

WEB Application for Cheapest Bus Ticket in Malaysia

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**University Utara Malaysia
2010**

WEB Application for Cheapest Bus Ticket in Malaysia

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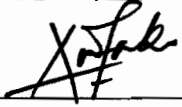
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ABSTRACT

There are many kilometers run between Malaysian cities. This wide distances between cities prompt Malaysian to use several means of transportation. Bus transportation is usually used to travel between cities especially if there is large distance between these cities. Moreover, the online searching assists the people to retrieve the information. When the people find difficulties to retrieve the cheapest bus ticket, information retrieval and online searching offer the technique which can retrieve the cheapest bus ticket.

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CHAPTER ONE

INTRODUCTION

1.1. Introduction

Malaysia is situated in the heart of Asia. The country is made up of a number of states such as Kedah. There are many kilometres run between Malaysian cities. There is a large distance between each city such as the distance between Alor Star and KL. This wide distances between cities prompt Malaysian to use several means of transportation. Bus transportation is usually used to travel between cities especially if there is a large distance between these cities. Moreover, people like to travel by bus because it has lower costs and easier choice. Malaysians prefer travelling by bus than travelling by trains and airplanes. Travelling by buses has benefits such as lower cost and time, easier to use and it is suitable to travel, anywhere and anytime (Burmistrov 2009). Thus, bus companies come to accommodate this people need for travelling between these cities. These companies are racing to overcome passengers need in convenient way (Md, Md et al. 2006).

Currently, internet and its technology are rapidly improving (E and Porter 2001). Internet has become one of the technologies which are near to human for usage everyday especially to satisfy people's needs. People like to use these technologies which serve their needs in faster and convenient way.

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References

- Abdulai, D. (2004). Can malaysia transit into the k-economy?: *dynamic challenges, tough choices and the next phase, pelanduk pubns sdn bhd.*
- Arai, G., Okada, H., sato, R., Ashizawa, Y., Yagi, H., Kano, M., et al. (2008). The validity and reliability of a new questionnaire for prostatic symptom scoring, the spss. *saitama prostate symptom score and its value comparing to the ipss (international prostate symptom score)*. 179(7), 577.
- Barry, B. (2007). Spiral model. retrieved on 1 jun. from <http://encyclopedia.thefreedictionary.com/spiral%20model>
- Bolchini, C., Schreiber, F. A., & Tanca, I. (2007). A methodology for a very small data base design. *Information systems*, 23(1), 61-82.
- Burmistrov, I. (2009). Mobile air ticket booking.
- Butler, B. (1996). Electronic course reserves and digital libraries: progenitor and prognosis. *The journal of academic librarianship*.

- Chen, J., I. Liu, et al. (2002). An intelligent information retrieval system model. *4th World Conference on Intelligent Control and Automation, Shanghai, P.R. China, IEEE*. 3: 2500-2503.
- E, M., & Porter. (2001). Strategy and the internet.
- Geraci, F. and M. Pellegrini (2008). Dynamic user-defined similarity searching in semi-structured text retrieval.
- G, T., Lewis, R. M., & Torczon, V. (2003). Optimization by Direct Search: New Perspectives on Some Classical and Modern Methods. *2003 Society for Industrial and Applied Mathematics*, 45, 385–482.
- Hong, J.-S. and C.-T. S. Tsai (2009). Government websites for promoting east asian culinary tourism: a cross-national analysis .
- Ishii, K. (2003). Internet use via mobile phone in Japan. *Paper presented at the telecommunications policy 28*.

J, B., Jansen, booth, D., & smith, B. (2009). Using the taxonomy of cognitive learning to model online searching.

koppius, O., W. Speelman, et al. (2005). Why are customers coming back to buy their airline tickets online? *theoretical explanations and empirical evidence 7th international conference on electronic commerce. xi'an, china, acm: 319-326.*

lee, J.-T., S.-B. Kim, et al. (2008). Bridging lexical gaps between queries and questions on large online q&a collections with compact translation models. *Conference on empirical methods in natural language processing, acm: 410–418.*

li, G. (2009). Analysis and design of individualized p.E. *Teaching system based on xml & agent technology. ic-nidc2009, ieee: 787 - 791*

Markantonakis, k., Tunstall, M., hancke, G., Askoxylakis, I., & mayes, k. (2009). *Attacking smart card systems: theory and practice.*

Md, G. G., md, N. A. A. R., & Nor. (2006). predicting the impact of demand- and supply-side measures on bus ridership in putrajaya, malaysia. *journal of public transportation, 9.*

Pandelidis, a. (2006). Defining the security required for wap based mobile ticket sales.

Prat, N., Akoka, J., & comyn-wattiau, I. (2006). A uml-based data warehouse design method. *Decision support systems*, 42(3), 1449-1473.

Tripathy, H. K. And b.K.Tripathy (2007). A rough set approach for clustering the data using knowledge discovery in world wide web for e-business. *IEEE international conference on e-business engineering*, iee: 705-71202.

Yi-yi, S. (2008). Research on retrieval method of web data based on semantics. 2008 *isecs international colloquium on computing, communication, control, and management*, iee. 1: 610-613.

Wall, G., & Mcdonald, M. (2007). Improving bus service quality and information in winchester.

Zhang, N., Guo, X., & Chen, G. (2008). Idt-tam integrated model for it adoption. *13(3)*, 306-311.