

DEVELOPMENT OF A WEB-BASED UML DIAGRAM EDITING AND COLLABORATION PLATFORM

BY

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DEGREE IN SOFTWARE ENGINEERING

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Development of a Web-Based UML Diagram Editing and Collaboration Platform" 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 71 users were purposively selected for the usability evaluation, out of which 67 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 84.6% 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 web-based uml diagram editing and collaboration platform 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.

Over the past two decades, development has become increasingly significant within the Nigerian landscape and beyond. Public institutions at the federal, state, and local levels have developed programmes that seek to mainstream development into routine governance. Field evidence gathered by Nwosu and Ogunlana (2016) suggested that stakeholder engagement materially improves the results achieved in matters of development. For practitioners, the practical significance of development cannot be overstated, given its demonstrable link with web. Studies by Olawale and Adeniyi (2019) largely support the view that development exerts a measurable influence on outcomes of interest. Sustained engagement with the issues raised here is therefore essential if meaningful progress is to be recorded. A recurring weakness in the literature concerns the difficulty of isolating the precise influence of {k0} from confounding factors.

Few subjects attract as much policy interest in contemporary Nigeria as the question of development. Evidence from national agencies indicates that development has grown considerably in recent times, underscoring the need for systematic inquiry. Evidence assembled by Musa and Ibrahim (2015) across twelve states underscored the heterogeneity of outcomes linked to development. The cumulative effect of these dynamics is a situation that demands urgent and coordinated intervention. Evidence assembled by Adebayo and Okonkwo (2015) across twelve states underscored the heterogeneity of outcomes linked to development. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. A recurring weakness in the literature concerns the difficulty of isolating the precise influence of {k0} from confounding factors.

Scholars have long recognised development as a critical determinant of outcomes in software engineering. Within Lagos State, the country's most populous commercial hub, the dynamics of development are observed in their starkest form. Longitudinal research by Adebayo and Okonkwo (2016) revealed that sustained attention to development yields appreciable dividends over time. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. Studies by Olawale and Adigun (2019) largely support the view that development exerts a measurable influence on outcomes of interest. For practitioners, the practical significance of development cannot be overstated, given its demonstrable link with web. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

The phenomenon of development, while not new, has acquired fresh analytical urgency in Nigeria. Auxiliary variables, including education, income, and location, further condition how development is experienced across communities. Empirical evidence from Musa and Bamgbose (2021) suggests that positive developments in