BORANG PENGESAHAHAN STATUS TESIS

JUDUL : AUTO BUYER GUIDE : BASED ON BUDGET

SESi PENGAJIAN : SEMESTER II TAHUN 4 (2006)

Saya SALTARINA BINTI AHMAD SHABRI (HURUF BESAR)

mengaku membenarkan tesis (PSM/Sarjana/Doktor Falsafah) ini disimpan di Perpustakaan Fakulti Teknologi maklumat dan Komunikasi dengan syarat-syarat kegunaan seperti berikut:

1. Tesis ini adalah hakmilik kolej Universiti Teknikal Kebangsaan Malaysia (KUTKM)
2. Perpustakaan Fakulti Teknologi maklumat dan Komunikasi dibenarkan membuat salinan untuk tujuan pengajian sahaja.
3. Perpustakaan fakulti Teknologi maklumat dan Komunikasi dibenarkan membuat salinan tesis ini sebagai bahan pertukaran antara institusi pengajian tinggi
4. ** Sila tandakan (/) (Mengandungi maklumat yang berdarjah keselamatan atau kepentingan Malaysia seperti yang termaktub dalam AKTA RAHSIA RASMI 1972)
(Mengandungi maklumat TERHAD yang telah ditentukan oleh organisasi/badan di mana penyelidikan di jalankan)

SULIT

TERHAD

TIDAK TERHAD

(TANDATANGAN PENULIS)

(TANDATANGAN PENYELIA)

Muhammad Suhaizan Bin Sulong
Fakulti Teknologi Maklumat dan Komunikasi
Kolej Universiti Teknikal Kebangsaan Malaysia
Karang Berkuasa 1200
Ayer Keroh, 75450 Melaka

Alamat tetap : No : 575-B, Lrg Aman
Kg Serdang, 32000,
Sitiawan, Perak

Tarikh : 12 April 2006

Tarikh : 27 4/2006

CATATAN : ** Jika tesis ini SULIT atau TERHAD, sila lampirkan surat daripada pihak Berkuaasa.
^ Tesis dimaksudkan sebagai Laporan Projek Sarjana Muda (PSM)
AUTO BUYER GUIDE : BASED ON BUDGET

SALFARINA AHMAD SHABRI

This report is submitted in partial fulfillment of the requirements for the Bachelor of Computer Science (Software Development)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
KOLEJ UNIVERSITI TEKNIKAL KEBANGSAAN MALAYSIA
DECLARATION

I hereby declare that this project report entitled
AUTO BUYER GUIDE : BASED ON BUDGET
is written by me and it is my own effort and that no part has been plagiarized
without citations.

STUDENT: ____________________________ Date: 25/04/06
(SALFARINA AHMAD SHABRI)

SUPERVISOR: ____________________________ Date: 27/4/2006
(HAJI MUHAMMAD SUHAIZAN BIN SULONG)

Penyarah
Fakulti Teknologi Maklumat dan Komunikasi
Kolej Universiti Teknikal Kebangsaan Malaysia
Karung Berkunci 1200
Ayer Keroh, 75450 Melaka
DEDICATION

To my beloved parents, Ahmad Shabri bin Idris and Fauziah bt Tahir

To my supervisor, Hj Muhammad Suhaizan b Sulong
ACKNOWLEDGEMENTS

During this period of completing the Projek Sarjana Muda II (PSM II), I have encountered many problems and obstacles. I am so lucky to have overcome it with the help of many people. Hence, I would like to express my highest appreciations to whom that have contributed to the successful of this PSM II.

Firstly, I would like to thank The Greatest Allah because of giving me the strength and spirit to overcome the problem and finally complete this PSM II.

I greatly appreciate my supervisor, En Suhaizan bin Sulung, for giving assistant to complete this project successfully, that providing me the feedback during the entire completing process. Also a note of thanks for his valuables time and efforts, I would also like to than him for his valuable suggestion and guidelines in supervising me. The patience and generosity in guiding me through are much welcomed and appreciated.

I would like to thank my beloved parents who have been giving me support and motivation throughout my project.

