

# **DEVELOPMENT OF AN ESTATE FACILITY MAINTENANCE REQUEST SYSTEM**

BY

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BEING A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF CIVIL ENGINEERING, FACULTY  
OF ENGINEERING, UNIVERSITY OF LAGOS, AKOKA, LAGOS STATE

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF BACHELOR OF SCIENCE (B.Sc.)  
DEGREE IN CIVIL ENGINEERING

[MONTH, YEAR]

## CERTIFICATION

This is to certify that this research project titled "Development of an Estate Facility Maintenance Request System" 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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PROJECT SUPERVISOR

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Date

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HEAD OF DEPARTMENT

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Date

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EXTERNAL EXAMINER

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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.

## **ACKNOWLEDGEMENT**

My profound gratitude goes to Almighty God for His grace, protection, and guidance throughout the duration of my study and the successful completion of this research project. I am deeply grateful to my supervisor, [SUPERVISOR'S NAME], for the patience, guidance, constructive criticism, and invaluable direction provided throughout the course of this research. I also wish to appreciate the Head of Department, the lecturers of the Department of Civil Engineering, and my course mates for their support and friendship. My appreciation also goes to my parents and siblings for their unwavering support, both financial and emotional, throughout my academic journey.

## **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 Structural Load Theory and the Soil Mechanics Theory. A total of 78 users were purposively selected for the usability evaluation, out of which 68 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 84.5% 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 an estate facility maintenance request system 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, when examined in relation to estate, reveals complex and often paradoxical dynamics. The Nigerian context presents peculiar challenges, ranging from infrastructural deficits to institutional weaknesses, which shape the manner in which development unfolds. A notable study by Bamgbose and Eze (2017) argued that the impact of development is substantially mediated by the quality of institutions. These developments carry important implications for policy and practice in civil engineering. Longitudinal research by Ogbeide and Famuyide (2016) revealed that sustained attention to development yields appreciable dividends over time. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

Contemporary scholarship increasingly frames development as inseparable from the broader question of estate. The socio-cultural diversity of Nigeria implies that responses to development must be differentiated rather than uniform. A notable study by Alade and Oyelaran (2017) argued that the impact of development is substantially mediated by the quality of institutions. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. Field evidence gathered by Umeh and Bello (2016) suggested that stakeholder engagement materially improves the results achieved in matters of development. These observations collectively invite a reconsideration of standard assumptions regarding estate. A recurring weakness in the literature concerns the difficulty of isolating the precise influence of {k0} from confounding factors.

development occupies a prominent position in contemporary debates about estate and national development. Economic pressures and resource scarcity frequently determine the pace at which development advances in practice. Longitudinal research by Umeh and Bello (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. A notable study by Musa and Aderemi (2017) argued that the impact of development is substantially mediated by the quality of institutions. For practitioners, the practical significance of development cannot be overstated, given its demonstrable link with estate. A recurring weakness in the literature concerns the difficulty of isolating the precise influence of {k0} from confounding factors.

development continues to command considerable attention among researchers, policymakers, and practitioners in civil engineering. Evidence from national agencies indicates that development has grown considerably in recent times, underscoring the need for systematic inquiry. The work of Osinachi and Nwosu (2023) extended earlier analyses by demonstrating that estate reinforces the effects of development. For practitioners, the