the Invoices currently in the system. You can easily scroll and search the list and select a Invoice to view. Once selected from the list, you can click <<View Invoice >> to open a form with the selected Invoice details.

Invoices				
Invoice ID	Invoice Number	Date	Client Id	Consult Fee
1	INV0001	2010-01-28	2012190284086	300.0
2	INV0002	2010-04-07	7309060944088	0.0
3	INV0003	2010-05-06	9003280235085	0.0
4	INV0004	2010-07-10	7212170290085	300.0
5	INV0005	2010-07-19	8807130418086	300.0
6	INV0006	2010-08-01	4708110702087	300.0
7	INV0007	2010-08-05	8610120779086	300.0
8	INV0008	2010-08-13	9003280235085	300.0
9	INV0009	2010-12-22	4104200140083	0.0
10	INV0010	2011-01-01	650402056081	320.0
11	INV0011	2011-01-06	5212190473083	0.0
12	INV0012	2011-01-11	2703080994088	0.0
13	INV0013	2011-01-11	2011240231088	0.0
14	INV0014	2011-01-14	2808250506083	320.0

[View Invoice](#) [Create Invoice](#)

**Figure 12. Invoice List Component**

#### 4.3.1 - How to View, Create and Download an Invoice

1. First search for and select a Invoice from the list screen.
2. Once a Invoice is selected from the list, you can now click <<View Invoice >> button to view the Invoice details.
3. From the Invoice View screen you can now also click <<Download Invoice >> to download the invoice to your computer to email to the client for payment.
4. Click <<Close>> button to close the current window and return to the main landing page of the application.

#### 4.3.2 - How to Save a new Invoice

1. Click <<Create Invoice >> button
2. Fill in the data in the fields
3. You will be able to Enter and view data for the following fields :
  - Invoice Number: The number of the Invoice saved
  - Invoice Date: The date of the invoice saved
  - Invoice Client ID: The client's 13 digit ID number associated with the invoice  
(Choose a client from the list)
  - Invoice Consultation Fee: Fee owed by client for consultation with Health Care Practitioner

<<Choose a Supplement from the list to add to the invoice>>

(you can add as many a necessary as long as the stock levels allow the sale)

- Invoice Supplement ID: The ID number of the Supplement
  - Invoice Supplement Price: The price of the supplement (No changes allowed here)
  - Invoice Supplement Quantity: The amount of items sold for this supplement on this invoice
  - Invoice Supplement Price Total: The price of the supplements multiplied by the quantity sold (Automatically calculated)
  - Invoice Supplement Total Price with Consultation: Total price including consult fee (Automatically calculated)
4. If you made a mistake, click <<Clear Fields>> button and all fields will be set blank.
  5. Click <<Save>> button, if correct data is entered, the Client details will be saved to the database and you will receive a notification. Else you will see a notification that

incorrect data was entered and be redirected to the incorrect field (**highlighted in red**). Enter the data in the correct format, and click <<Save>> again.

6. Click <<Close>> button to close the current window and return to the main landing page of the application.
7. **For historical purposes, Invoice data will not be deleted from the system. For any queries regarding Invoices, please contact your system administrator.**

## 5.0 ADMINISTRATION AND MANAGEMENT FEATURES

This section provides further insight into the features provided to Management of EHA

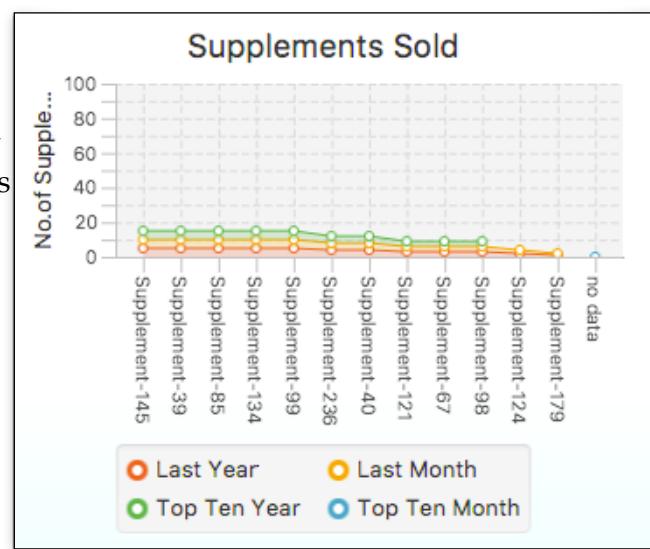
### 5.0.1 - Dashboard

If you have been granted Admin or Management privileges by your administrator, you will additionally also see a dashboard (Figure 4) on the Right hand side of the screen. This will provide you with an overall view of various information to assist with decision making. You will see graphs containing Supplement Information, Client birthdays and appointments, and various other information designed to help you make better business decisions.

Other features exist, (such as clicking on a patient in the dashboard. You will instantly navigate to that patient to view details.) And an alert will let you know when supplements are low.



**Figure 4. Dashboard Patients / Supplements**



### 5.0.2 - Advanced Features

- When creating an invoice, the admin or Management can change the prices of supplements before saving them to the invoice. This feature is not available to regular user. This means the prices will reflect on the form, and you can either leave the prices as is, or change to a new price.
- You will be able to add as many supplements to the invoice as you please, and change the pricing before saving the invoice.
- You will be able to Download the invoice at any time as a PDF file.

Installation manual

# Installation Manual

## Enlightened Health Alternative

### Stock System Desktop Software

Software v1.01 - 01 October 2018



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**COMPILED BY SEAN LIEBENBERG**

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APPEAR IN ALL COPIES.**

# Preface

This software guide is intended for EHA administrators and users who want to successfully perform a clean install of all the software packages necessary for production, and correctly configure the system for use.

For detailed instructions on how to use all the features of this system, please refer to the accompanying manual ie. User Manual - EHA StockSystem Software v1.0

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# 1.0 - Introduction

## 1.1- Overview of the System

In order for the EHA Stock System software to work as intended, the following software first needs to be downloaded, installed, and configured.

- Windows 7 Operating system with at least the minimum hardware and software requirements met.
- The latest version of Java to be downloaded and installed
- Database and Server Software: The latest version of WAMP to be downloaded and installed on your computer.
- Database replication software: Install and configure SymmetricDS software, this will manage the replication of data between the offline and online database.
- Finally, the EHA Stock System software needs to be installed. Once all the previous steps have been completed, this software will be able to run with no extra configuration necessary.

## 1.2 - How to Use This Document

This document describes the entire installation process for the EHA Stock System Software starting from scratch. This document covers all aspect of it's installation including all various other software needed, and how to deploy the services on your machine. When installing the EHA Stock System Software, you are encouraged to follow the order of this document. In some cases certain software needs to be installed and configured before other software will work correctly.

## 1.3 - References

- <https://support.microsoft.com/>
- <https://www.java.com/en/>
- <http://www.wampserver.com/en/>
- <https://www.symmetricds.org>

## 1.4 - Overview of the Manual

7. Section 1 Introduction: A General overview of this document
8. Section 2 Operating System Requirements: Necessary hardware and software for the system to work
9. Section 3 Java Install : How to install and configure Java on the Operating System
10. Section 4 Database and Server Installation: Install and configure WAMP (This includes Apache, Mysql and PHP server software)
11. Section 5 Database Replication Installation: Install and configure SymmetricDS software
12. Section 6 EHA Stock System Desktop Software: Install the EHA Software on the computer

# 2.0 - Operating System Requirements

## 2.1 - Operating System

Please ensure you have your Windows 7 Operating System installed and have updated your Operating System to the latest updates before you install the EHA system software.

You will need the following to meet the minimum requirements to run Windows 7 and run this software:

- 1 gigahertz (GHz) or faster 32-bit (x86) or 64-bit (x64) processor\*
- 1 gigabyte (GB) RAM (32-bit) or 2 GB RAM (64-bit)
- 16 GB available hard disk space (32-bit) or 20 GB (64-bit)
- DirectX 9 graphics device with WDDM 1.0 or higher driver
- Latest Windows 7 Updates from [microsoft.com](http://microsoft.com)
- Internet Access
- Latest version of a web browser(Google Chrome, or Firefox, etc)

# 3.0 - Java JRE

## 3.1 - Java Runtime Environment

The Java Runtime Environment (JRE) is what you get when you download Java software. The JRE consists of the Java Virtual Machine (JVM), Java platform core classes, and supporting Java platform libraries. The JRE is the runtime portion of Java software, which is all you need to run it in your Web browser or on your computer.

