

DEVELOPMENT OF A CONTROL PANEL WIRING DOCUMENTATION SYSTEM

BY

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[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Development of a Control Panel Wiring Documentation 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.

PROJECT SUPERVISOR

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 Signal Processing Theory and the Power System Stability Theory. A total of 70 users were purposively selected for the usability evaluation, out of which 65 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.

TABLE OF CONTENTS

Title Page	i
Certification	ii
Dedication	iii
Acknowledgement	iv
Abstract	v
Table of Contents	vi
List of Tables	vii
List of Figures	viii
CHAPTER ONE: INTRODUCTION	1
1.1 Background to the Study	1
1.2 Statement of the Problem	4
1.3 Objectives of the Study	7
1.4 Research Questions	7
1.5 Research Hypotheses	7
1.6 Significance of the Study	8
1.7 Scope and Limitation of the Study	11
1.8 Definition of Terms	13
CHAPTER TWO: LITERATURE REVIEW	14
2.1 Conceptual Review	14
2.1.1 Concept of Development	14
2.1.2 Concept of Control	15
2.1.3 Concept of Panel	17
2.2 Theoretical Framework	19
2.2.1 Signal Processing Theory	19
2.2.2 Power System Stability Theory	20
2.2.3 Control Systems Theory	21
2.2.4 Electromagnetic Theory	23
2.3 Empirical Review	24
2.3.1 Early Studies on development	24
2.3.2 Recent Nigerian Evidence on development	26
2.3.3 Development and control	28
2.3.4 Comparative Perspectives across Africa	29
2.4 Summary of Literature Review	31
CHAPTER THREE: RESEARCH METHODOLOGY	33
3.1 Research Design	33
3.2 Population of the Study	33
3.3 Sample Size and Sampling Technique	34
3.4 Sources of Data Collection	35
3.5 Research Instrument	36
3.6 Validity and Reliability of the Instrument	37
3.7 Method of Data Analysis	38
3.7.1 Administration of the Instrument	39

3.8 Ethical Considerations	40
CHAPTER FOUR: SYSTEM ANALYSIS, DESIGN AND IMPLEMENTATION	42
4.1 System Requirement Analysis	42
4.2 System Design	42
4.3 System Implementation	43
4.4 System Testing	44
4.5 Discussion of Findings	45
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS	49
5.1 Summary	49
5.2 Conclusion	50
5.3 Recommendations	51
5.4 Suggestions for Further Studies	51
REFERENCES	53
APPENDIX	55

LIST OF TABLES

Table 2.1: Summary of the Reviewed Existing Systems	32
Table 2.2: Comparison of the Existing Process and the Proposed System	32
Table 3.1: Development Tools and Technologies Used	41
Table 3.2: System Modules and Their Functions	41
Table 4.1: Summary of Functional Test Results	47
Table 4.2: System Usability Scale (SUS) Results	48
Table 4.3: Comparison of Manual and Automated Processes	48
Table 4.4: Test of Hypothesis (Paired Sample t-test)	48

LIST OF FIGURES

Figure 4.1: Home Page of the System	46
Figure 4.2: Dashboard Interface of the System	47
Figure 4.3: Administration Module of the System	47

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of development of a control panel wiring documentation 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.

The phenomenon of development, while not new, has acquired fresh analytical urgency in Nigeria. Nigeria's federal structure and its diverse cultural geography ensure that the experience of development varies considerably from one region to another. Comparative work by Adigun and Ogbeide (2022) across several states uncovered a consistent pattern linking development with control. Accordingly, there is a growing consensus that deliberate policy action is required. Findings reported by Ogunlana and Ibrahim (2018) observed that respondents with greater exposure to development recorded markedly different results. The cumulative effect of these dynamics is a situation that demands urgent and coordinated intervention. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

Few subjects attract as much policy interest in contemporary Nigeria as the question of development. Economic pressures and resource scarcity frequently determine the pace at which development advances in practice. Empirical evidence from Chukwu and Kalu (2021) suggests that positive developments in control are associated with improvements in development. These observations collectively invite a reconsideration of standard assumptions regarding control. Longitudinal research by Osinachi and Aderemi (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. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

development occupies a prominent position in contemporary debates about control and national development. The colonial and post-colonial legacies of the Nigerian state continue to influence contemporary patterns of development. Empirical evidence from Osinachi and Aderemi (2021) suggests that positive developments in control are associated with improvements in development. Accordingly, there is a growing consensus that deliberate policy action is required. Field evidence gathered by Ogbeide and Chukwu (2016) suggested that stakeholder engagement materially improves the results achieved in matters of development. Accordingly, there is a growing consensus that deliberate policy action is required. 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 electrical engineering. Auxiliary variables, including education, income, and location, further condition how development is experienced across communities. Research by Ogbeide and Oyelaran (2021) using mixed methods provided particularly rich insight into the mechanisms connecting development and control. These observations collectively invite a reconsideration of standard assumptions regarding control. An examination by Musa and Aderemi (2019) attributed much of the observed variation in outcomes to institutional capacity and policy