Last but not least, to all who might have involved directly or indirectly in developing this system is much appreciate and a note of thanks from me.
ABSTRACT

The title for this Projek Sarjana Muda II (PSM II) is Auto Buyer Guide : Based on Budget (ABG). It is a web-based system which is will develop by using web-based concept application. It means this system will be use and be able to access by user/public (home user) from anywhere at anytime. The problem of current system is it couldn’t guide or help user in order to make a decision on which new car to buy. The solution of current problem is by developing a new system with the web-based concept to facilitate the user to make a decision. This system is develop in order to give more understanding other than user can gain details information about car and price that they need to know before make a decision to buy it and also based on their budget(in terms of downpayment), needs and desire. The ABG need to achieve it scope and adhered to the user requirement. The proposed system has become a reality and looking forward to see the system to work in a real time environment. This report of PSM II of seven chapter as Introduction (I), Literature Review and Methodology (II), Analysis (III), Design (IV), Implementation (V), Testing (VI), and Conclusion (VII). By completing this report, it was using the OOAD (Object-Oriented Analysis Design) as approach to design the high level design in Chapter IV (Design).
ABSTRAK

Tajuk yang dipilih untuk Projek Sarjana Muda II (PSM II) ini adalah Auto Buyer Guide : Based on Budget (ABG). Projek yang akan dibangunkan ini adalah web-based sistem dengan mengaplikasikan konsep web-based di mana ia boleh dicapai dari mana-mana destinasi/tempat dan bila-bila masa oleh pengguna awam terutamanya dari rumah atau pejabat. Masalah yang menjerus kea rah pembangunan system ini adalah kerana system yang sedia ada tidak sepenuhnya dapat membantu pengguna untuk membuat pilihan atau keputusan yang berkenaan. Untuk menyelisai masalah yang timbul ini, maka satu sistem yang baru akan dibangunkan untuk memenuhi kehendak dan keperluan pengguna dalam membantu mereka membuat keputusan berdasarkan kehendak dan kemampuan mereka. Tujuan sistem ini dibangunkan adalah untuk memberikan maklumat yang lengkap dan padat mengenai kereta terutama harga kereta yang terbaru dan lain-lain maklumat berkenaan yang perlu diketahui oleh mana-mana individu yang ingin membeli kereta baru tetapi masih tidak dapat membuat pilihan yang terbaik berdasarkan kehendak, keperluan dan bajet(dari segi bayaran pendahuluan) mereka.

Setakat ini, pembangunan ABG adalah untuk mencapai skop yang memenuhi kehendak pengguna. Sistem yang dicadangkan ini akan menjadi sistem yang realiti apabila dibangunkan kelak dan ia akan menjadi satu sistem yang berguna kepada seluruh pengguna yang menggunakankannya nanti. Laporan bagi sistem ini mengandungi tujuh topik utama iaitu Pengenalan (I), Kajian Literature dan Kaedah Penyelesaian (II), Analisis (III), Rekabentuk (IV), Perlaksanaan/Pembangunan (V), Ujikaji (VI), dan akhir sekali adalah topik Penutup (VII).
# TABLE OF CONTENT

