TechnicalReport

For

eRolex

Prepared by

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Abstract

Rolex is a popular delicacy in Uganda with high demand in urban and semi-urban areas. As a consequence, getting a rolex made after an order is placed is a time consuming exercise.
At the moment, there is no online platform for ordering a rolex in Uganda. The aim of this project was to design, develop and implement a mobile application that would help solve this problem.
eRolex is a mobile application that enables a consumer purchase a rolex online based on his current position and other specification like price, rolex type and more. This is to be done by making a reservation for a rolex through the phone and then the rolex vendor reserves the rolex for the consumer who will pick it later on, or a delivery (at an extra fee) can be arranged to where the consumer is located depending on the kind of services the rolex vendor provides. The consumer can make a reservation and pay cash on delivery or buy on credit.

Rolex vendors can provide their service information and details using the application. This information will act as the basis for the search results displayed to the user. There are three types of users that interact with the system: rolex consumers, rolex vendors and administrators. Each of these three types of users has different use of the system so each of them has their own requirements.

The mobile application users can only use the application to find a rolex vendor. This means that the user has to be able to search for rolex vendor, choose one from that search and then navigate to it. The rolex vendor will use the mobile application to update the rolex menu displayed to customers. The administrators only interact with the system through the web portal. They are managing the overall system so there is no incorrect information within it. The administrator can manage the information for each vendor as well as the options for the customers.
E Rolex should be free to download from either a mobile phone application store or similar services. This Mobile application allows a customer to make an order for a rolex online from any location at anytime thus saving time in the process. The mobile app also allows to quickly and easily manage an online menu which customers can browse through and use to place orders with just few clicks.

1 Introduction

This document describes the process, progress and results of eRolex, a mobile phone application. It also provides detailed information on the User challenges and solution to that challenge, Project goals and objectives, Product design and functionality, and Limitations during development. This report is prepared for our clients, project supervisor and for the project team.

1.1 User Challenge

Every rolex stall has counter where you can place your order, wait for it to be made and then make the payment after. So every rolex stall needs an employee for taking the order, preparing the rolex and processing the payment.

This is time consuming because a customer may have to wait in line for the rolex until his turn comes. Sometimes a customer craving a rolex may have to rush to the rolex vendor late after a busy schedule only to realize the ingredients are depleted or the rolex stall is closed for the day.

It is an advantage for the customer to know in advance that he will not have to go through the trouble of waiting until his rolex is available, or being put on a waiting queue, or in the worst case, needing to find another vendor to purchase from because the one chosen won't be able to serve him.

1.2 Project Goals

The main objective of this project to design, develop and implement a mobile application that enables a customer to order a rolex online and make a reservation where after they can have it delivered or pick it from the rolex vendor at a later time. This project will address the various challenges which closely relate to the detailed objectives of the project.

Other objectives of eRolex are:

- To computerize the process of ordering a rolex. The customer may not need to go to the rolex stall to place his order. Instead he will place his order with the help of the touch screen using the intuitive graphical user interface.
- To develop a system that takes order from the customer as per his/her choice. The customer selects a rolex from a particular rolex vendor through the available menu.
- To develop a system that calculates and displays the final bill based on the placed order i.e. quantity of the items multiplied by their unit price topped up by the applicable delivery charges if any.

- To develop a system where the customer will have the option of having the rolex delivered to his location and possibility of paying the bill by cash on delivery or on credit. The customer will receive notifications from the vendor to clear their debt.
- To develop a system that offers the choice for the rolex vendor to change the menu items. He may decide to add / delete an item from the menu or want to put festive offers on some items because of which there is a change in the price of some of the items.

1.3 Definitions, Acronyms and Abbreviations

Table 1 – Definitions

Term	**Definition**
Application Store	An installed application on mobile phone which helps user to find new compatible applications with mobile phone platform and download them from Internet.
Bandwidth	The amount of information that something, like a connection to the internet, can handle in a given time.
Delicacy	A rare or expensive food item that is considered highly desirable, sophisticated or peculiarly distinctive, within a given culture.
Rolex	A popular food item in Uganda, combining an egg omelet and vegetables wrapped in a chapatti.
Web-Portal	A web application which presents an interface to the database for the rolex vendor.

