THE SYSTEM REQUIREMENTS FOR THE ONLINE AUCTION BASED ON UUM STUDENTS PERSPECTIVE

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THE SYSTEM REQUIREMENTS FOR THE ONLINE AUCTION BASED ON UUM STUDENTS PERSPECTIVE

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By

OSAMA SALEM KHALIFA MASSOUD

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ABSTRACT

The main objective of this study is to develop an online auction for UUM students, the student can buy or sale their belonging through by using this system after to be developed for UUM students. The design is tested on the prototype and evaluated to test the usability and acceptability of the system. The Active Server Page.Net (ASP.Net) programming language have been used in this study to develop the system of online auction for UUM student, and SPSS have been used to analysis the data after collected form the student of UUM.
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CHAPTER ONE

INTRODUCTION

This chapter explains in detail about the background of the online auction and its solution in related environment and the problem statement which is related to the UUM’s students who want to dispose their belongings that necessarily to be solved and gives the motivation to this study. The research questions and research objectives are expressed as in the section 1.3 and section 1.4 respectively. The scope of the study and significance of the study expressed as in the section 1.5 and section 1.6 respectively.

1.1 Introduction

The fast development of communication technology caused the millions of auction listings in thousands of categories on auction websites, for example eBay, Yahoo and uBid (Yen and Lu, 2008). Online auctions conducted over the Internet provide substantial sales growth chances for the intermediaries and substantial unit cost reduction for purchaser of chosen commodities (Emiliani, 2000). Recently, online auctions activities have increased rapidly, leading to a transaction revolution that is
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Reference

Abdul Hamid @ Hamid bin Haji Hassan (2003). Requirement analysis on wireless network infrastructure in UUM College. A master project in partial fulfillment of the requirements for the degree of Master of Science (Information Technology), University Utara Malaysia.


Lim chee chian, (2004). Multimodal-based mobile application: a development of prototypes for accessing students academic result at UUM. A master project in partial fulfillment of the requirements for the degree of Master of Science (Information Technology), University Utara Malaysia.


Mohd Yusuf Bin Md Saad (2005). Requirements analysis and proposed model for a wireless network infranstructure in Bukit Kachi student college UUM. A master project in partial fulfillment of the requirements for the degree of Master of Science (Information Technology), University Utara Malaysia.