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>SUBJECT</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DECLARATION</td>
<td>iii</td>
</tr>
<tr>
<td></td>
<td>DEDICATION</td>
<td>iv</td>
</tr>
<tr>
<td></td>
<td>ACKNOWLEDGEMENT</td>
<td>v</td>
</tr>
<tr>
<td></td>
<td>ABSTRACT</td>
<td>vi</td>
</tr>
<tr>
<td></td>
<td>ABSTRAK</td>
<td>vii</td>
</tr>
<tr>
<td></td>
<td>TABLE OF CONTENT</td>
<td>viii</td>
</tr>
<tr>
<td></td>
<td>LIST OF TABLE</td>
<td>xii</td>
</tr>
<tr>
<td></td>
<td>LIST OF FIGURE</td>
<td>xiii</td>
</tr>
<tr>
<td>CHAPTER I</td>
<td>INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>1.1 Project Background</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>1.2 Problem Statement</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>1.3 Objectives</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>1.4 Scope</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5 Project Significant</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>1.6 Expected Output</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>1.7 Conclusion</td>
<td>5</td>
</tr>
<tr>
<td>CHAPTER II</td>
<td>LITERATURE REVIEW AND PROJECT METHODOLOGY</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>2.1 Introduction</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>2.2 Fact and Finding (based on topic)</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>2.3 Project Methodology</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>2.4 Project Requirement</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>2.4.1 Software Requirement</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>2.4.2 Hardware Requirement</td>
<td>15</td>
</tr>
</tbody>
</table>
CHAPTER IV  DESIGN  39
  4.1 Introduction  39
  4.2 High-Level Design  39
    4.2.1 Raw input/data  40
    4.2.2 System Architecture  45
      4.2.2.1 Static Organization  47
      4.2.2.2 High-Level Class Diagram  49
    4.2.3 User Interface Design  50
      4.2.3.1 Navigation Design  50
      4.2.3.2 Input Design  51
      4.2.3.3 Output Design  51
    4.2.4 Database Design  53
      4.2.4.1 Logical Database Design  53
    4.2.5 Deployment View  54
  4.3 Low-Level Design  55
    4.3.1 Detailed Design  55
    4.3.2 Physical Database Design  61
  4.4 Conclusion  64

CHAPTER V  IMPLEMENTATION  65
  5.1 Introduction  65
  5.2 Software Development Environment Setup  66
    5.2.1 Environment Setup  67
  5.3 Software Configuration Management  68
    5.3.1 Configuration Environment Setup  69
    5.3.2 Version Control Procedure  76
  5.4 Implementation Status  77
  5.5 Conclusion  79

CHAPTER IV  TESTING  81
  6.1 Introduction  81
  6.2 Test Plan  82
    6.2.1 Test Organization  82
6.2.2 Test Environment 83
6.2.3 Test Schedule 83
6.3 Test Strategy 84
6.3.1 Classes of Test 85
6.4 Test Design 86
6.4.1 Test Description 86
6.4.1.1 User Module Test 86
6.5 Test Cases Result 87
6.5.1 Test Data 88
6.6 Conclusion 89

CHAPTER VII CONCLUSION 90
7.1 Observation and Weakness 90
7.1.1 Strengthness 91
7.1.2 Weaknesses 91
7.2 Proposition for Improvement 91
7.3 Conclusion 92
REFERENCES 94
APPENDIXES 95
Appendix A – Test Results and Analysis 97
Appendix B – User Manual 102
Appendix C – Admin Manual 119
Appendix D – Gantt Chart 136
Appendix E – Coding of Main Function 142
# LIST OF TABLE

<table>
<thead>
<tr>
<th>TABLE</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Example Grid Analysis Showing <em>Unweighted</em> Assessment of How Each Type of Car Satisfies Each Factor</td>
<td>10</td>
</tr>
<tr>
<td>2.2</td>
<td>Example Grid Analysis Showing <em>Weighted</em> Assessment of How Each Type of Car Satisfies Each Factor</td>
<td>10</td>
</tr>
<tr>
<td>2.3</td>
<td>Hardware Requirements</td>
<td>15</td>
</tr>
<tr>
<td>3.1</td>
<td>Hardware Requirements</td>
<td>37</td>
</tr>
<tr>
<td>5.1</td>
<td>Environment Setup for Server</td>
<td>67</td>
</tr>
<tr>
<td>5.2</td>
<td>Environment Setup for Database</td>
<td>67</td>
</tr>
<tr>
<td>5.3</td>
<td>Environment Setup for Computer Requirements</td>
<td>67</td>
</tr>
<tr>
<td>5.4</td>
<td>Environment Setup for Web Browser</td>
<td>68</td>
</tr>
<tr>
<td>5.5</td>
<td>Implementation Status-General</td>
<td>77</td>
</tr>
<tr>
<td>5.5.1</td>
<td>Module name: User Interface</td>
<td>77</td>
</tr>
<tr>
<td>5.5.2</td>
<td>Module name: Database - ABG</td>
<td>78</td>
</tr>
<tr>
<td>5.5.3</td>
<td>Module name: Authenticate Admin</td>
<td>78</td>
</tr>
<tr>
<td>5.5.4</td>
<td>Module name: Main Function for Auto Buyer Guide</td>
<td>79</td>
</tr>
<tr>
<td>6.1</td>
<td>Test Schedule</td>
<td>83</td>
</tr>
<tr>
<td>6.2</td>
<td>User Module Test Description</td>
<td>86</td>
</tr>
<tr>
<td>6.3</td>
<td>Admin Module Test Description</td>
<td>87</td>
</tr>
<tr>
<td>6.4</td>
<td>Test Cases Result</td>
<td>87</td>
</tr>
</tbody>
</table>
## LIST OF FIGURE

