Designing Information Systems of Mobile Phone Catalog Product by Web-based

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Abstract. Macromedia Dreamweaver 8.0 programming language is an application program that can edit HTML visually and manage websites and pages. This study aims to apply the PHP programming language with Macromedia Dreamweaver 8.0 to display mobile phone catalog information and increase the knowledge and capabilities of researchers regarding the website through internet media. The research method used is identification, formalization, implementation, and testing that aims to maximize the final results. The final result of designing information systems of mobile phone catalog product by Web-based is to apply the website to facilitate information retrieval and selling mobile phones online.

1. Introduction
At present, the development of the manual catalog is no longer efficient because it is difficult for the community to get the information they want because it is limited by distance and time factors [1][2]. With this online catalog, people no longer need to come all the way to shops or places of sale that are located both inside and outside the city, because with this catalog, people can choose the cellphone they want that can be accessed through internet [3].

Web applications or web-based software can be developed rapidly both in terms of usage, size, language used and complexity [4]. Many web applications are dynamic and interactive for use in information systems, telecommunications, commerce, banking and others [5][6]. The development is increase rapidly within web applications since internet technology appearance is very helpful to utilize and speed of delivery, spread and receipt of information. Starting from companies, schools, colleges and other institutions or organizations, many have used web applications in sales, promotion, learning and other activities where it is necessary to send, disseminate and receive information to make it easier for users requiring [7][8][9].

2. Related Works
Design lays the basis for making each object or system [10]. This system can be used both as a noun and as a verb, and in a broader way, this means applied arts and techniques [11]. As a verb, "planning" refers to the process that originates and develops a plan for a product, structure, system or component.
with a specific purpose. As a verb, "designing" is used either for the end or can be called a plan solution in the form of the final product of a design [12].

3. Research Methodology

3.1. Collecting Data Method

In this research, researchers searched and collected related data and information to completing research data through the stages of several methods, namely:

1. Identification
   Identification is to identify problems with clear boundaries with library research techniques, it is an attempt to find [13], explore and search for all information related to this research[14][15][16][17]. This information is obtained from books, the internet, and other information that is need to support the making of the program.

2. Conceptualization
   After all data is obtained through the identification phase, then designing the knowledge base, inference engine and interface design. Plan some of the capabilities that the program will have.

3. Formalization
   From the results of the second stage, the development tools to be carried out at this stage are determined.

4. Implementation
   The results of the above stages will be moved into a computerized system [18][19].

5. Testing
   In this stage, test the course of the program created [12], make corrections to errors that occur and also check the shortcomings that may have to be added.

3.2. System Flow Algorithm

To provide guidance in carrying out the research process and provide a general description, the author makes the flow of the application design system [20][21][22]. These steps can be described as follows:

1. Start making background problems from the research that will be built.

2. Perform the process of identifying problems that exist in making software.

3. Make the boundaries of the problem from the design of the software made.

4. Determine several objectives and benefits of the research obtained by researchers in making the software.

5. Determine and discuss the theoretical foundations relating to the title of the design of the application made.

6. Then the researcher processes the observation of the system to be built.

7. Re-examine the observations obtained in previous observations to determine the suitability of the results of the study with the conditions in the field.

8. After making repeated observations, next the researcher design a program that will be made from the results of the analysis obtained.

9. Researchers start making programs.

10. Implement the program to ascertain whether the program created can be run. When the program can be run, the conclusion is made. But if the program still has errors, researcher can revises and redesign the program based on the analysis obtained.

11. Make conclusions and suggestions based on the research conducted.
4. Result and Discussion

4.1. System Analysis
A system must have a purpose or target. If a system does not have a target, then the operation of the system will be of no use. The aim of the system is to determine the input needed by the system and the output that the system will produce. A system is successful if it reaches its target or its purpose.

Conventional marketing systems make it difficult for customers to get the latest product information and prices that continue to change as well as delivery time information. As a result, providing information to customers is less efficient. To overcome this problem, a marketing catalog was designed to optimize the delivery of product and service information to customers. This catalog displays features that make it easier for customers to get information on products and services provided.

4.2. Design
The scope in this research is to describe context diagram form. Context diagram is the overall picture of a system, whose purpose is to give a general view of the system and show a process of interacting with its environment. There are parties who provide input, and there are other parties who accept system output. At a glance, the context diagram of designing information system mobile phone product catalog by web-based can be seen in the following figure 1.

![Figure 1. Information System Context Diagram](web-based-mobile-catalog.png)

**Figure 1. Information System Context Diagram**

Web-based Mobile Catalog
Figure 2. Zero Level DFD Mobile Product Catalog Information System

4.3. System Implementation
In order for the system to run properly, a computer is needed with specifications that include multimedia facilities, that is, at a minimum, includes device specifications, namely:

a. Pentium IV computer with processor 2 GHz, 120 GB hard drive, 1 GB memory, for better performance it is recommended to use a Pentium 4 Core I3 with a 3.0 Ghz processor, 250 GB hard drive and 2 GB memory.

b. Keyboard.

c. Mouse.

d. Monitor VGA
4.4. Run the Program

1. To open the mobile phone catalog information system site map
   a. Open web browser applications such as Internet Explorer, Mozilla Firefox, Opera or other web browsers.
   b. Type in the browser address "localhost / catalog" (without quotes) then Enter.
   c. Then you will enter the main page (Home).
2. To open the site map administrator
   a. Open a web browser application
   b. Type in the browser address "localhost / catalog / admin"
   c. You will go to the administrator page
   d. Enter your username and password, then log in
   e. If you successfully log in, then you will go to the administrator page.

