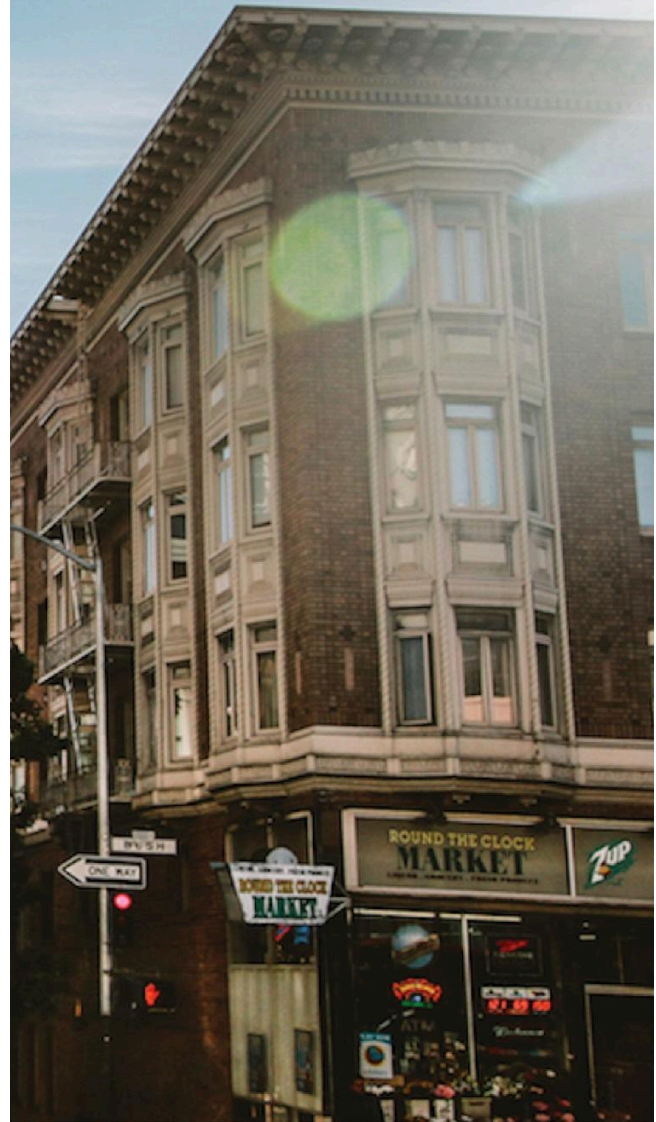


ISD 316D Project Phase 1 & 2



MAY 16th

Kalafong Hospital
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Teffo

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Overview

Kalafong Provincial Tertiary Hospital (also known as Kalafong Hospital) is a public hospital in Pretoria, Gauteng, South Africa. The hospital is situated on the western outskirts of Pretoria in the suburb of Atteridgeville.

Kalafong serves an estimated 2 million people. The hospital was built in March 1973 to service the large black population. The massive proliferation of informal settlements in our catchment area together with the burden of HIV/AIDS, has resulted in increased patient load. Key health problems include HIV/AIDS, TB, chronic non communicable disease, trauma, and violence.

Kalafong Objectives (vision and mission)

- A caring and compassionate, professional service.
- A clean and well maintained, secure therapeutic environment.
- Minimized waiting times.
- to create an environment where quality health care is available

Stakeholders

Sponsor: Gauteng department of health, Mr Malebana DD.

Users: Doctors, patients, pharmacist, receptionists, managers.

Project team: Project manager

: Business analyst

: Database administrator

: System analyst

TELL CURRENT SITUATION

At Kalafong Hospital, there are no computers, everything that the receptionist does is handwritten and she uses a photocopying machine to copy patients' IDs, medical aid, and medical records. At the end of the process, she files patient's records and keeps them in the paper folder and stores them in a cupboard. Quite often patient files get lost or miss placed. The manual system is also very slow and causes overcrowding in the hospital, to an extend where some patients do not get an opportunity to health care services. The hospital is filthy due to the crowed.

The process takes 2hour for the patient to queue for consultation due to the number of people on the queue.

Problem description JUSTIFY WHY THERE IS A NEED OF THE PROJECT

1. Due to the fact that there are no computers, everything is handwritten and they use photocopying machine to copy patients' IDs, medical aid, and medical records.
2. The paper folders are stored in a cupboard.
3. Quite often patient files get lost or misplaced.
4. The manual system (use of papers) is also very slow and causes overcrowding in the hospital, to an extent where some patients do not get an opportunity to health care services.
5. The hospital is filthy due to the crowd.
6. The process takes 2 hours for the patient to queue for consultation due to the number of people on the queue.

