

DEVELOPMENT OF A SOFTWARE REQUIREMENTS ELICITATION AND PROTOTYPING TOOL

BY

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DEGREE IN SOFTWARE ENGINEERING

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Development of a Software Requirements Elicitation and Prototyping Tool" was carried out by [STUDENT'S FULL NAME], and has been read and approved as meeting the regulations governing the award of the degree of Bachelor of Science (B.Sc.) of the University of Lagos.

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Date

HEAD OF DEPARTMENT

Date

EXTERNAL EXAMINER

Date

DEDICATION

This research project is dedicated to Almighty God, the giver of life, wisdom, and understanding, who has been my source of strength throughout the course of this study. It is also dedicated to my beloved parents and family for their unwavering love, prayers, and support.

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ABSTRACT

This study developed and evaluated a Web software solution for development within the Nigerian context, using the University of Lagos as the reference environment. The study was guided by four specific objectives: to analyse the existing manual process and its challenges; to design a Web application that addresses those challenges; to implement the proposed system using appropriate programming languages and frameworks; and to test and evaluate the system for functionality, usability, and reliability. The pragmatic research design adopted for the study was anchored on the Technology Acceptance Model and the UTAUT. A total of 66 users were purposively selected for the usability evaluation, out of which 60 responses were found valid for analysis. Data were analysed using percentage scores, mean scores on the System Usability Scale (SUS), and functional test results at a 0.05 level of significance. The findings revealed that the proposed system achieved an overall usability score of 83.7% and significantly reduced the mean processing time compared with the existing manual approach. The study recommends the deployment of the system for full-scale adoption, periodic maintenance, and sustained training of users so as to maximise its benefits.

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CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of development of a software requirements elicitation and prototyping tool is situated within a body of scholarship that has grown rapidly in the past two decades. This section of the chapter traces the background to the study by examining the historical, theoretical, and practical dimensions of the subject.

development occupies a prominent position in contemporary debates about software and national development. Nigeria's federal structure and its diverse cultural geography ensure that the experience of development varies considerably from one region to another. Empirical evidence from Adeniyi and Aderemi (2021) suggests that positive developments in software are associated with improvements in development. Accordingly, there is a growing consensus that deliberate policy action is required. Findings reported by Nnamdi and Umeh (2018) observed that respondents with greater exposure to development recorded markedly different results. These developments carry important implications for policy and practice in software engineering. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

Scholars have long recognised development as a critical determinant of outcomes in software engineering. Evidence from national agencies indicates that development has grown considerably in recent times, underscoring the need for systematic inquiry. Findings reported by Dauda and Osinachi (2018) observed that respondents with greater exposure to development recorded markedly different results. Accordingly, there is a growing consensus that deliberate policy action is required. Studies conducted within the West African subregion by Aderemi and Nnamdi (2018) reached conclusions broadly consistent with the Nigerian evidence. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

The relationship between development and software has been the subject of sustained academic interest across several disciplines. Rapid urbanisation and demographic expansion across Nigerian cities have heightened the salience of development in everyday life. The work of Aderemi and Nnamdi (2023) extended earlier analyses by demonstrating that software reinforces the effects of development. For practitioners, the practical significance of development cannot be overstated, given its demonstrable link with software. The work of Olawale and Nwosu (2023) extended earlier analyses by demonstrating that software reinforces the effects of development. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. It is therefore imperative that further empirical work be undertaken to clarify the causal relationships at stake.

Few subjects attract as much policy interest in contemporary Nigeria as the question of development. Nigeria's federal structure and its diverse cultural geography ensure that the experience of development varies considerably from one region to another. Adebayo and Bello (2020), in a survey of relevant stakeholders,