Running Java allows the EHA Stock System Software to run on any Operating System with future updates, but for this version only Windows 7 is supported.

## Steps to install and configure Java Runtime Environment:

Steps to complete:

1. Download Java
2. Install Java
3. Configure Java

### 1. Step 1 - Download Java

Go to the java website and download the latest version of the Java Runtime Environment. The latest version at the time of this document is: Recommended Version 8 Update 181. And it can be downloaded from <https://www.java.com/en/download/>

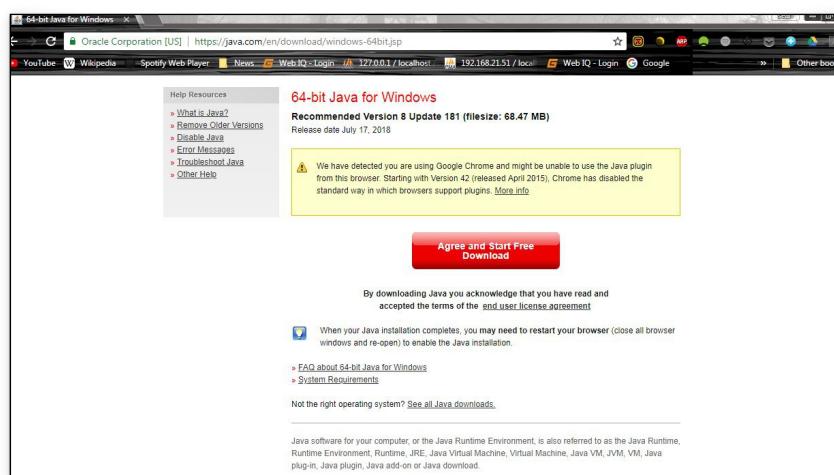


Figure 1: Java download page on [www.java.com](https://www.java.com)

## 2. Step 2 - Install Java

Once download is complete, locate and run the installation file. It will most likely be named similar to this - jre-8u181-windows-x64.ewe

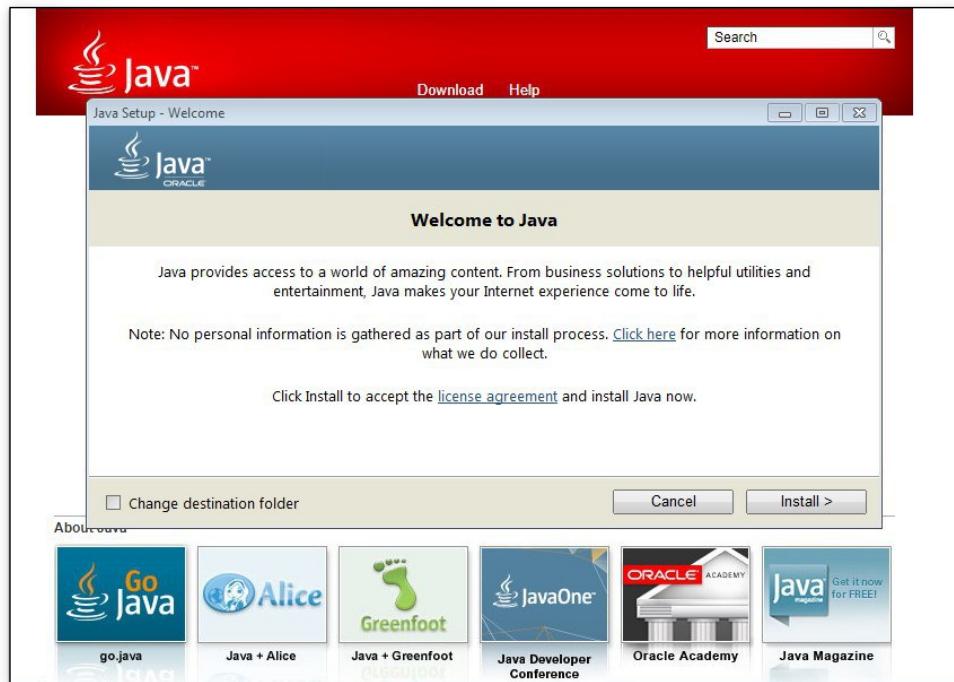


Figure 2: Start Installation of java

You will be prompted to change or leave the destination as is. You can leave it as is and click install, follow the prompts until installation is complete. Once complete you can verify your java installation by going to this link: <https://java.com/en/download/install8.jsp>

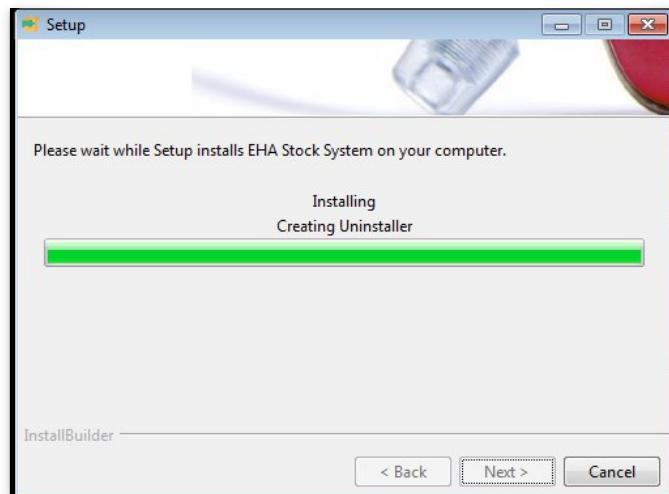


Figure 3: Completing Java Installation

### 3. Step 3 - Configure Java

You should now be able to access the Java control panel located in the taskbar. Click start bar, Go to the control panel, go to the security tab, and check Enable Java content at the top of the screen.

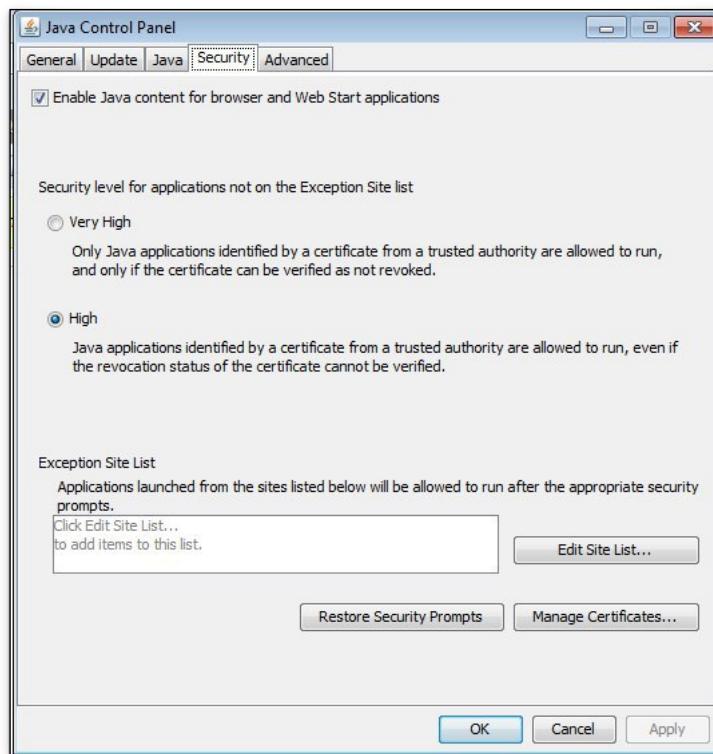


Figure 4: Java Control Panel

4. Make sure your browser has allowed java to run. If not, go to your browser settings, and manage add-ons. Click Toolbars and extensions, and set allow java to on.
5. Once installed, you can check the installation by clicking on the start menu, and then go to all programs, then Java, then click on configure java - this will open the Java control panel.

