

# Project Tender

Project Name: Integrated Gynaecology Patient Information Management System.

**Client Name:**

Prof. L.C. Snyman

**Contacts**

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**Team Name:**

IT Admirals

**Team Members:**

Mr Sboniso Masilela

Mr William Seloma

Miss Martha Mohlala



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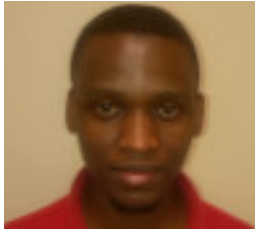
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# 1 The Team

## 1.1 Mr W. Seloma

William Seloma

May 3, 2015



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### Education

- **Vukuzame F.E.T School** Empumalanga, South Africa  
*Grade 12* 2009
- **University of Pretoria** Pretoria, South Africa  
*Final year Bis Multimedia* 2015

### Objectives

- I am a dedicated Person who seeks to Use my skills and education to develop good Software that would simplify life for people, I am eager to learn and to be challenged in order to develop my problem solving skill and my programming skills and also to grow as a person.

### Experience

1. Web development using HTML, CSS, jquery and Javascript
2. Game development using Unity and C

### Skills

1. WEB DEVELOPMENT (LANGUAGES BELOW)
  - HTML 5
  - CSS / CSS5
  - Javascript, JQuery and Ajax
  - PHP

- XML, XSLT, XML Path
- SQL, noSQL
- DB4O

## 2. PROGRAMMING (LANGUAGES BELOW)

- Java
- C/C++
- C
- python

## 1.2 Mr S. Masilela

Sboniso Masilela

May 3, 2015



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### Education

- **Tinhlonhla High School** Mpumalanga, South Africa  
*Grade 12* 2008
- **University of Pretoria** Pretoria, South Africa  
*Final year BSc Computer Science* 2015

### Objectives

- I am person who is willing to consider new ideas, dedicated on what I do, I've acquired good technical and non-technical skills over the years I spent with the varsity, I am willing to utilize my previously gained skills and new ones' I am going to acquire through this project to give the client results that are more than expected and grow professional in this field.

### Experience

1. Web development using HTML, CSS, JQuery,PHP, and Javascript
2. Developing an agricultural application that farmers use to improve the growth of their crops,it gives them personalized tips and agile methods based on what they have planted(not yet fully completed).

### Skills

1. WEB DEVELOPMENT (LANGUAGES BELOW)
  - HTML 5
  - CSS / CSS5
  - Javascript, JQuery and Ajax

- PHP
- XML, XSLT, XML Path
- SQL
- NoSQL
- DB4Objects

## 2. PROGRAMMING (LANGUAGES BELOW)

- Java
- C/C++
- C

### 1.3 Miss M. Mohlala

Martha Mohlala

May 3, 2015



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#### Education

- **Mang Le Mang High School** Limpopo, South Africa  
*Grade 12* 2008
- **University of Pretoria** Pretoria, South Africa  
*Final year Bsc(IT) Information and Knowledge Systems* 2015

#### Objectives

- I am an open minded person whose career focus is on software and web development and computer networks. I like to take on new challenges and see to it that I create easy and cost effective solutions. I enhance my problem-solving skill by learning fast and as much as possible. I am hoping one day I will put what I have learned to help in developing the world wide solutions.

#### Experience

1. I taught computer literacy as a community based project(April 2011).
2. I am currently teaching assistant for imperative programming.
3. Web development using HTML, CSS, jquery and Javascript.

#### Skills

1. WEB DEVELOPMENT (LANGUAGES BELOW)
  - HTML
  - CSS
  - Javascript, JQuery and Ajax
  - PHP

- XML, XSLT, XML Path
- SQL/MySQL

## 2. PROGRAMMING (LANGUAGES BELOW)

- Java
- C++
- C
- Assembly

## 3. FRAMEWORKS (BELOW)

- Java EE
- .NET
- Node js



## **2 Project execution**

### **2.1 Development Methodology**

#### **Traditional(Waterfall) software development methodology.**

We intend on using Traditional approach because it entails achieving the succession in the implementation process and provides the benefits of milestone-based planning and team building and it involves the following stages:

- Initiation (requirements specification).
- Planning and design.
- Execution (construction and coding)
- Control and integration.
- Validation (testing and debugging).
- Closure (installation and maintenance).