<table>
<thead>
<tr>
<th>FIGURE</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Project Schedule and Milestone</td>
<td>16</td>
</tr>
<tr>
<td>3.1</td>
<td>Select Car Specification Interface (current system(a))</td>
<td>19</td>
</tr>
<tr>
<td>3.2</td>
<td>Select Car Specification Interface (current system(b))</td>
<td>20</td>
</tr>
<tr>
<td>3.3</td>
<td>Activity Diagram (current system(a))</td>
<td>21</td>
</tr>
<tr>
<td>3.4</td>
<td>Activity Diagram (current system(b))</td>
<td>22</td>
</tr>
<tr>
<td>3.5</td>
<td>Overview of Auto Buyer Guide : based on budget</td>
<td>24</td>
</tr>
<tr>
<td>3.6</td>
<td>Activity diagram of Auto Buyer Guide : based on budget</td>
<td>25</td>
</tr>
<tr>
<td>3.7</td>
<td>Global view of use case model</td>
<td>26</td>
</tr>
<tr>
<td>3.8</td>
<td>View Info Interface</td>
<td>28</td>
</tr>
<tr>
<td>3.9</td>
<td>Select Car Specification and Budget Range interface</td>
<td>29</td>
</tr>
<tr>
<td>3.10</td>
<td>View Results interface</td>
<td>30</td>
</tr>
<tr>
<td>3.11</td>
<td>Authenticate interface</td>
<td>31</td>
</tr>
<tr>
<td>3.12</td>
<td>Maintenance interface</td>
<td>32</td>
</tr>
<tr>
<td>3.13</td>
<td>Interaction Diagram for View Info</td>
<td>33</td>
</tr>
<tr>
<td>3.14</td>
<td>Interaction Diagram for Select Car Specification and</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Budget Range</td>
<td></td>
</tr>
<tr>
<td>3.15</td>
<td>Interaction Diagram for View Results</td>
<td>35</td>
</tr>
<tr>
<td>3.16</td>
<td>Interaction Diagram for Authenticate</td>
<td>36</td>
</tr>
<tr>
<td>3.17</td>
<td>Interaction Diagram for Maintenance</td>
<td>37</td>
</tr>
<tr>
<td>4.1</td>
<td>Example data collection for car general specification</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>(Honda)</td>
<td></td>
</tr>
<tr>
<td>4.2</td>
<td>Example data collection for car general specification</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>(Hyundai)</td>
<td></td>
</tr>
<tr>
<td>4.3</td>
<td>Example data collection for car general specification</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>(Toyota)</td>
<td></td>
</tr>
</tbody>
</table>
4.4 Example data collection for car general specification (BMW)
4.5 Example data collection for car general specification (Mersedes-Benz)
4.6 Example data collection for car general specification (Perodua)
4.7 Example data collection for car general specification (Proton)
4.8 Example data collection for details car specification (Honda)
4.10 System software architecture overview based on 3-tier architecture
4.11 System software architecture overview based on 3-tier architecture
4.12 The CSCI Auto Buyer Guide
4.13 Class Diagram for Auto Buyer Guide (ABG)
4.14 Navigation Diagram of Auto Buyer Guide (ABG)
4.15 Example of car specification and budget range selection interface (Input data)
4.16 Example of output design (standard features)
4.17 Example of output design (final results)
4.18 ERD Diagram for Auto Buyer Guide : Based on Budget (ABG)
4.19 Deployment View for Auto Buyer Guide : Based on Budget (ABG)
5.1 Three tier architecture
5.2 Configuration of Macromedia Dreamveawer
5.3 Apache and MySql starting on EasyPhp
# LIST OF ACRONYMS