*You have now installed and configured Java.*

# 4.0 - Database and Server

## 4.1 - WAMP Environment (Apache, MySql, PHP)

WampServer is a Web development platform on Windows that allows you to create dynamic Web applications with Apache2, PHP, MySQL and MariaDB. WampServer automatically installs everything you need to run a native version of the EHA Desktop software on your system. You will be able to change your server settings without even touching its setting files. WampServer is available for free (under GPML license) in both 32 and 64 bit versions.

### Steps to install and configure WAMP Server on Windows 7:

Steps to complete:

1. Download Wamp
2. Install
3. Test
4. Configure

#### 1. Step1 : Download Wamp

Before doing anything you need to download WAMP from the link <http://www.wampserver.com/en/#download-wrapper>

You will have the option to choose either a 32 or 64-bit environment depending upon your computer's configuration. In addition to Apache, PHP and MySQL this download includes phpMyAdmin .

#### 2. Step 2 : Install the Software

Once you have downloaded the WAMP then double click on the setup and you will need to go ahead and launch it to start the installation process.



Figure 5: Wamp Setup Wizard Start

When you will click the next button then you will be asked to accept the license agreement. Click accept. Then select the folder where you would like to install your WAMP server. The default will be c:\wamp however you can change this to install the server into any directory or partition you choose.



Figure 6: Wamp select Destination folder to Install

After you choose your directory you will have the option to setup icons. Once you decide on this click the Next button and then confirm the installation settings by clicking Install.

Once the installation runs its course you will be asked to choose your default browser. Internet Explorer is the default choice but you can navigate your way to any other browser of your choosing.

(if your Windows firewall pops up at this point make sure to grant Apache access).  
Next is to set up the smtp and PHP mail parameters. You can leave this set to the defaults. click Next.



Figure 7: Wamp server : Set localhost smtp settings

*Congratulations, WAMP Server is now installed on your local computer.*

### 3. Step 3 : Test the Installation

#### The WAMP management console

Navigate the below steps to the Management console :

Start -> All Programs -> WampServer -> start WampServer, you can launch the management console. Once opened, it will appear in the lower right hand side corner of your screen.

If WAMP is not started go ahead and click Start All Services. If you are not sure whether or not WAMP is running, look for the small green W icon in your toolbar. If it is red, WAMP services are stopped, green means everything is running while orange means some services are running. Most likely first time use will require you to install the apache service manually.

- To install the service manually, go to the control panel at the bottom of the screen, click on Wamp, then scroll to apache, then scroll to Serviceapache64, then click install service.
- This will start the installation of the apache service. You will be prompted to install - confirm and the installation will be instantaneous.
- Check the logo, it should now be green.

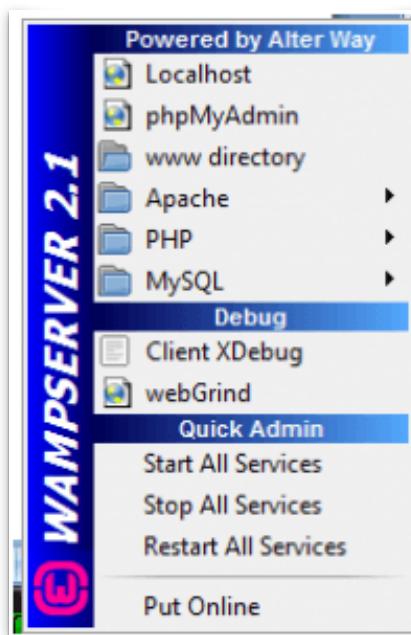


Figure 8: Wamp Management Console

Now we want to test to see if everything was installed correctly.  
In the WAMP management console, click on Localhost. If you see the following screen pop up in your browser then everything is working!



Figure 9: Wamp Console in Browser - Working!

## 4. Step 4 : Configure phpmyadmin (Install the Database and add users)

Click on the phpmyadmin link or type localhost / phpmyadmin on URL then you will get the interface of phpmyadmin like below :

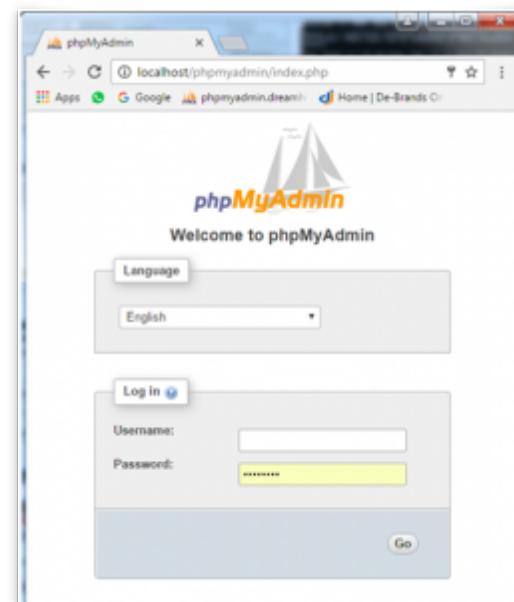


Figure 10: PHPMyadmin login screen

Insert root in the username and enter the password that you filled at the time of installation (also root) then click on the go button you will be redirected to the phpmyadmin dashboard. You are now ready to configure PhpMyadmin and install the EHA Database.

## Setup The Database

Once logged in, Navigate to the home page of phpmyadmin.  
On the left side panel - at the top, click new.



Figure 11: phpmyadmin database view

Type in the database name as EHA\_Database, and at collation scroll down to utf8 and select utf8\_general\_ci.  
Click Create.

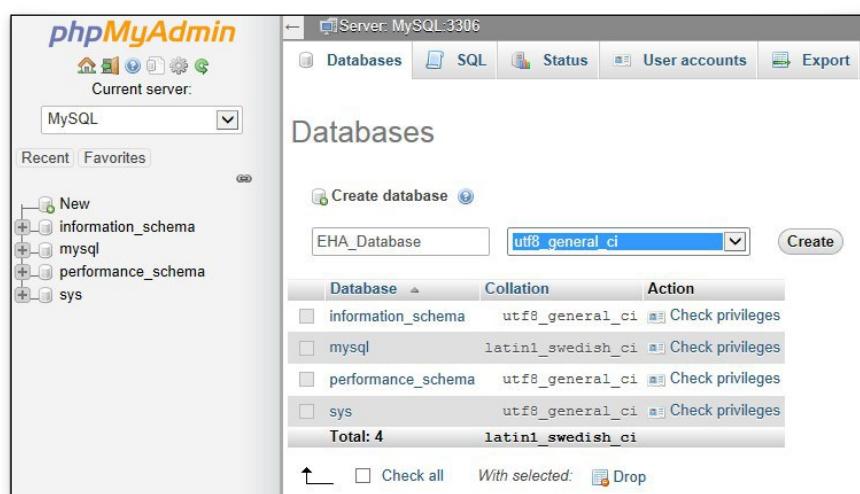


Figure 12: phpmyadmin create new database

This creates an empty database.

Now click on this database in the left side panel, and then go to the middle- top of the screen and click import.

It should now say Importing into database "EHA\_Database".

Go to browse your computer, click browse and select the EHA\_Database.sql file (you received this with the installation package).

Make sure the character set is set to utf8. Click go.