Project need justify why is the system needed

To transform the current system of running things at the hospital. With this project there will be more service that will be rendered at the hospital than before. It will fasten and make things easier for all people at the hospital. Explain in details.

Proposed solution

1. Create a system that will be used by all the hospital personals (Doctors, Managements and Receptionists) and the patients.
2. The hospital should recruit receptionists, doctors, cleaners...
3. They should renovate the hospital
4. Increase spaces in the hospital to allow all the patient to be treated
5. Instead of using a photocopy they should use a scanner and save all the patients details in a database.

Tell what the system will be doing, what is the system going to do.

To address the challenge that the hospital is facing, we are proposing to create a system That will be used by all the hospital personals and the patients.

We are planning to create system that will process an online registration, by allowing people to book online for consultation, excluding cases of emergencies, to reduce the number of people at the hospital.

To hinder patients from standing for a long time which can deteriorate their health by allowing each patient to have their specific time slot.

We will create a system that will have a database to keep the patients and the hospitals records to avoid losing patient's files...

Make the hospital management more efficient.

System interface.

How is the project management system going to interact with the hospital management system.

SCOPE CREEP

CHANGES, HOW TO MANAGE THE PROCESS. BABOK

Phase 2 Project plan

1. Executive summary Brief introduction

2. Tell what the system will do and what it will not do, give the functional requirement and non functional requirement.

3. End Users of the system what will the staff of the hospital going to do when they get in the system.

4. Organisational chart for the project : how far are you, and who is the person accountable for it.

5. How long that the phases took.

***number of days for phase 1 : explain**

6. WBS : indicate what need to be done, is a time table of

***how to things must be completed, outline the ressource.**

***What are the resource that he need to use**

Business analyst : business analysis body of knowledge

Reporting : explain how it was reported, what happened,write a report

***Change managemet process**

How to handle changes in the hospital

Phase 3

System process

1. The hospital will have an online web page that is available on smartphones or computer the online booking will also be available at the hospital to allow all the people who do not have devices to book for an appointment.
2. Patient will be asked to book an appointment online or at the hospital and will be given a time slot.
3. The receptionist will be receiving the patients forms and save his details on the hospital's system
4. The doctors will be receiving the form and store the diagnosis on the system
5. The Pharmacist will receive the prescription via the system sent by the Doctor.

Project Scope

How should the system work?

1. For personals:

1.1 Doctor

The system will help the doctor to access patient's files, to update patient's health conditions

The doctor should be able to see notification from hospital management

1.2 Management

The system will be helping the hospital's management to manage personals (doctors, receptionist, pharmacist)

The management should be able to see how many times personals login and what they did.

For example: The system will allow management to see number of patients that a doctor consult per day, week and month

1.3 Receptionist

The Receptionist will use the system to register patient's file and send it to the doctor

1.4 Pharmacist

The pharmacist should be able to access patient's files to see if the patient is in the hospital's system

The Pharmacist will receive the prescription through the system.

2. for patients (clients)

The system will allow patients to book appointment, make payment and update his details

New patient will register online, and they will be provided with a patient number at the hospital to secure the hospital from frauds.

What our System will not do

1. For personals:

1.1 Doctor

The system will not allow the doctor to choose which patient to attend only the receptionist will submit the patient's file to the doctor based on the patient's sickness or choice

1.2 Management

The system will not allow the management to access patient's file.

The system will not allow the management to do transaction with hospital's personals

1.3 Receptionist

The system will not allow receptionist to modify patient's file or update anything what the patient as registered

1.4 Pharmacist

The system will not allow the pharmacist to modify patient's file just view

The pharmacist will not provide medication to the patient until the system displays the prescription

2. for Patients

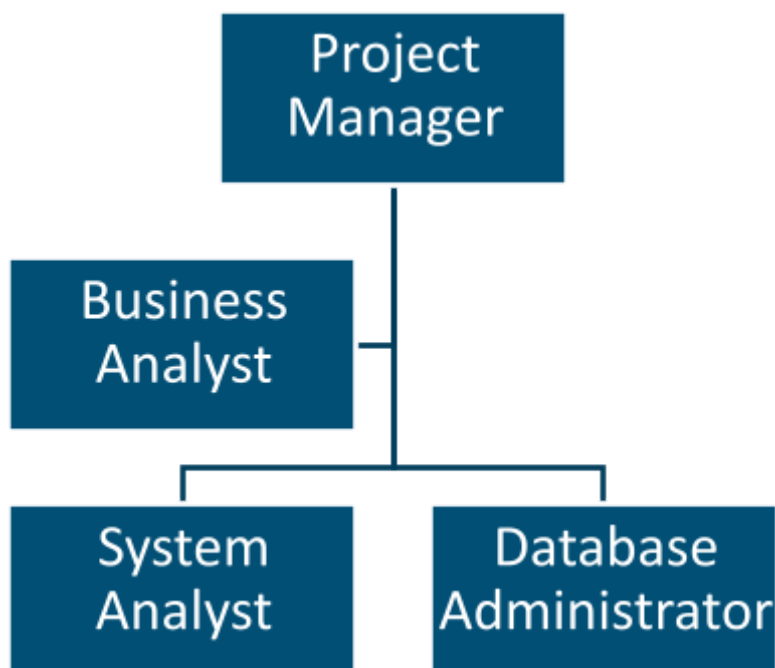
The system will not provide a patient number until they go to the hospital to confirm their identity(for new patients)

The system will not allow the patient to book if the time slot is taken, or if the day is full, the patient will be requested to book for another day

Customer Acceptance Criteria

1. System Security: Enhance Patient confidentiality and trust, make sure patient's file can be access by anyone except relevant people (doctor, receptionist, and pharmacist), the payment will be secure to avoid scammers.
2. System functionality: the system should be fast to execute any instructions from users and being able to be used by many users at the same time without bugging.
3. System accessibility: the system should be accessed everywhere, anytime by users who are registered or not and should access by any kind of devices (computer, phone, tablet, and the hospital if they do not have devices)

Organization chart for the project



Project resources and schedule

1. resources

Money

Electronic devices (computers)

Data

Network

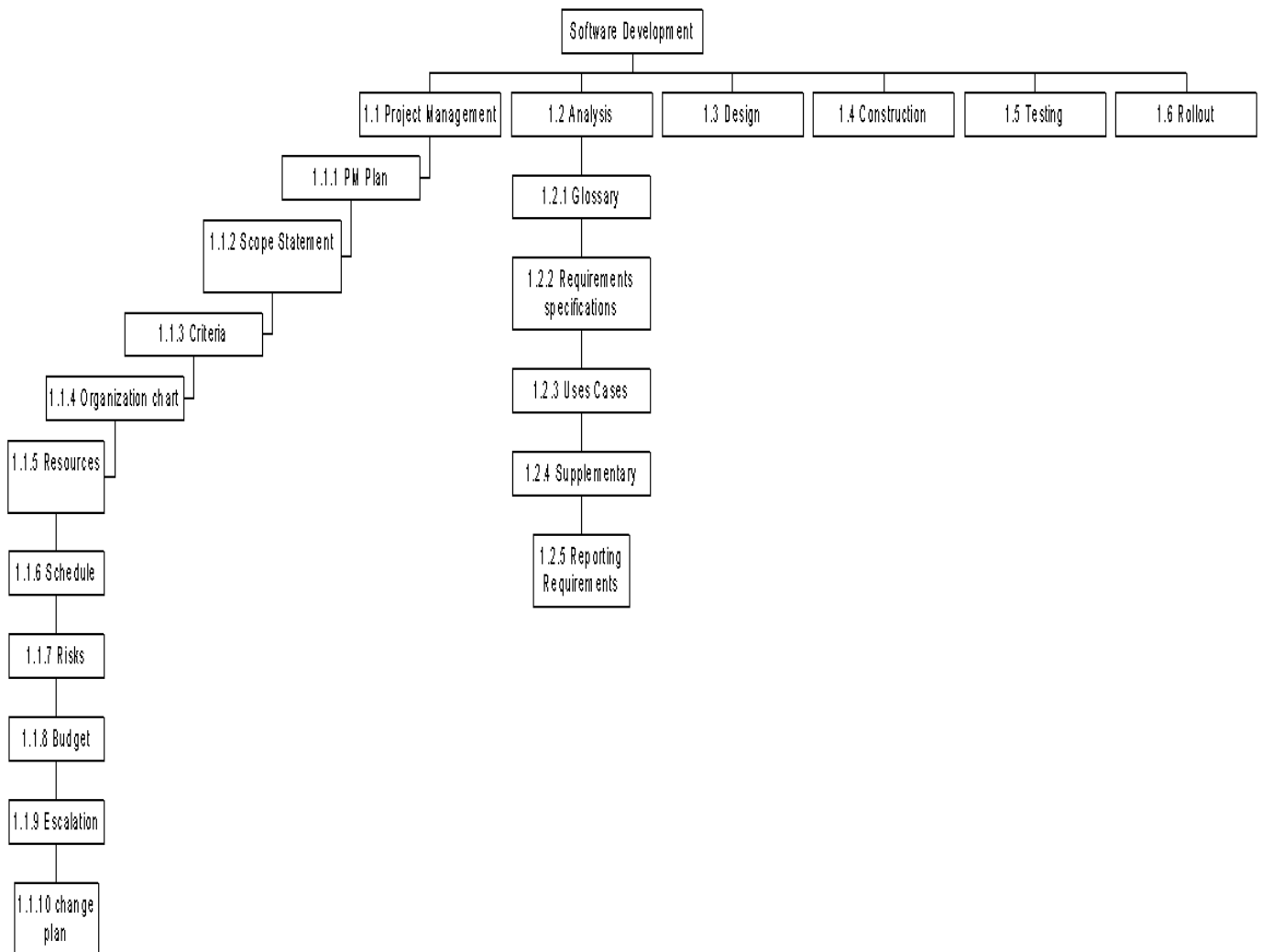
2. Schedule

Project Management Kalafong hospital Project Lead					
		Project Start Date:		09/03/2022	
		Scrolling Increment:		0	

Milestone Description	Category	Assigned To	Progress	Start	No. Days
Title 1					
Task 1: find out need to change	Goal	Business Analyst	100%	09/03/2022	3
Task2:List problems to be addressed	Goal	Business Analyst	100%	12/03/2022	3
Task3:Consult system Analyst and Database designer	On Track	Business Analyst	100%	15/03/2022	3
Task4:Analysing all alternative solution	Milestone	Business Analyst	60%	03/05/2022	3
Task9:Value the solution	Milestone	Business Analyst	0%	06/06/2022	2
Title 2					
Task1:Analysing the current system	Goal	System Analyst	100%	11/03/2022	4
Task2:Plan new system	On Track	System Analyst	33%	15/03/2022	5
Task3:Analyse the system	Milestone	System Analyst	0%	20/03/2022	6
Task4:Design new system	Milestone	Designer	0%	26/03/2022	10

Task5:Develop new system		Milestone	Programmer	0%	06/04/2022	19
Task6:Test new system		Milestone	Tester	0%	22/04/2022	3
Task7:Implement new system		Milestone	System Analyst	0%	25/04/2022	2
Title 3						
Task1:Database initial study	initial	On Track	Database designer	100%	13/03/2022	4
Task2:Database design		Milestone	Database designer	100%	17/03/2022	5
Task3:Database implementation and loading	and	Milestone	Database designer	100%	22/03/2022	6
Task4:Testing and evaluating	and	Milestone	Database designer	100%	17/03/2022	10
Task 5:Operation		Milestone	Database designer	100%	27/03/2022	19
Task6:Maintenance and evaluation		Milestone	Database designer	100%	15/04/2022	3

Work Breakdown Structure



Risks, countermeasures and person accountable for each countermeasure:

External risk arises out of external factors, new government's policies or new negotiation about public hospitals, suppliers.

The Person accountable is the Project manager

Internal risk arises within the project: finding resources, and prioritisation

Person accountable is the project manager

Prioritisation: system analyst, business analyst.

Technical risk: arise out of the technology being used: technology and quality

Person accountable: technicians and developers.

Project management risks arise out of project management activities, estimating, planning, schedule, and communication.

Person accountable is Project manager

Problem escalation

After taking note of potential high risk of serious problem stakeholders, must be held as soon as possible to present them in detail what is happening and measures to take or have been taken to avoid the worst.

Reporting

Weekly _ **project health report** update stakeholders on the overall health of the project, derived from whether the project is either advancing as projected, in danger of stagnation or complexly stagnated

Monthly _ **Project status report** shows stakeholders a general snapshot of how well the project is advancing toward its targets, the project status report can be thought of as general update that's designed to keep stakeholders on project progress, emerging issues, and key points to note, all immediately.

Change management process

Prepare the organisation for change

In the preparation phase, the manager is focused on helping employees recognise and understand the need for change.

Craft a vision and plan for change

Once the organisation is ready to embrace change, project Manager will be developing a thorough and realistic plan for bringing the plan with details:

Strategic goals

1. Key performance indicator
2. Project stakeholders and the team
3. Project scope
4. Implement the change

After the plan has been created, all that is remain is to follow the steps outlined within it to implement the required change

Embed changes within company culture and practices, once the change initiative has been completed, change manager must prevent a reversion to the prior state or status.