Table 2 – Abbreviations

Abbreviation	**Meaning**
App	Application
eRolex	Electronic Rolex
GPS	Global Positioning System
UI	User Interface

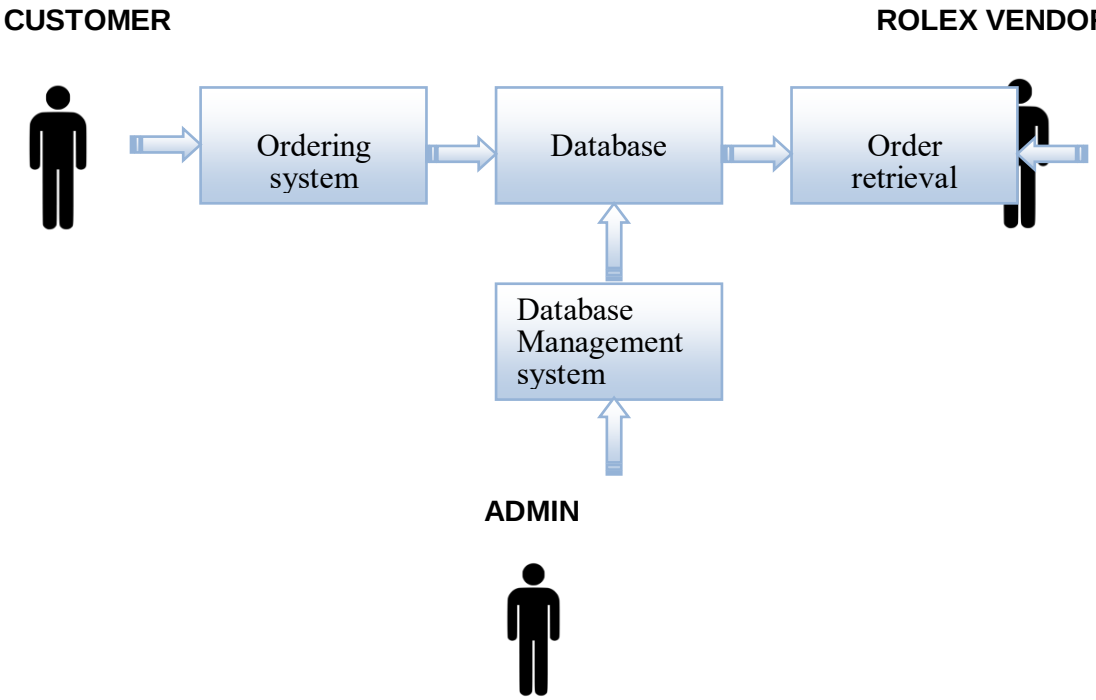
2 Project Results

2.1 Product Design

eRolex is built as a Thin Client application as it depends on server processing and must always be fully connected to the internet. ERolex required a simpler UI, and other specific design decisions in order to work within the constraints imposed by the device hardware. The main constraints are memory, battery life, and network bandwidth. We used the concept of layers in order to maximize separation of concerns, and to improve reuse and maintainability for the mobile application.

The structure of the system can be divided into 3 main logical components:

- *Ordering System:* provides the functionality for customers to place their order.
- *Menu Management:* allows the vendor to control what can be ordered by the customers
- *Order Retrieval System:* allows rolex vendor to keep track of all orders placed. This component takes care of order retrieving and displaying order information

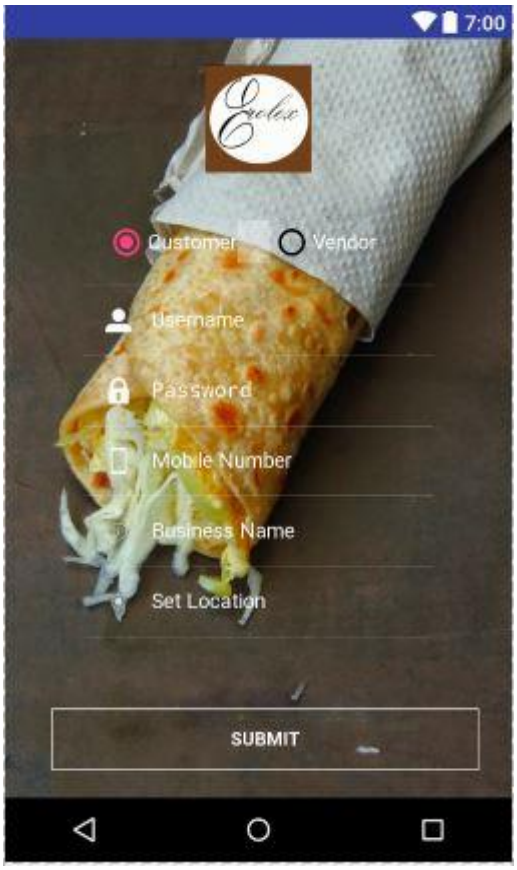


The project involved the use of MySQL database as the database for storing information. Android simulator was used to check the working of the application and the app was checked for compatibility with API 15 as the target API.