<table>
<thead>
<tr>
<th>ACRONYMS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>KUTKM</td>
<td>Kolej Universiti Teknikal Kebangsaan Malaysia</td>
</tr>
<tr>
<td>OOAD</td>
<td>Object-Oriented Analysis and Design</td>
</tr>
<tr>
<td>UML</td>
<td>Unified Modeling Language</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and Communication Technology</td>
</tr>
<tr>
<td>ABG</td>
<td>Auto Buyer Guide : Based on Budget</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

1.1 Project Background

Auto Buyer Guide: Based on Budget is applying the web-based concept which means this system will be used and be able to access by user/public (home user) from anywhere. This system is develop in order to give more understanding other than user can gain details information about car and price that they need to know before make a decision to buy it and also based on their budget, needs, and desire. This system needs user to select options provided based on their needed such as car makes, transmission option, interior color, exterior color and budget which is user can select from the options provided.

This system is a new innovative web-based system which is will use by user in order to gain details information about car details info such as car specification an car features. This system is general system which is capable to access by user/public from anywhere as it applies the web-based concept. This system has an interactive function as options selection make by user which is already provided in this system and it will match with appropriate car based on selection made and at last user will views by the results about suitable car based on standard car specification options select by user.
Finally, this system will views the appropriate car and the price based on the selection makes by user and gives suggestion on which new car is suitable for them based on their budget, needs and desire. This system also gives the related dealer information such as address and contact number to facilitate the user to buy the car after makes their decision.

1.2 Problem Statement

Nowadays, the communications revolution has arrived. The technology application especially Internet facilities is the most important medium used by people to gain any information about anything that they need to know in fast and easy.

In this case, it is easier to user gain related information by using an Internet as it can access from anywhere at anytime either at office or at home. Usually, a person who wants to gain information about car will get it from magazine or catalogue that they get from the car dealer. Time management is very important. By using that approach, people may need to go several shop or need more than one magazine and finally they still didn’t get the accurate information and will waste of time.

Other than that, most of people still can’t decide on which new car to buy. They encounter a problem in choose the car based on their budget.
In this project, the development is based on how to solve those problems. For the first problem which is time management, by develop this web-based system, user can access it from anywhere and surely it can reduce the time consuming.

User also is able to get more understanding and details information about car especially the features, prices, and specification based on their desire. User can select the options provided from the related pages.
Then, from the budget problem, this system will help users to get the car on their budget range. Users need to select the budget range and the system will match the options selected by users and as finally, it will view some results and also give suggestions where they can get the car as they can get the dealer information on related pages.

1.3 Objectives

The objectives of this system are:

- To facilitate users who want to access the information they need from anywhere, especially at home, which is why they can have good time management
- To provide more understanding and provide the latest details about car specifications and features from the information provided in this system
- To allow users to make a selection on the type of car they want based on car specifications, budget, and desire
- To provide suggestions and guide users on which new car to buy based on budget and desire
- To allow users to make any choice from the solutions views by this system at the end of the process

1.4 Scope

The scope of this system is:

- It only consists of car as vehicle type, not including vans, minivans, and others
- It will consist of local and imported cars
- For local makes, it will include Proton and Perodua while for imported makes, it will include Hyundai, Honda, Toyota, BMW, and Mercedes
- For every car make, it will include four types of model only
- This system is going to be used by the public around Peninsular Malaysia only
1.5 Project Significant

This system will benefit to the public especially who wants to buy a new car which is they still can’t decide on which new car to buy. This system is general, it is not belong to one company but it is used for public view.

At the end of this system, it will help and guide user on making a decision on which new car to buy based on the budget and desire.

This project is important because it will facilitates the user, help user to have good time management, give more understanding and related details information that need by user, and also help and guide user to make a decision as the system will act as guide to help them on it.

1.6 Expected Output

Actually, as this system is will guide on make a decision for the user, firstly it needs some input from the user such as standard car specification and budget range which is user can select from the options provided.