### **2.2 Informing the client about the project**

The client is available as needed to the development team,the client is highly flexible to negotiate time for meetings.The client will meet with us regularly weekly or bi-weekly if necessary.

Providing feed back to our client is essential to the type of development methodology we have chosen, and this we feel ensures a fully functional software which is in line with the clients liking at the end of the development of the software.

### **2.3 Solving technical challenges**

Problem statement

Kalafong Provincial Tertiary Hospital is yet not computerized, meaning Clinical records of patients are kept in a paper based platform (which is clinical files), and this way of doing things it makes things extremely difficult, for instance to get access to accurate data with regards to the patients information, even though the data is accurate but going through the process of gaining access to the information can be very time consuming and it affect research because information cannot be accessed anytime, anywhere and by any means of technology we have in hand.

#### **Overview of current system**

- Clinical records of patients are recorded in an A4 paper by the people on duty.
- The information and its accuracy at times may be hard to verify and referenced to the person who recorded it because the identity of the person is not automatically stipulated to that paper.
- It is easy to lose the clinical records of the patients all at once in case of fire, natural disasters and human error factors.

#### **Proposed Solution**

- First, all the users of the system they will be registered and assigned different access level based on their position (e.g. Medical interns, senior medical students, Research assistants etc.).
- Allow users to record information using different online web based platforms (smartphones, tablets, laptops and desktop computers) and automatically referenced the username of the person entered the record.
- Restrict users to see the information except those authorized to do so.
- Integrate this system will the already existing department Microsoft Access database.
- Link this system with other online systems (e.g. National Health Laboratory System) that may need its services and vice versa.
- Allow users to search patients records using certain parameters (In a usable and faster interface).

This will make the application interacting with our data system able to adhere to the following usability goals:

1. Effectiveness - make the product good at what its supposed to do.
2. Efficiency - help to increase productivity.
3. Utility - provide the functionality that the users want/need.
4. Learnability - Make it easy for user to learn and use the product.
5. Intuitive - Make it easy to use and understand the application.

## 2.4 Technologies we will used

**Technologies we see are suited for the Building of the system:**

1. Visual Basic .NET or C would be our choice as there are enough objects and classes built-in to support create medium size database driven applications without writing much code :), objects in the OleDb namespace can be used to connect and insert/retrieve/update data in the database.

## 2.5 Implementation plan

This aims to outline the System Development Life-Cycle (SDLC) of the proposed project solution.

### Overview of Implementation Phase

Before implementations takes place, the development team will provide you (client) with the following documents:

#### **Functional Requirements document**

- This document will address an in depth description of the Integrated Gynaecology Patient Information System, its primary and equivalent purpose of the system, set apart the functional and non-functional requirements of the system and its features, and the front end(which is the interface),and all the pre and post conditions that must be met when the system is working properly.

## **Architectural Design document**

- This document will address an in depth description of the Integrated Gynaecology Patient Information System, based on what architecture patterns that will be used and why?, that will be based on features each pattern provide which equivalent to meet the requirements of the system and its subsystem, and it will give an in depth understanding of the non-functional requirements in their priority order (which is critical, important and nice-to-have)

## **Testing Document**

- This document will simply give a full report whether and the pre and post conditions of the system are met and shows whether the system works the way it is expected to. some of the usability goals include the following:
  - Effectiveness - is the product good at what its supposed to do?
  - Efficiency - does the product help to increase productivity?
  - Utility - does the product provide the functionality that the users want/need?
  - Learnability - is it easy to learn to use the product?
  - Intuitive - is it easy to use and understand? etc.

## **Included in all the above stipulated documentation will be:**

1. Unified Modelling Language (UML) diagrams to further illustrate the flows, operations, sequences etc. that form part of the system's operation.
2. Database Entity Relationship (ER) diagrams to illustrate the system entities that will form part of the system's persistent data.

## **Users and installation manual**

This document will provide a full description of how the system works to ensure effective usability of the system