If the observation can be predicted with certainly and does not require further investigation [23] [24] [25]

5. Conclusion

From the results of the research that has been done, it can be drawn some conclusions as follows:
1. Website is means online information that can be accessed by anyone.
2. The display of a nice and attractive layout can add the attractiveness of the website and visited by many visitors.
3. A good website is a website is always maintained while still updating information with everything new.
4. This web was built by Macromedia Dreamweaver 8.0 program so that it is easily repaired or redesigned again.

References

[1] P. A. Longley, M. F. Goodchild, D. J. Maguire, and D. W. Rhind, Geographical Information Systems and Science. 2005.
[2] B. Shneiderman, Designing the user interface: strategies for effective human-computer interaction. Pearson Education India, 2010.
[3] S. Mann, J. Nolan, and B. Wellman, “Sousveillance: Inventing and Using Wearable Computing Devices for Data Collection in Surveillance Environments,” vol. 1, no. 3, pp. 331–355, 2003.
[4] B. R. Setiadi, S. Subagyo, A. B. Johan, M. Nurtanto, S. Sugiyono, and H. Nurdiyanto, “Mobile pocketbook of the 4Cs skills-oriented inform of Quick Response Code,” in Proceedings of the International Conference of Social Science, 2019.
[5] C. Martins, T. Oliveira, and A. Popović, “Understanding the internet banking adoption: A unified theory of acceptance and use of technology and perceived risk application,” International Journal of Information Management, vol. 34, no. 1, pp. 1–13, 2014.
[6] K. K. Kim and B. Prabhakar, “Initial trust and the adoption of B2C e-commerce: The case of internet banking,” ACM SIGMIS Database: the DATABASE for Advances in Information Systems, vol. 35, no. 2, pp. 50–64, 2004.
[7] T. D. Wilson, “The nonsense of knowledge management,” Information research, vol. 8, no. 1, pp. 1–8, 2002.
[8] A. Iskandar, M. Rizal, N. Kurniawan, D. U. Sutikno, and A. Purnomo, “The Effects of Multimedia Learning on Students Achievement in Terms of Cognitive Test Results,” in Journal of Physics: Conference Series, 2018, pp. 1–7.
[9] A. Iskandar, Rismawati, and R. Rahim, “Designing Application for Performance Assessment to Measure Employee Professionalism in Goverment,” in Joint Workshop KO2Pl and The 1st International Conference on Advance & Scientific Innovation, 2018, pp. 154–161.
[10] G. W. Fitzmaurice, H. Ishii, and W. Buxton, “Bricks: Laying the Foundations for Graspable User Interfaces,” in Proceedings of the Conference on Human Factors in Computing Systems (CHI’95), 1995.
[11] H. Kridalaksana, Kelas kata dalam bahasa Indonesia. Gramedia Pustaka Utama, 1986.
[12] B. R. Setiadi, Setuju, and M. Nurtanto, “Installation of Closed Circuit Television To Produce a Quality Assessment Process in Vocational Learning,” Dec. 2018.

[13] M. Nurtanto, S. Nurhaji, D. Widjanarko, M. B. R. Wijaya, and H. Sofyan, “Comparison of Scientific Literacy in Engine Tune-up Competencies through Guided Problem-Based Learning and Non-Integrated Problem-Based Learning in Vocational Education,” in *Journal of Physics: Conference Series*, 2018.

[14] R. Ratnadewi, D. Sudrajat, A. E. Sari, S. U. Ady, and D. Rianita, “Security application using data encryption standard algorithm,” *Journal of Advanced Research in Dynamical and Control Systems*, vol. 10, no. 7 Special Issue, pp. 1879–1882, 2018.

[15] R. Whittmore and K. Knaf, “The integrative review: Updated methodology,” *Journal of Advanced Nursing*. 2005.

[16] J. Bell, *Doing Your Research Project: A guide for first-time researchers*. McGraw-Hill Education (UK), 2014.

[17] A. Iskandar et al., “Web based testing application security system using semantic comparison method,” in *IOP Conference Series: Materials Science and Engineering*, 2018, pp. 1–6.

[18] M. A. Hamid et al., “The Analysis of Learning Implementation Plan (LIP) In Vocational Subjects Based on 2013 Curriculum,” Dec. 2018.

[19] M. Nurtanto et al., “Information media literacy to improve working concept comprehension of ignition system with contact breaker and problem-based learning,” no. February, 2019.

[20] N. Hanifah, *Memahami penelitian tindakan kelas: teori dan aplikasinya*. UPI Press, 2014.

[21] A. Neely et al., “Performance measurement system design: Developing and testing a process-based approach,” *International Journal of Operations and Production Management*. 2000.

[22] R. Rahim et al., “Hashing Variable Length Application For Message Security Communication,” *ARPN Journal of Engineering and Applied Sciences*, vol. 14, no. 1, pp. 259–264, 2019.

[23] D. Abdullah, S. Suwilo, Tulus, H. Mawengkang, and S. Efendi, “Data envelopment analysis with upper bound on output to measure efficiency performance of departments in Malaikulsaleh University,” *J. Phys.: Conf. Ser.*, vol. 890, p. 012102, Sep. 2017.

[24] M. Mesran et al., “Combination Base64 and Hashing Variable Length for Securing Data,” *J. Phys.: Conf. Ser.*, vol. 1028, p. 012056, Jun. 2018.

[25] D. Elango, R. Vongurai, and K. Srifah, “The Factors Influencing Intention to Study Via Online Education: The Case Study of People In Bangkok, Thailand,” *JOIV: International Journal on Informatics Visualization*, vol. 2, no. 4, pp. 245–251, Jul. 2018.