الآية

بسم الله الرحمن الرحيم

(فَتَعَالَى اللَّهُ الْمَلِكُ الْحَقُّ وَلَا تَعْجَلْ بِالْقُرْآنِ مِنْ قَبْلِ أَنْ يُقْضَى إِلَيْكَ وَحْيُهُ وَقُلْ رَبِّ زِدْنِي عِلْمًا)

سورة طه، الآية114

صدق الله العظيم

Dedication

I would like to dedicate this study to the following:

To our beloved God for giving us the light as a guide to this research

To my family, who were always supportive to me, specially my father who encouraged me to enroll in this master program, and who is my role model and inspiration to always achieve higher levels in my life just like him

To College of Computer Science and Information Technology

And

My friends, who encouraged me when the workload was heavy

Acknowledgement

I would like to give thanks, praise to God, and express my earnest gratitude for allowing me to continuously discover myself through good health, and a sound and balanced life to complete this research.

I also would like express my heart full gratitude to:

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The people who participated in the study, and took the time to fill the questionnaire.

And to the owners of the E-commerce systems, who were kind and gave me all the information I needed about their systems.

ABSTRACT

Quality of the software is critical and essential, in some types of software, poor quality may lead to loss of human life, financial loss and more, one of software types is E-commerce systems. Research objective is proposing a quality model for E-commerce systems in Sudan to produce E-commerce systems with high quality according to people needs, and analyzing all the aspects of using E-commerce systems in Sudan. Research problem is that quality concept is not well known and people do not demand it and that lead to E-commerce systems with bad quality and unsatisfied customers. Hypothesis that research will prove: people use E-commerce systems, what are the types of e-commerce systems in Sudan, obstacles that makes it hard for people to use them, ways to encourage people to use it, and ways to help spread the concept of quality of E-commerce systems in Sudan. Research methodology is qualitative; by using questionnaire to model the use of e-commerce systems in Sudan, observation to find quality factors out of the questionnaire results with the consideration of quality models to find suitable model. Research result showed that people in Sudan use social media as a way to make e-commerce systems, the researcher proved all the hypotheses, and proposed a quality model to implement and develop E-commerce systems with high quality according to people requirements in Sudan.

المستخلص

جودة البرمجيات هي عامل ضروري وأساسي، في بعض أنواع البرمجيات الجودة المنخفضة قد تؤدي الى خسائر في الأرواح، خسائر مالية وأكثر، أحد أنواع هذه البرمجيات هو أنظمة التجارة الإلكترونية. هدف البحث هو اقتراح نموذج جودة لأنظمة التجارة الإلكترونية في السودان للحصول على انظمة الكترونية ذات جودة عالية وفقا لمتطلبات المستخدمين، وتحليل جميع جوانب استخدام أنظمة التجارة الإلكترونية في السودان. مشكلة البحث هي ان مفهوم الجودة ليس ذا صيت عال والمستخدمين لا يطالبون بأنظمة ذات جودة عالية مما يؤدي الى وجود أنظمة ذات جودة منخفضة وبالتالي مستخدمين غير راضيين. الفرضيات التي ستثبت بواسطة البحث: يتم استخدام أنظمة التجارة الإلكترونية في السودان، ماهي أنواع أنظمة التجارة الإلكترونية المستخدمة، العوائق التي تجعل من الصعب على المستخدمين استخدام هذه الأنظمة، طرق لتشجيع المستخدمين لاستخدام الأنظمة، وطرق للمساعدة على نشر مفهوم الجودة في السودان فيما يخص أنظمة التجارة الإلكترونية. منهجية البحث هي بحث نوعي: باستخدام آداة الاستبانة لنمذجة استخدام أنظمة التجارة الإلكترونية في السودان، والملاحظة لاستخراج عوامل الجودة من نتائج البيانات المتحصل عليها من الاستبانة مع الأخذ في الإعتبار نماذج الجودة لإقتراح النموذج المناسب. نتائج البحث اظهرت ان المستخدمين في السودان يفضلون استخدام مواقع التواصل الإجتماعي كأنظمة تجارة إلكترونية، قامت الباحثة بإثبات جميع الفرضيات، واقتراح نموذج جودة ليتم تطبيقه لتطوير أنظمة تجارة الكترونية ذات جودة عالية وفقا لمتطلبات المستخدمين في السودان.

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List of abbreviations

The terminology	Meaning of the terminology
E-commerce	Electronic commerce.
QA	Quality assurance.
SQA	Software quality assurance.
SQE	Software quality engineering.
EDI	Electronic data interchange.
IT	Information technology.
Factors and Metrics	Factors: They describe the external view of the software, as viewed by the users. Metrics: They are defined and used to provide a scale and method for measuring the factor.
Unit testing	a software testing method by which individual units of source code, sets of one or more computer program modules together with associated control data, usage procedures, and operating procedures, are tested to determine whether they are fit for us.
SDG	Sudanese pound (the Sudanese currency)
E-literacy	The skill set required to make efficient use of all of the materials, tools, and resources that are available online.
Online questionnaire	Questionnaire that is filled through internet browser.
Offline questionnaire	The paper-based questionnaires.

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