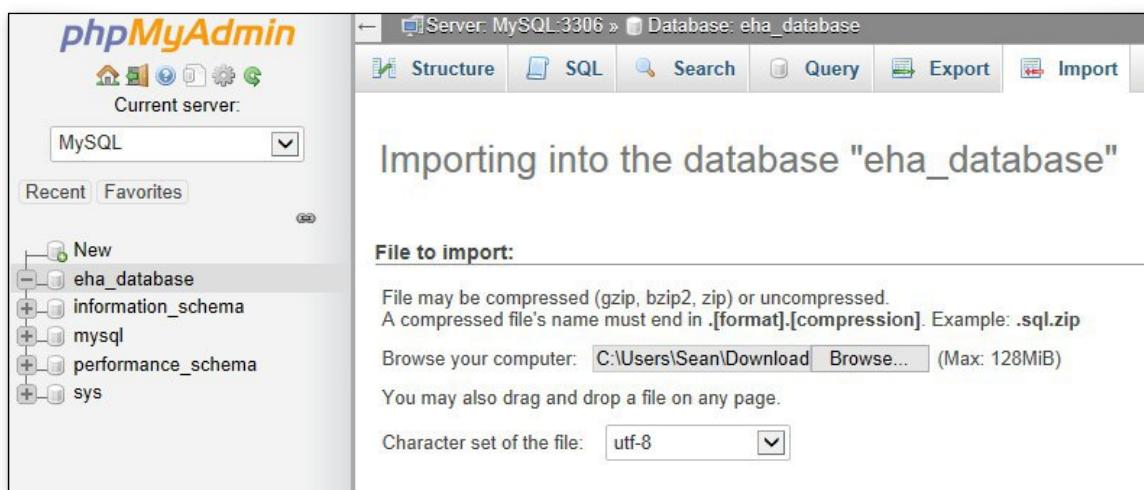


Figure 13: phpmyadmin import sql file

The database should now be imported and you should see a green bar confirming this.  
(A pink bar means something might have gone wrong and some aspects of the database might not have copied properly)

Navigate to any of the tables on the left, and you should be able to see data in the fields.

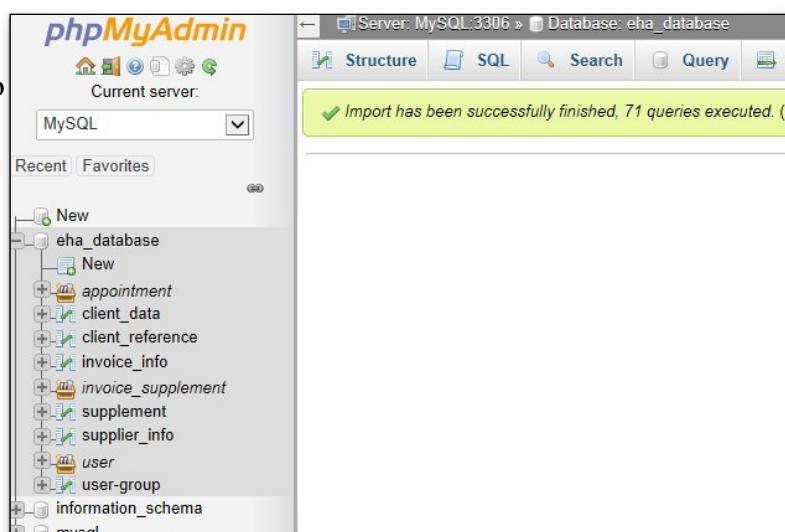


Figure 14: phpmyadmin database tables after import

## Add Users

Add users to the database in the user table, they will require a username and password to login to the system.

*The database is now successfully setup.*

# 5.0 - Database Replication

## 5.1 - SymmetricDS (Auto replication and database sync)

SymmetricDS is open source software for database replication, with support for one-way replication, multi-master replication, filtered synchronization, and transformations. Using web and database technologies, it can replicate data asynchronously as a scheduled or near real-time operation. Designed to scale to a large number of databases and operate between different platforms, it works across low-bandwidth connections and can withstand periods of network outage.

### Steps to install and configure SymmetricDS:

#### Steps to Complete:

1. Install SymmetricDs Standalone Application
2. Add as a Node (configure)

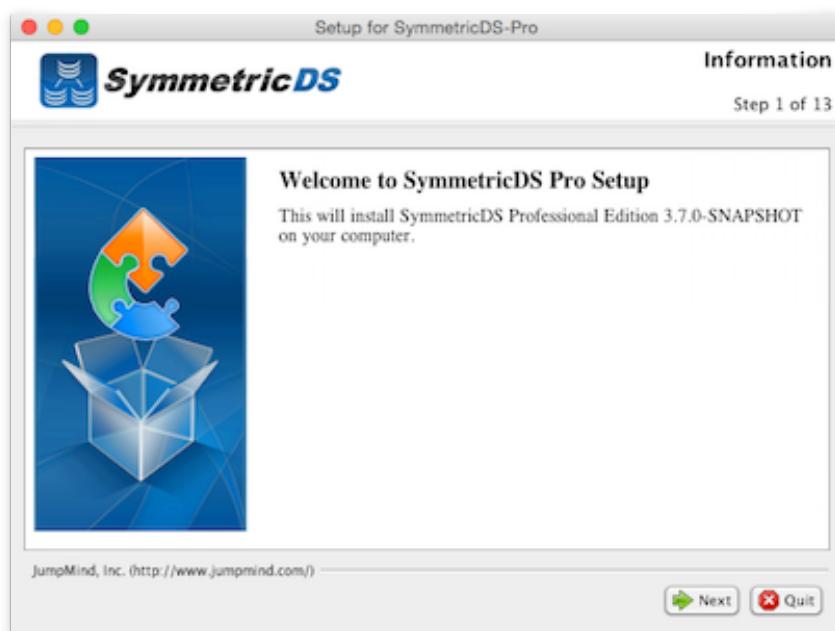
To continue, Make sure the db setup is completed. A database is needed to initialise the db sync!

### 1. Step 1 - Install SymmetricDsPro

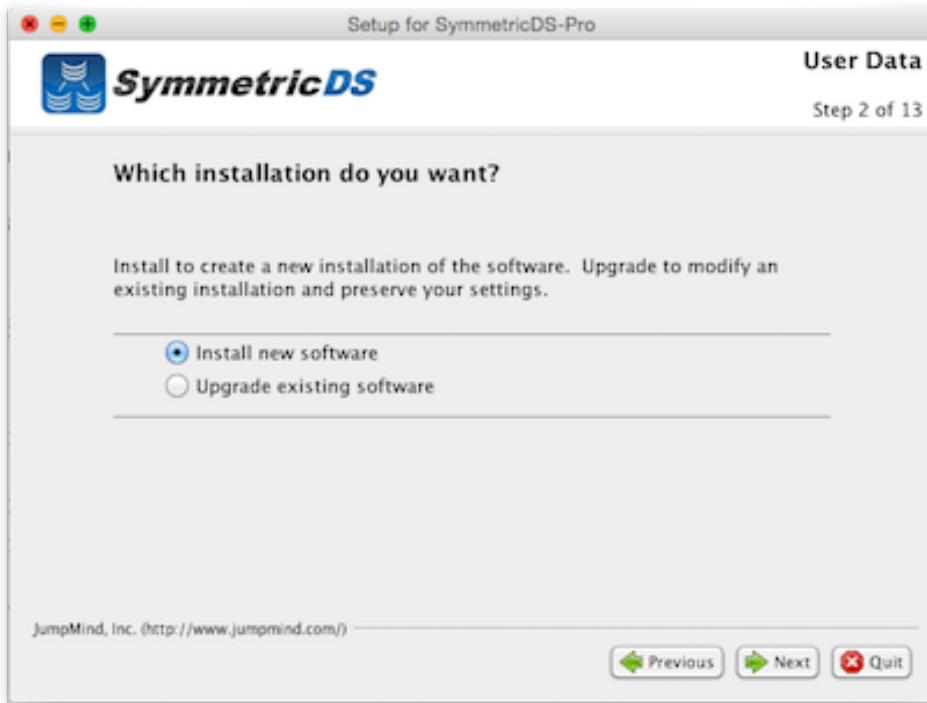
The SymmetricDS installer is an executable jar file named **symmetric-pro-<version>-setup.jar**. In order to run the installer, you must have the Java Runtime Environment (JRE) version 6.0 or newer installed. Start the installer by *double-clicking* it (if the JRE is in your path and associated with .jar files), or by running it from a command prompt, like this:

```
java -jar symmetric-pro-<version>-setup.jar
```

