BUSITEMA UNIVERSITY
Pursuing Excellence

FACULTY OF ENGINERING

P.O. Box 236, Tororo, Uganda
Gen: +256 - 45 444 8838
Fax: +256 - 45 4436517
Email: info@adm.busitema.ac.ug

www.busitema.ac.ug

## DEPARTMENT OF COMPUTER ENGINEERING

# WEB BASED APPLICATION FOR IRISH POTATO EXTENSION SERVICES AND MARKETING



**CHELANGAT ISAAC BU/UP/2015/332**

**Email: chelangatkapmelkutisaac@gmail.com**

**Tel: 0704482440 / 0777380923**

**SUPERVISOR: MR. OCEN GILBERT**

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## DECLARATION

I CHELANGAT ISAAC BU/UP/2015/332, do hereby declare that this Project is original work and has not been submitted for any other degree award to any other University before.

Sign ..... Date 2/07/2019

CHELANGAT ISAAC BU/UP/2015/332

Bachelor of Computer Engineering

Department of Computer Engineering

Busitema University.

## APPROVAL

The dissertation Report of the project title "Wed Based Application For Irish Potato Extension Services and Marketing" has been submitted with approval of the following supervisor.

Signature ..... Date 3/Sept/2019

Mr. Ocen Gilbert

Department of Computer Engineering

Faculty of Engineering

Busitema University.

## ACRONYMS

| | |
|---|---|
| XML | Extensible Markup Language |
| SOAP | Web Services Description Language |
| WSDL | Web Services Description Language |
| UDDI | Universal Description, Discovery, and Integration |
| W3C | World Wide Web consortium |
| URL | Uniform Resource locator |
| PHP | Hypertext Preprocessor |
| MySQL | My Structured Query Language |
| CSS | Cascading Style Sheet |
| HTML | Hypertext Markup Language |

**ABSTRACT**

This report describes the design, development, implementation and testing of the web-based application for Irish potato extension services and marketing that can be accessed by both farmers and the extension workers to boost Irish potato farming in Uganda and beyond, the application has the functionality of working offline, creating an icon on the home screen, background synchronization and web push notification. The developed application is able to send information to the. database where it.is stored and then retrieved from the database and displayed on the web application in real time.

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# CHAPTER ONE

# INTRODUCTION

## 1.1 Background

The United Nation estimates that the global population will rise from 7 to 9 billion by 2050, 1 billion is already hungry and food production must be increased by 70-100% if it is to feed this growing population. The addition of 2 billion people to the planet, largely in developing countries, requires a corresponding increase in food crop production, one that could be relatively achievable given that production increase of food crops such as maize, wheat, rice and Irish potatoes.[1]

The role of agriculture in economic development has long been recognized to play a unique role in reducing poverty and serve as an important engine for growth in developing countries. This is, in part, due to the sheer numbers of poor people engaged in it with around 75 percent of them surviving on less than US$1 a day lived in rural areas in 2002 [2].

In Africa, nearly 60% of the total population live in rural areas [3] and depend on agriculture as the major livelihood strategy, it follows that raising agricultural productivity is the key to increasing real rural incomes, reduce poverty, increasing food security, addressing under-nutrition, and promoting more sustainable management of natural resources.

Improving agricultural productivity through extension services, however, requires expanding investments in agricultural research, technology development and delivery, extension, input and output markets, processing, institutional and policy innovations, training and capacity development[4]. The goals of agricultural extension include transferring information from the global knowledge base and local research to farmers, enabling them to clarify their own goals and possibilities, educating them on how to make better decisions, and stimulating desirable agricultural development in adoption of more productive technologies; seeds, fertilizers, agrochemicals, mechanization, etc. [5]. This involves adequate and timely access of relevant information to farmers. Thus, [6]extension services provide human capital-enhancing inputs, including information flows that can improve rural welfare as an important outcome recognized in the development dialogue[7].

The complexities of the agricultural production function imply that farmers need information on a variety of stages, before adopting a new technology this include: - seeding, preparing and planting,

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