After that, the system will give an outputs/results and suggestion on which new car is appropriate for them based on budget and desire. The results will also views the details information about that particular car such as car price, car model, fuel, cc, and etc. It will view some choices of results to let people choose from it and also they can go to the related linkage.
1.7 Conclusion

This system is a new innovative which is will apply the web-based concept, means it can be access from anywhere at anytime. This system can be access by public (home user) in order to gain more related information about the car other than helps and guide them to have and choose the best car based on their budget, needs and desire.

This system also will give the related contact number (car dealer). The next activity needs to be develop is Literature Review and Project Methodology.
CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

Literature review is a searching, collecting, analyzing and drawing conclusion from all debates and issues in relevant body.

Project methodology is a way to use all available, tools and approaches used in order to achieve predetermined objectives of the proposal project.

2.2 Fact and finding (based on topic)

The finding for this topic can be found from many sources as book, Internet and magazine as well. Extraction, analysis, and drawing conclusion from these sources will present the result of literature review.

Based on this project, we can found that there are reasons that cause the development of this system to solve the existence problems.
In a new era of modernization, there is much products, devices, software or process with technology based was already exist based on people or any organization needs and desire.

"Ahli-ahli organisasi kini bekerja atau melaksanakan tugas mereka secara automasi dengan bantuan computer dan pelbagai eranti atau system elektronik”

"Teknologi computer juga menjadi pemangkin kea rah pembangunan Negara secara keseluruhannya. Tambah pula era globalisasi ini telah menuntut agar manusia bergerak seiringan dengan kemajuan sains dan teknologi bagi mencapai kemajuan dalams ektor ekonimi, politik dan sosial”

“Resources – Ever – growing number of websites: according to the Online Computer Library Centre in 2002 there were 8.7 million unique sites, about 3 million of them where most or all of the content is public; this is a growth of 111% since 1998 in public sites (through their statistic show little growth in public sites since 2001).”
http://www.onid.orst.edu/~healeyd/upc/advdisadv.html
[Access 21 April 2005])

It means that how important it is to apply the technology approach on any process of activity.

Other than that, this project also stress on the transportation that is one of the most important needs by needs by people. In this case, we can say that car is one of the
best solutions for transportation problems. Other than it is easy to get, it is also not too expensive and many of people are able to have if based on their affordable.

"Should you buy a car and, if so, what kind is right for you? What kind of financing arrangement is the best for you?"


"Imaging walking up and actually feeling good about your financial future? You can with a plan. Well make sure your plans evolve as your life does. Because we focus on making you feel good about it"

(Money. (Dec 2004). Pp 21)

"Our exclusive survey identifies six common errors that could cost your family. Stop making them"

(Jean Chatzky (Dec 2004). The biggest Money Mistakes [And How to Avoid Them]. Pp 93)

Based on above quote, we can simply say that in order to have and owned car by themselves, they still can’t decide what type of car is suitable for them other than have not enough information about how to have a good financial management on that. So, because of these all things, this system is a good solution as one of the best approaches to help people especially the public to have a good management on their financial.

By using this system, user can gain more understanding other than it will help and guide user to manage their financial in order to have their own car based on their needs, desire and budgets.

Other than that, we cannot deny that people always encounter a problem especially in decision making in order to make a right choice in any decision they need to make.
Based on the case study of decision making below, we can conclude that people always need some medium or guide to make sure that the decision that they choose is the right one.

Case study 1:

Example:
A windsurfing enthusiast is about to replace his car. He needs one that not only carries a board and sails, but also that will be good for business travel. He has always loved open-topped sports cars. No car he can find is good for all three things.

His options are:

- A four wheel drive, hard topped vehicle
- A comfortable 'family car'
- An estate car
- A sports car

Criteria that he wants to consider are:

- Cost
- Ability to carry a sail board at normal driving speed
- Ability to store sails and equipment securely
- Comfort over long distances
- Fun
- Nice look and build quality to car

Firstly he draws up the table shown in Figure 1, and scores each option by how well it satisfies each factor: