**CERTIFICATION**

This is to certify that research project on “AN AUTOMATED SOLUTION FOR A TIMETABLE CONSTRAINT SATISFACTION PROBLEM” was carried out by Akata Otemabor Lawrentta (0628/2011), under the supervision of Dr. A. Arnold Ojugo and has been approved by the undersigned to have met the standard of the Department of Mathematics and Computer Science, Federal University of Petroleum Resources, Effurun, Delta State, Nigeria.

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Dr. A .A Ojugo Date

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Dr. A. M Okedoye Date

…………………………….. ………………………….

External Examiner Date

**DECLARATION**

We declare that this project titled “AN AUTOMATED SOLUTION FOR A TIMETABLE CONSTRAINT SATISFACTION PROBLEM” with Registration number 0628/2011 has been examined and found to have met partial fulfillment of the requirements for the award of Bachelor of Science Degree.

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Dr. A. A Ojugo Date

(Supervisor)

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Dr. A. M Okedoye Date

(Head of Department)

**DEDICATION**

I dedicate this work first to God Almighty for His grace and mercies in my life.

To my husband for always being there for me through it all, giving me all the love as well as support morally, financially and spiritually I need all the time. I thank you for all your sponsorship in all form towards the successful completion of my education.

To my Parents and other family members whose support and invaluable contributions to my success as a student; your good deeds will never be forgotten.

**ACKNOWLEDGEMENT**

I am eternally grateful to God Almighty for keeping me by His grace and mercies and seeing me through the university.

I would also like to express my sincere thanks to my amiable supervisor Dr. A. Arnold Ojugo for his invaluable guidance, continuous encouragement and constant support in making this research possible. It has been a great honor to have worked under his supervision. His valuable suggestions and feedback at every critical phase throughout the work were of utmost importance for timely completion of the project. His tremendous knowledge about the subject has gone a long way in ensuring the successful completion of this project. I also thank him for the time spent proofreading and correcting my many mistakes.

To my Head of Department, Dr. A. M. Okedoye and all of the lovely lecturers for all their efforts in grooming me for a better future. I say thank you.

I also wish to acknowledge Dr. Silas Illomechine who played a fatherly role in my life, Biobaku Oluwole Timothy, Mrs Ochuko Omenuwoma and Mr. Kingsley who were always supporting me both spiritually and otherwise, my extended family members; the Akata’s, and the Eshiet’s who never for once gave me the opportunity to complain about academic stress.

Finally, my sincere indebtedness and gratitude goes to my parents, husband Cpl Ubong Thomas Samuel and loved ones for their love, dream and sacrifice. I would also like to thank my colleagues and friends for their continued support which has helped me stay strong and focused on the project work and those who love and care for me. God bless you.

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**ABSTRACT**

Scheduling course timetables for a large array of courses is a very complex problem which often has to be solved manually by the University even though results are not always fully optimal. Timetabling being a highly constrained problem, this project attempts to put into play the effectiveness of evolutionary techniques based on Darwin’s theories to solve the timetabling problem if not fully optimal but near optimal.

**PHP** (Hypertext preprocessor) is a server scripting language, and a powerful tool for making dynamic and interactive Web pages and **MYSQL** (My Structured Query Language) is an open source relational database management system (RDBMS) that has been successfully applied to many hard combinatorial optimization problems which includes timetabling and scheduling problems.

The Web-base system was applied in the development of a viable timetabling system which was tested to demonstrate the variety of possible timetables that can be generated based on user specified constraint and requirements.

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