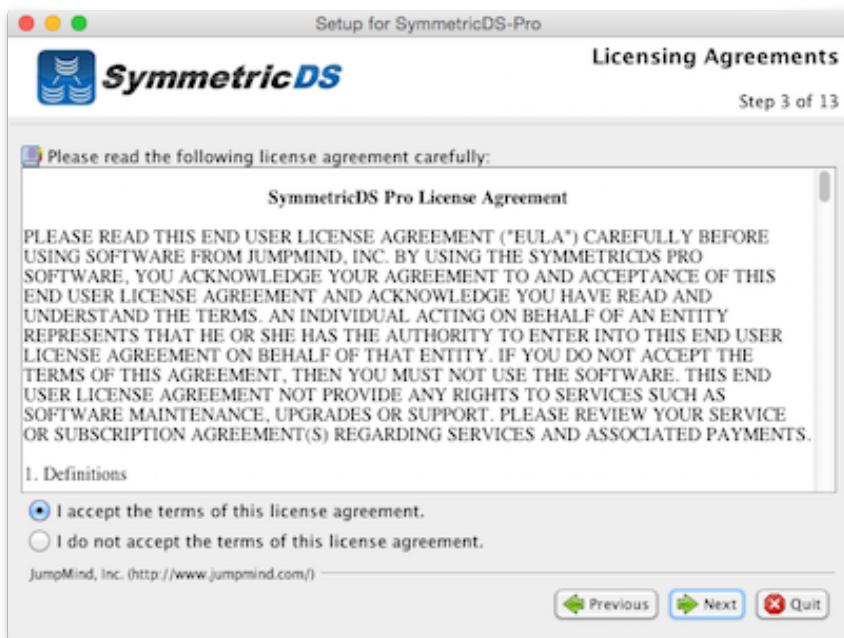
The default installation will run in graphical mode, but it can also be run from a command window by adding the **-console** argument on the end of the command.



The first screen is a Welcome screen that includes the SymmetricDS Pro version number. The installer will ask a series of questions before writing files to disk. To begin selecting installation options, click **Next**.



Specify whether you want to install a new version of SymmetricDS for the first time (*Install new software*) or upgrade an existing version of SymmetricDS that was previously installed (*Upgrade existing software*). For upgrade, the existing installation of SymmetricDS or SymmetricDS Pro is verified before continuing. Select the appropriate option and click **Next**.

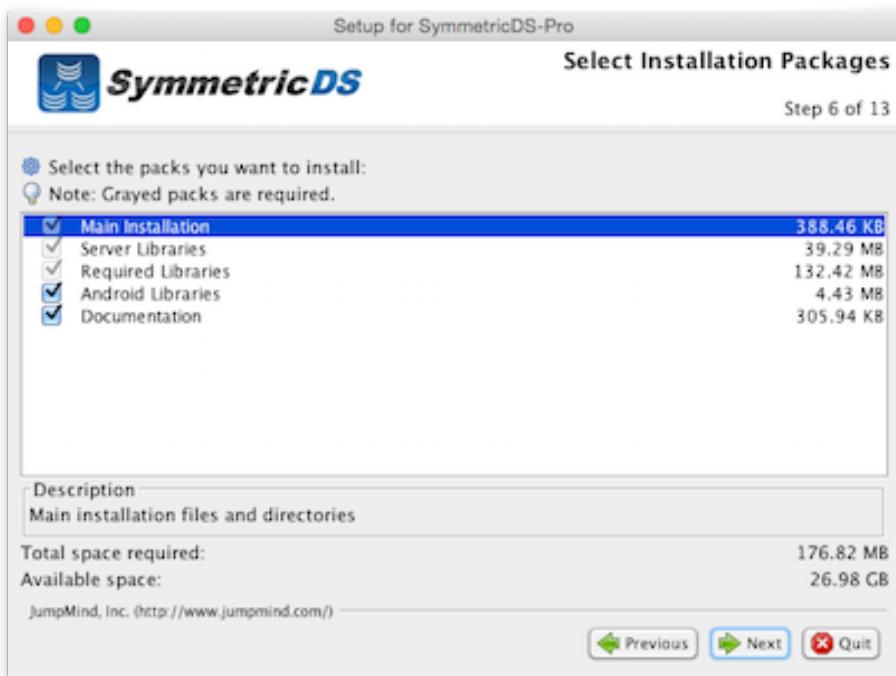


Carefully read the SymmetricDS Pro License Agreement.  
If you accept, select I accept the terms of this license agreement and click Next.



Choose the installation path where SymmetricDS will either be installed or upgraded. If the directory does not already exist, it will be created for you. Make sure your user has permission to write to the file system.

After entering the directory path, click Next.



Select the packages you want to install and verify disk space requirements are met. By default, all packages are selected. If you are NOT integrating SymmetricDS with Android, you can unselect the Android package.  
After selecting packages, click **Next**.



A standalone installation can either be run automatically by the system or manually by the user. Select the *Install service to run automatically* checkbox to install a Windows

service or Unix daemon that will start SymmetricDS when the computer is restarted. The service can be installed or uninstalled later using the Control Center or command line. Select the *Run server after installing* checkbox to also run SymmetricDS after installation so it can be used immediately.

After selecting options, click **Next**.

For standard synchronization and web console access over HTTP, select the *Enable HTTP* checkbox. For encrypted synchronization and web console access over HTTPS, select the *Enabled SSL* checkbox.

The Java Management eXtensions (JMX) are a set of server properties and operations that can be used to manage the server. To enable a simple web console for JMX, select the *Enable JMX* checkbox. To enable remote access for JMX clients like JConsole and bin/jmx, select the *Enable JMX Agent* checkbox.

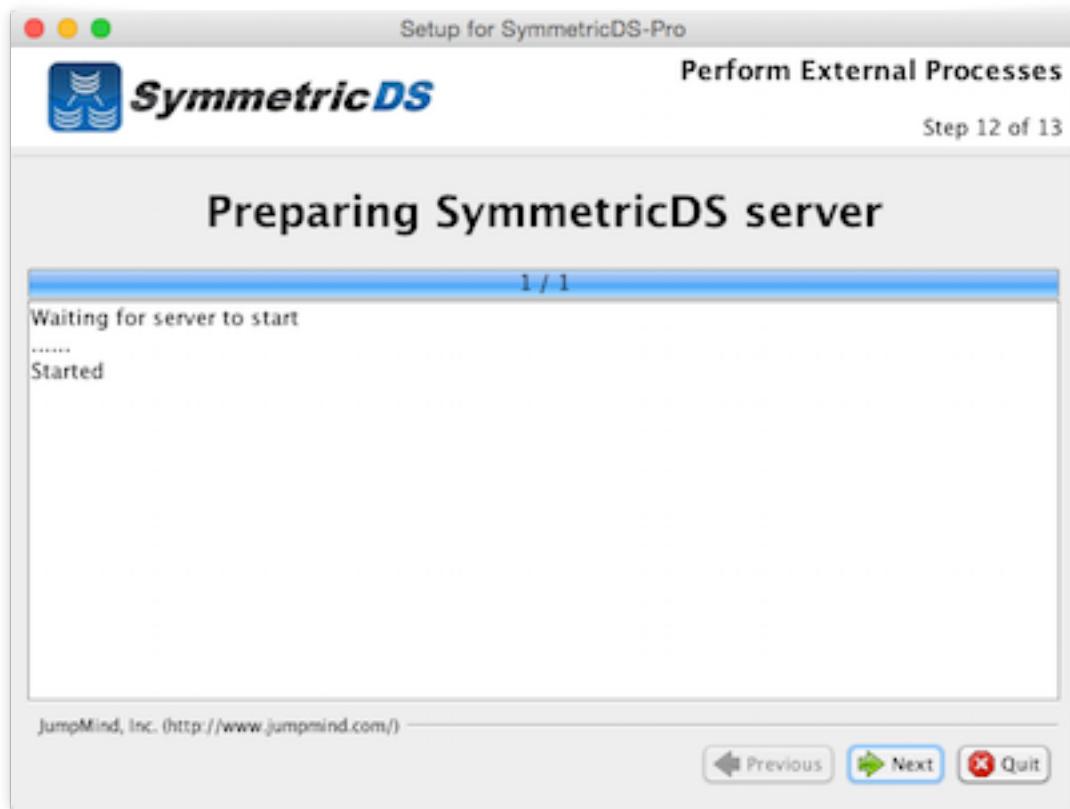
After selecting options and specifying unused ports, click **Next**.



