DEVELOPMENT OF A CLOUD BASED HEALTH INFORMATION SYSTEM FOR ANTENATAL AND POSTNATAL CLINIC

BY

AJAYI PRISCILLA OLUWATOYIN

MATRIC NO.: 04CG01130

A PROJECT PRESENTED TO THE DEPARTMENT OF COMPUTER AND INFORMATION SCIENCE (COMPUTER SCIENCE PROGRAMME), COLLEGE OF SCIENCE AND TECHNOLOGY,
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ACCEPTANCE

This is to attest that this dissertation was accepted in partial fulfillment for the award of the degree of Masters of Science in Computer Science in the Department of Computer and Information Science, College of Science and Technology, Covenant University, Ota, Ogun State Nigeria.

Philip John Ainwokhai **..……..**

(Secretary, School of Postgraduate Studies**)** **Signature & Date**

Prof. Samuel T. Wara **……**

(Dean, School of Postgraduate Studies**)** **Signature & Date**

CERTIFICATION

This is to certify that **AJAYI PRISCILLA OLUWATOYIN** (Matric No: **04CG01130**) carried out this research work in partial fulfillment of the requirements for the award of Masters of Science (M.Sc.) degree in Computer Science of Covenant University, Ota, under of **Professor Nicholas Omoregbe**:

Professor Nicholas Omoregbe **……...……**

(Project Supervisor**)** **Signature and Date**

Dr. Oladipupo Olufunke **……...……**

(Head of Department**)** **Signature and Date**

DECLARATION

It is hereby declared that this research work titled "**DEVELOPMENT OF A CLOUD BASED HEALTH INFORMATION SYSTEM FOR ANTENATAL AND POSTNATAL CLINIC**" was undertaken by **AJAYI PRISCILLA OLUWATOYIN**. It is based on the original study in the Department of Computer Science, College of Science and Technology, Ota, Ogun State, under the supervision of Professor Nicholas Omoregbe and the ideas and views of other researchers have been dully expressed and acknowledged.

Ajayi Priscilla Oluwatoyin **……...……**

(Student) **Signature and Date**

DEDICATION

This dissertation is dedicated to God Almighty, the Omnipotent and Omniscient, the giver of life and the ingenious architect of my destiny for His faithfulness, tender-mercies and graciousness towards me.

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ABSTRACT

Medicinal services are an exceedingly perplexing and divided industry. It is novel in that it must support a boundless, differing proficient client populace (healthcare practitioners) with patients in life basic circumstances. The business is at present confronting becoming monetary and administrative weights that make its IT foundation ready for radical change. In blend, these two components recommend that associations in the wellbeing business should investigate the potential advantages of distributed computing. Maternal Mortality Ratio (MMR) in Nigeria has consistently been above 800 per 100,000 live births over the last two decades. A major challenge in these settings relates to the quality and promptness of antenatal and/or postnatal care given. Recent advancements in technology, notably Health Information Systems (HIS), have helped in the response to many of these challenges. In Africa, and indeed Nigeria, there is yet a comprehensive HIS that cuts across health sector that can address these issues.

This project was sought to design a Cloud Based Antenatal and Postnatal Clinic System of a HIS to assist in efficient utilization of material and human resources and enhance quality of delivery of health services, geared towards improving maternal health. Requirements gathering for the system were conducted through a study of Antenatal and Postnatal Clinic Systems of existing Cloud Based HIS in order to ensure harmonization of medical data in Nigeria and Africa, through the adoption of the system based on requirements gathered. This was achieved through the use of the Unified Modeling Language (UML). And to implement, the system was based on an established architecture, Enterprise Architectural Framework. HTML5; Apache Server, PHP, MySQL, XML and JavaScript were used as tools for development and the system was also evaluated through administering of questionnaires.

This project work showed the need for government to get involved in keeping the medical records of its citizens, which would allow patients and hospital to trust the workability of inetroprability in health information system.

Keyword: Service-oriented Architecture, Cloud Computing, Health Information System, Antenatal, Postnatal