Review progress and analysing results

Just because a change initiative is complete does not mean it was successful.

Conducting analysis and review can help business leaders understand whether a change initiative was a success, failure, or mixed result.

User Requirements Phase 4

Purpose and objectives

Creating a new system for kalafong hospital aims to increase the speed of consultation in the hospital, through an online system which will help the organization (hospital) to consult more people and avoid overcrowding the hospital. The system will help to keep patient's records safety.

Project Team

Sponsor: Gauteng department of health, Mr Malebana DD.

Users: Doctors, patients, pharmacist, receptionists, managers.

Project team: Project manager -Kelani LA

: Business analyst-Teffo MK

: Database administrator -Sekoma I

: System analyst: - Mujinga MA

System Requirements

The new kalafong system should be able to allow:

1. Receptionist to register patients by opening files for them

After opening the file, the system will keep the file and make it accessible for specific people like doctors, patient, or pharmacist.

2. Patients to book appointment and make online payment. The system will provide a safe way or process of payment by collaborating with banks.

3. Doctors to access, update patients' files, to communicate with the hospital management

4. Management to monitor hospital personnel (which doctor received who) because the system will show the management all the file's movement (the receptionist sent this file to that Doctor by this time)

5. Pharmacist to view patients file before issuing the medicines

Database requirements

MySQL server database 4 core Intel processor accessibility to authorised personnel Back up and restore data capable of handling large amount of information database administrator.

Customer Database will be needed to save their information, customers information's will be saved in table where we will find their ID number, name, surname, date of birth, gender, address, contact details, opening date of the file. Our system will have a Database for the hospital personnel (Doctor, receptionist, pharmacist) to allow the management to identify all people around the hospital. Their ID number, name, surname, date of birth, contact details,

status, type of contract, duration of contact...etc. All those information will be saved in personal tables.

Managerial Report Requirements

1. Accuracy
2. suitable title
3. precise and simple
4. consistency
5. Reporting relationship
6. Timelines
7. Cost effective
8. selective
9. comprehensions
10. Unbiased

Operational Report Requirements

1. Develop reports for which accurate and complete data can be collected.
2. Develop reports that measure the right thing and that drive you and your team to perform at the appropriate, advertised levels.
3. Develop only enough reports necessary to adequately track success and gauge performance. Too many reports can create unnecessary expenses and paperwork.
4. Develop reports that are simple and easy to explain. If a report cannot be explained in less than ten or fifteen words, it may be too complex or irrelevant.
5. Reports should always pass the SMART test. This means that the metrics will be Specific, Measurable, Actionable, Relevant, and Timely.
6. Reports should be generated daily, weekly, and monthly based upon operational and business needs.

Security Requirements

Passwords and authentication for every personnel authorisation and role identification network and data security.

It will not have the remember password part to the counter act unauthorised access.

All the passwords should be a strong password that have; at least 8 characters including Uppercase letter , a lowercase letter, Special character and a digit.

1. Confidentiality: preserve the access control and disclosure restrictions on information.

Guarantee that no one will be break the rules of personal privacy and proprietary information;

-
2. Integrity: avoid the improper (unauthorized) information modification or destruction. Here is included ensure the non-repudiation and information authenticity;
 3. Availability: the information must be available to access and use all the time and with reliable access. Certainly, it just must be true for those who have right of access.
 4. Authorization and role management.
 5. Audit logging and analysis.
 6. Network and data security.
 7. Code integrity and validation testing.
 8. Cryptography and key management.
 9. Data validation and sanitization.

Interface requirements

User groups

Content presentation

User instructions

User navigation

Data manipulation

Saving and restoring work

Look and feel requirements

the system should look professional and have a simple design that's not too complex to get used to. It should be very responsive (respond quick) and easy for all parties to use. It should appear secure to reassure patients, doctors, pharmacist and all users that the confidentiality is maintained by the system.

Operational requirements

User such as receptionist will be trained for the system to be used effectively.

It will be created according to the policy of the organisation(Kalafong)

Describe in detail the steps in managing new requirement changes

- 1 Evaluate proposed change requests.
- 2 Execute the proposed change.
- 3 Communicate the Change.
- 4 Validate or Seek Feedback.

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- 5 Reject or Batch.
 - 6 Implement and Integrate.
 - 7 Verify and Update.
 - 8 Review and Revise.