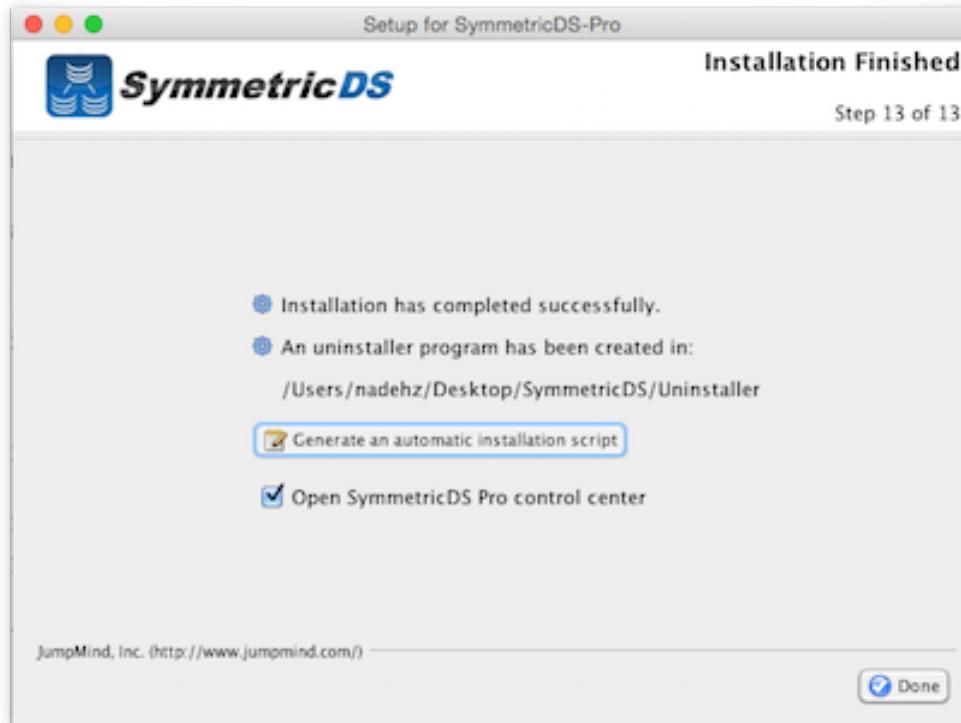
Confirm your installation settings and click **Next** to begin the installation.



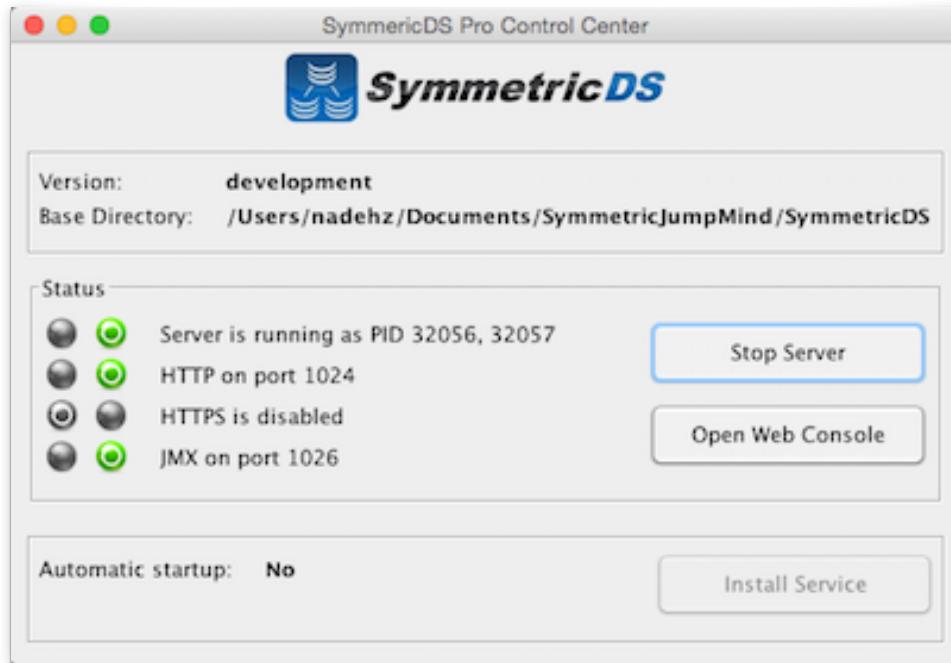
After SymmetricDS finishes installing, click **Next**.



If you chose the option for the server to start after installation, wait for it to start and then click **Next**.



The installation is now complete. Choose if you want to open the SymmetricDS Pro Control Center where you can view the server status and open a web console. Click **Done** to exit the installer.



From the SymmetricDS Pro Control Center, you can start/stop the server, open the web console, and install/uninstall the service.

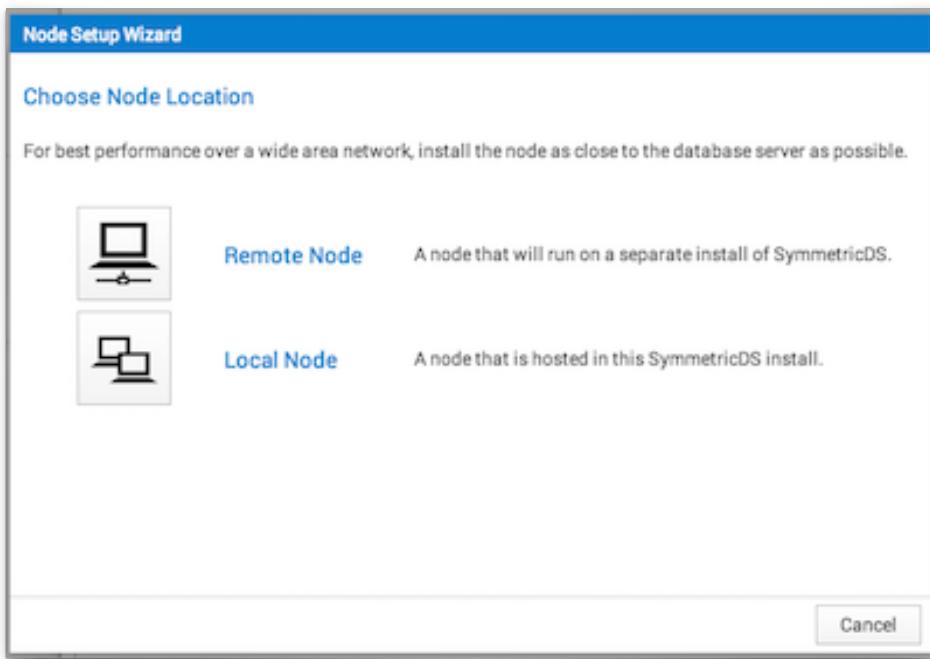
To begin configuration of SymmetricDS, check that the server is running, and then click **Open Web Console**.

<http://Seans-MacBook-Pro.local:31415/sync/server>

## 2. Step 2 - Add This installation as a node

Multiple nodes can be hosted in a single SymmetricDS instance. SymmetricDS will start a node for each properties file it finds in the engines directory. Multiple nodes can be hosted in a single SymmetricDS instance. SymmetricDS will start a node for each properties file it finds in the engines directory.

Add nodes to your synchronization scenario by using the Node Setup Wizard. This wizard is automatically shown when less than 2 nodes are configured. It can also be accessed from the Manage Nodes screen by clicking the **Add** button.



Choosing node location

The screenshot shows the 'Node Setup Wizard' window with the title 'Remote Node Setup Instructions'. It contains the following text:  
1. Install SymmetricDS on the remote machine.  
2. Open the web console for the remote machine and setup the new node.  
3. When prompted during setup, use the following Registration URL:  
  
  
Auto registration is enabled, nodes will register automatically.  
  
At the bottom, there are 'Cancel', 'Previous', and 'Finish' buttons, with 'Finish' being highlighted in blue.

The registration url shown on this screen above will be used by the remote node during its installation process in order to properly connect to the SymmetricDS network.