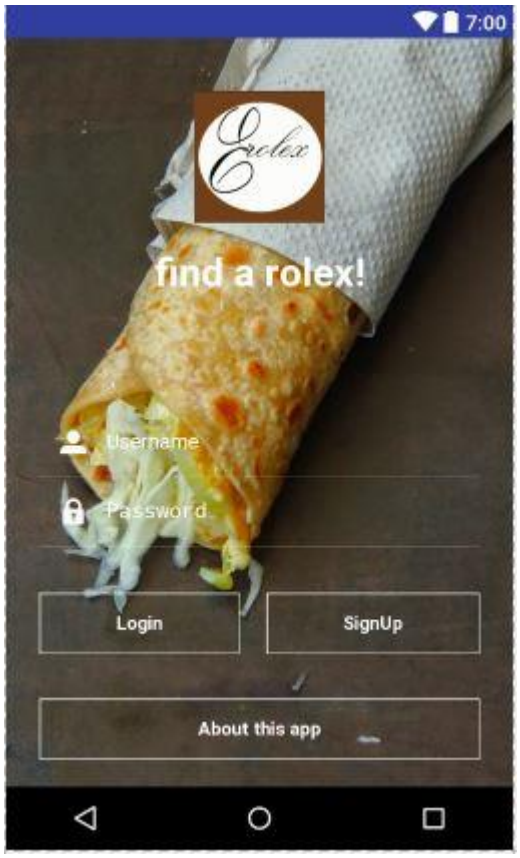
2.2 Product Functionality and Screenshots

ERolex has the following basic functions;

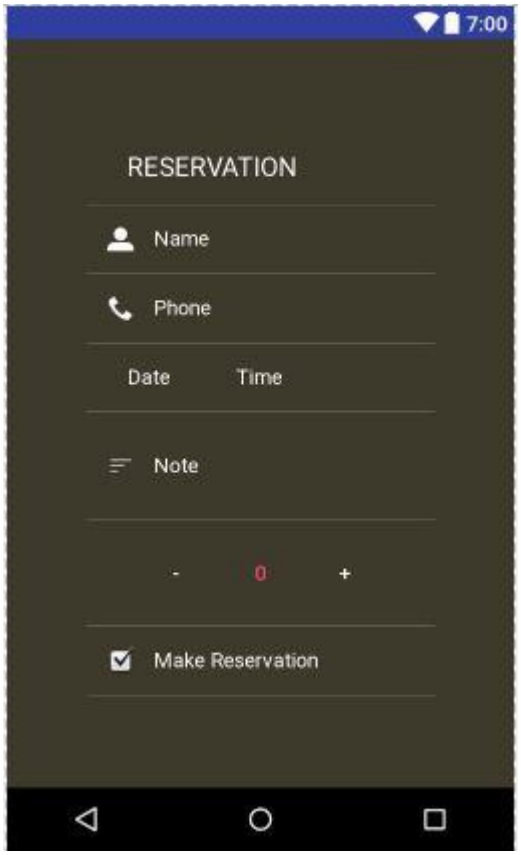
2.2.1 Functionality for customers and vendors to create an account and log into the system



2.2.2 Functionality for users to sign in



2.2.3 Functionality for customers to make reservation.



2.2.4 Functionality to search for vendors and rolex types.

3 Limitations and Next Steps (max. 1 page)

3.1 Limitations and Solutions

During the development of this mobile application, the following factors limited the development process;

- The system can only be tested effectively when connected to the internet since the use of GPS is required as well as for all sign in and other read operations.
- Another limitation is that most rolex vendors have limited interaction with smart phones and cannot effectively use the application.

Below are the potential solutions to the above limitations in respective order;

- Limiting the number of read operations that have to be performed on the database.
- The use of user friendly UI elements that easily show functionality for usability as well as including an about activity that explains how the app works.

3.2 Next Steps

The project team has come up with ideas on what to do with eRolex app after we are done with this course. We intend to deploy the app on Google app engine to increase the ability of the database to handle more requests. We intend to extend the application to android auto to enable users make reservations while driving. We also hope to launch eRolex at the annual Rolex Festival when it is ready. Finally, we plan on creating a web version for eRolex that will cater for the busy office workers that use desktop apps more often than mobile apps.