Please enter: **http://Seans-MacBook-Pro.local:31415(sync/server)** as the Registration url.

# Database Setup

**Node Setup Wizard**

**Configure Database Settings**

Next, you will configure the connection to the node's database. Some supported databases require that a driver be downloaded and installed.

If you get a warning that the driver cannot be located, you will need to download and install the driver in the lib directory of the SymmetricDS installation.

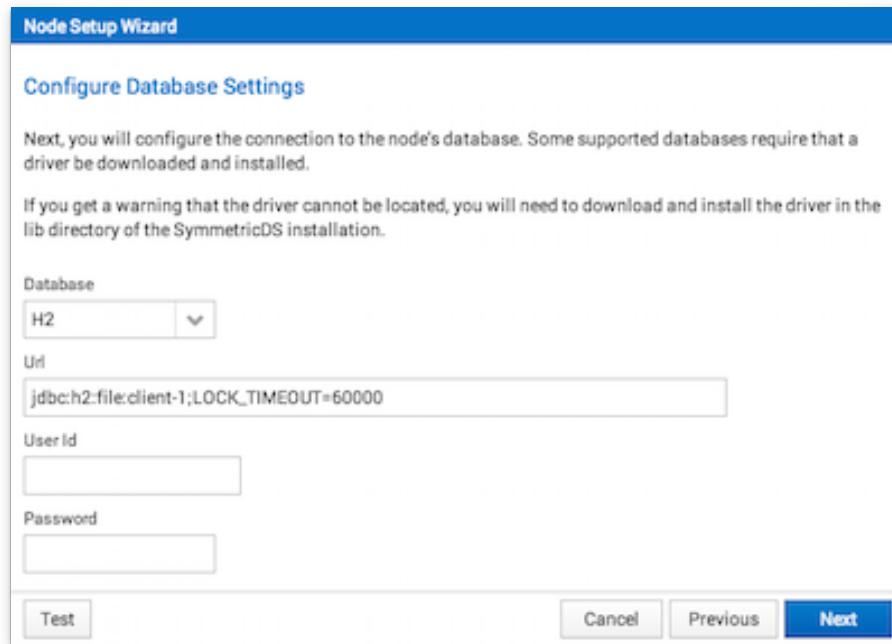
Database: H2

Url: jdbc:h2:file:client-1;LOCK\_TIMEOUT=60000

User Id: (empty)

Password: (empty)

**Test** **Cancel** **Previous** **Next**



Provide database credentials to connect the node to a database.

After selecting a database type the jdbc url will be populated for you based on the driver. Be sure to replace host name, port, and database name if necessary (varies by type).

Please enter the following in these fields:

Database: MySql

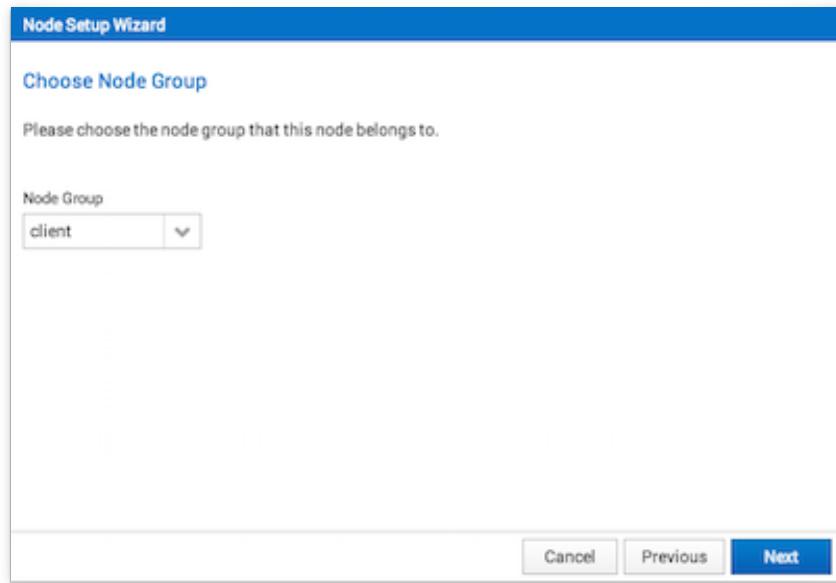
Registration URL - jdbc:mysql://localhost/eha\_databse?tinyInt1isBit=false

userid = root

password = root

Click Test, to see if database connection is successful.

## Node Group



Provide the registration url in order to register the node on the SymmetricDS network.  
This url is the sync url of the Master Node:

<http://Seans-MacBook-Pro.local:31415/sync/server>

As the Node group, please enter: slave.

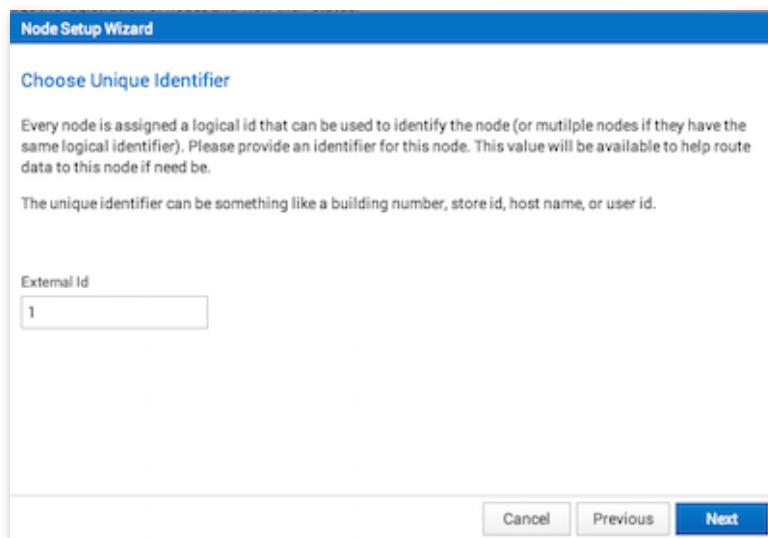
The list of groups will be provided from the Master Node.

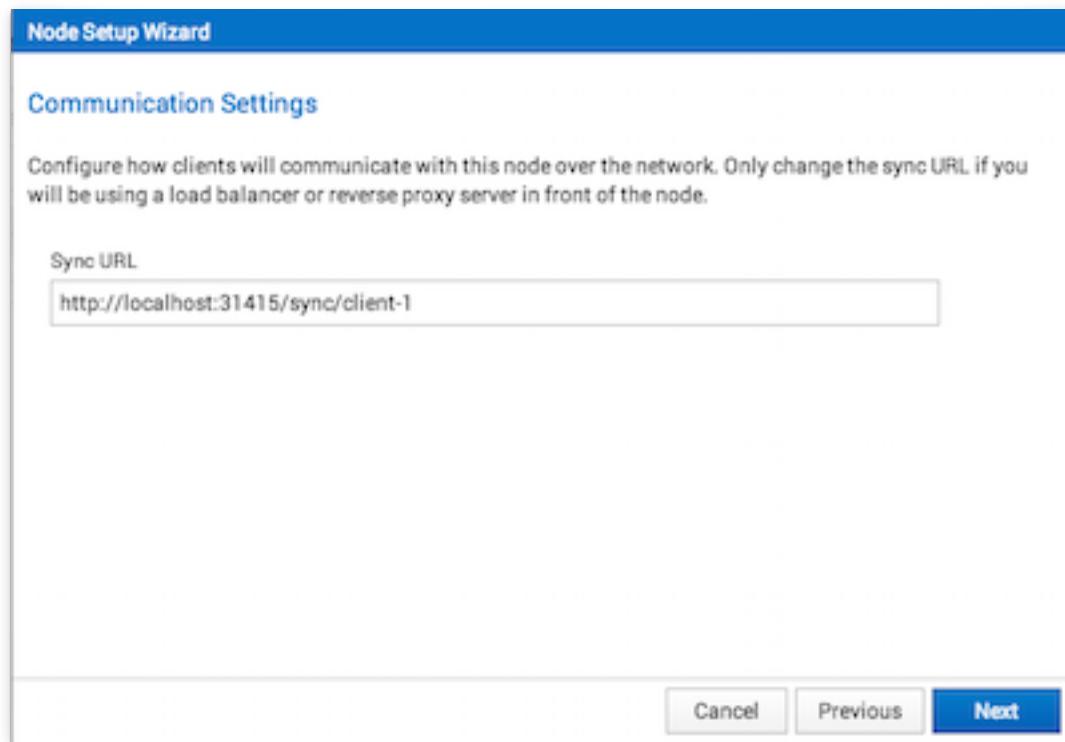
A new group can be typed in though if the desired group is not present.

External ID = 0002

This is a unique identifier for the node.

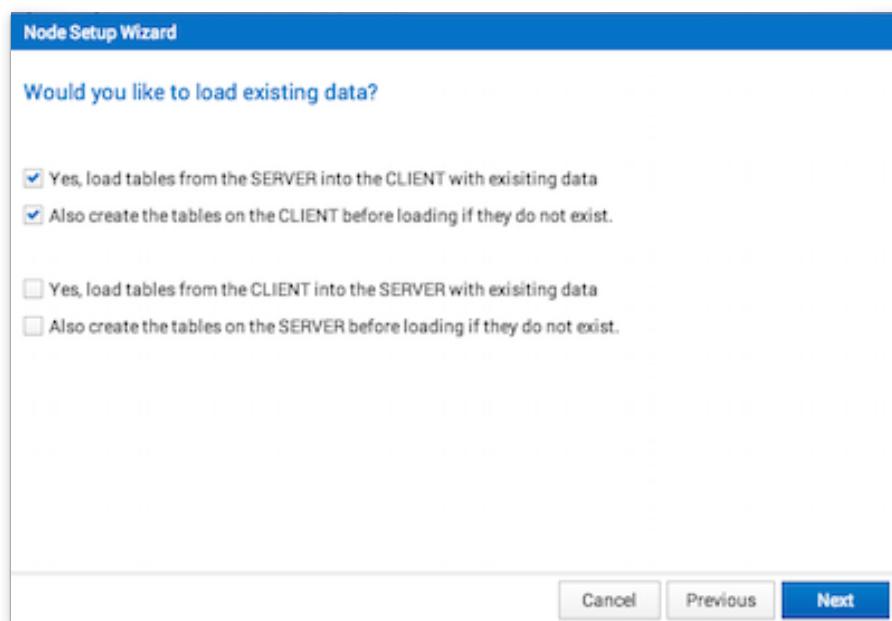
(In our case : 002)





If your network will be accessing the web console through a proxy or a different host name than the one shown in the first bullet you can override the hostname to be used. You can also select HTTPS or HTTP to be used for transferring data.

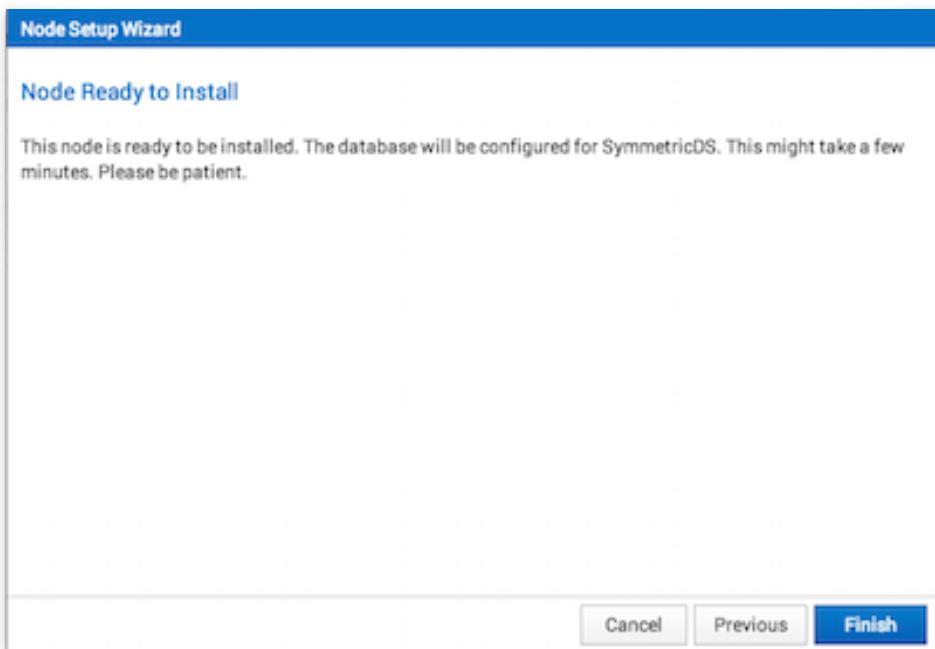
#### Load Existing Data



Often when new nodes are connected for synchronization they need to be initially loaded with existing data before synchronization was in place.

You can also indicate if you wish tables to be created in the new node as part of the initial load process if they do not already exist.

Finish



*The node is now ready to be installed.*

*SymmetricDs will attempt to sync the server and slave installations*

# 6.0 - EHA Stock System Software

## 6.1 - EHA Desktop Stock System Software

EHA Stock System is an application that allows collecting and managing information of the EHA Supplement Stock, EHA Clients, Invoices, appointments, and EHA Supplement Suppliers. The application provides an easy and user-friendly way to manage information.

### Steps to install and configure EHA Stock System Software:

#### Steps to Complete:

1. Install
2. Run

Make sure the database is installed and working correctly before attempting to run this software!

### 1. Step 1 - Install EHA Stock System Software

Locate the installation file named ehaStockSystem.exe, and run it.

Follow the installation package prompts.

You will be prompted to choose a destination folder, you can change this to a destination of your choice, or you can leave it as is. Click next.

Once installation is complete click finish.

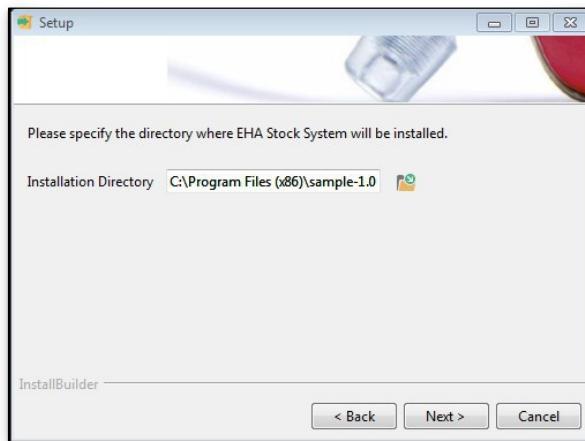


Figure 15:EHA software installation

## 2. Step 2 - Run the software

3. Go to the taskbar and go to EHA StockSystem folder, click on EHA Stock System.exe to run the application.

If there are any complications with the application, or problems with installation, or if you wish to delete the application for any reason, go to the taskbar, find EHA StockSystem folder, in here you will also find uninstall.exe. Run this to uninstall the EHA application at any time.

## 7.0 - Additional information

For additional information and help, please refer to the following:

### Windows 7

If you have any problems with the windows installation, you can re-install operating system as a clean install. You can follow the steps by going to this web page:  
[https://www.wikihow.com/Install-Windows-7-\(Beginners\)](https://www.wikihow.com/Install-Windows-7-(Beginners))

### Java

Follow this link for more information and help regarding Java download and install:  
[https://www.java.com/en/download/help/index\\_installing.xml](https://www.java.com/en/download/help/index_installing.xml)

And this link for more info about Java in General:

<https://go.java/index.html?intcmp=gojava-banner-java-com>

### WAMP

Follow this link to get more information about installing WAMP :  
<https://allinonetuts.com/install-wamp-server-windows-7/>

And this link for more information about WAMP server:

<http://www.wampserver.com/en/>

### SymmetricDs

Help with Installing SymmetricDs Software:

[https://www.symmetricds.org/doc/3.9/html/user-guide.html#\\_installation](https://www.symmetricds.org/doc/3.9/html/user-guide.html#_installation)

### EHA Stock System Software:

User Manual:

EHA StockSystem Software v1.0