3.3 References

[1] Jairam, P.N. (2003). Restaurant Reservation Decision (PDF).

[2] Madrigal, Alexis C. (23 July 2014). "Where Restaurant Reservations Come From". The Atlantic. Atlantic Media. Retrieved 24 July 2014.

4 Appendix A – Project Work plan

Below is a Gantt Chart showing the project schedule, progress and the distribution of various tasks among group members

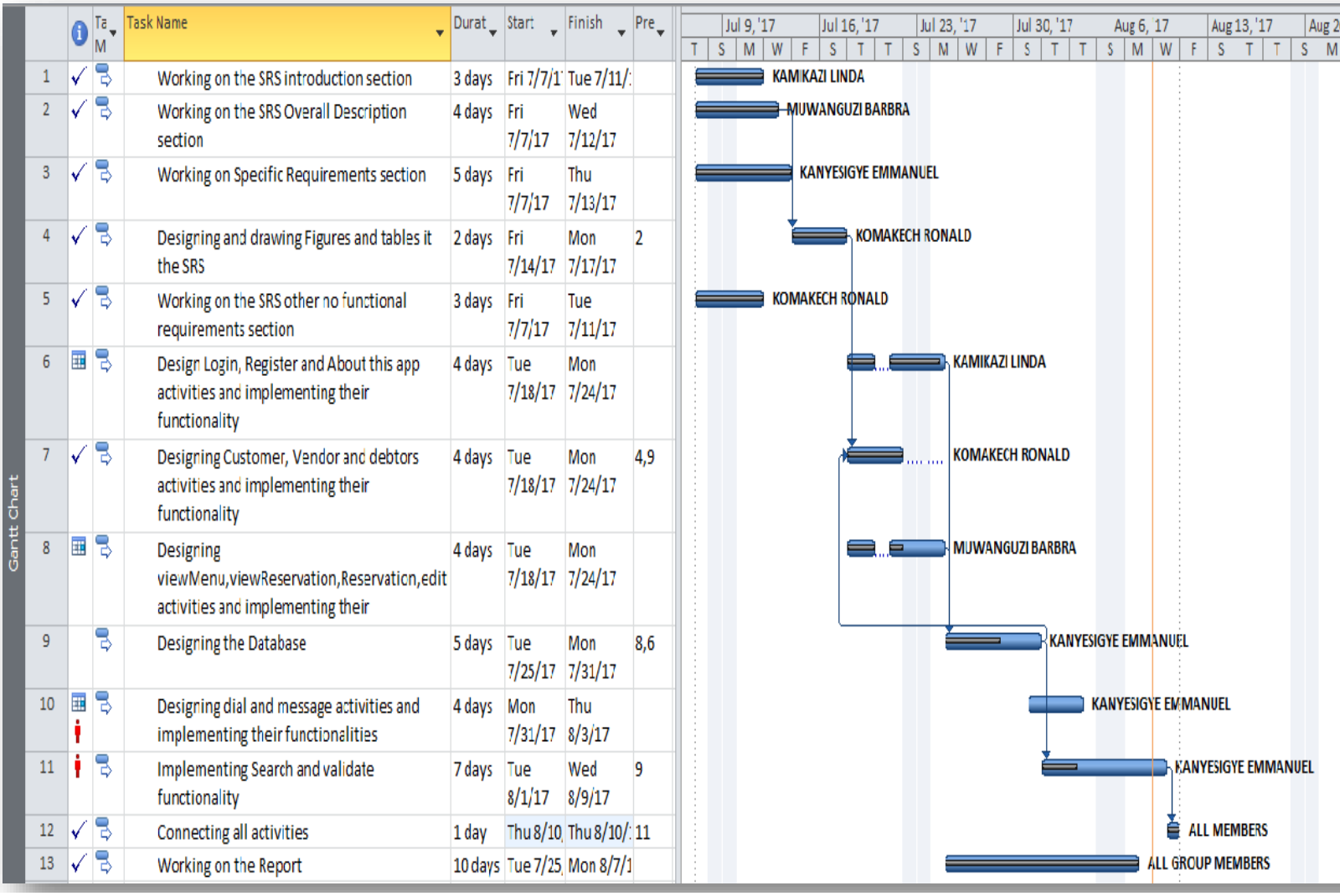


Figure 1 Gantt chart showing project work plan

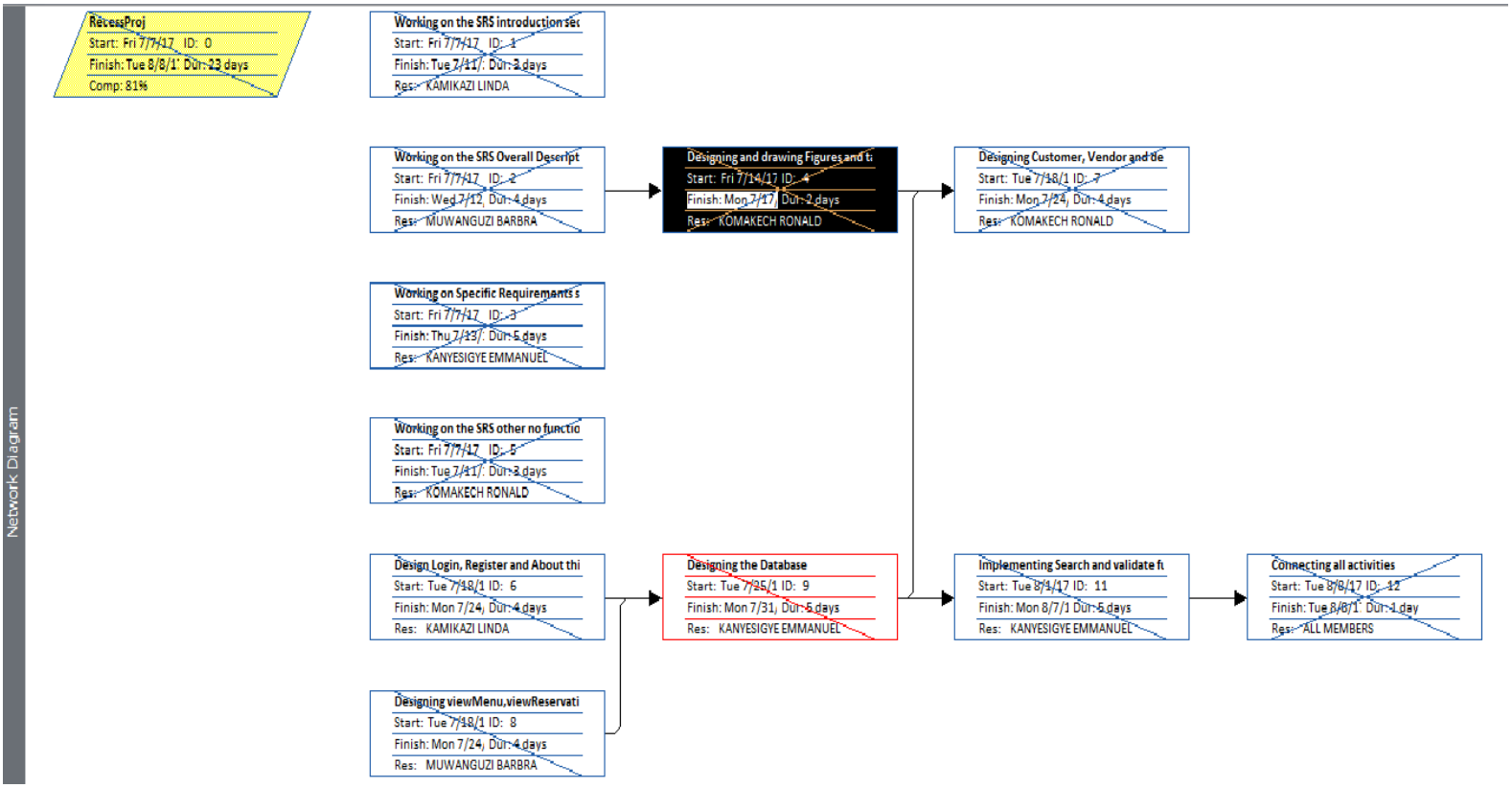


Figure 2 Network diagram showing critical tasks

Appendix B–Contribution by Team Members

No.	Team Member	Contribution
1.	KANYESIGYE EMMANUEL	Worked on SRS functional Requirements section Designed Implemented the database and also implemented the validate and search java classes
2.	MUWANGUZI BARBARA	Worked on SRS overall Description section Designed Reservation, viewReservation, viewMenu and editMenu and implemented their respective functionalities.
3.	KOMAKECH RONALD	Worked on SRS other non functional Requirements section . Drew tables ,use case diagrams and user interfaces in the SRS Designed Customer ,Vendor and Debtors activities and implemented their respective functionalities.
4.	KAMIKAZI LINDA	Worked on the SRS introduction section Designed Login, Register and About this App activity and implemented their respective functionalities I