

TESTING THE WEBSITE OF SMP NEGERI 2 TULANGAN USING THE BLACKBOX TESTING METHOD

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ABSTRACT

In today's modern world we cannot undervalue the importance of technology. Likewise with the impact of technology on education in Indonesian society. SMP Negeri 2 Tulangan serves as an example of a school that has utilized information technology by creating a website that has a function to provide information to public. The website is created specifically for SMP Negeri 2 Tulangan of which the function is to provide information and knowledge about SMP Negeri 2 Tulangan. This test will use the blackbox testing method, blackbox testing is a way of testing software by testing the function of an application without testing its internal structure and workings. This test goes through four stages, namely the selection of the system to be tested, determining the expected input and output, testing the system and analyzing the results. In this test, the results obtained were quite satisfying and good, after we tested and we got test results showing that each menu and feature owned by the website could function perfectly and there were no bugs in the system 12. As a result, the website owned by SMP Negeri 2 Tulangan is considered functional and appropriate for its users to use.

Keywords: *Information Technology, Blackbox Testing, Modern Education, Functionality*

1. INTRODUCTION

Currently, the progress of technology and information is very rapid and fast, including in Indonesia [1]. The public is already aware that the internet can serve as a medium for communication as well as for the dissemination of information, and that it can provide fairly good convenience in both cases. [2]. In the era of global business, the influence of advances in information technology is inevitable, such as the use of telephones, facsimiles, computers, and satellites in various activities of the company's means of communication [3]. including in the field of education. The utilization of information technology has also been applied by SMP Negeri 2 Tulangan which uses technology for information media as well as promotional media for SMP Negeri 2 Tulangan itself.

Due to a lack of alternative media or information tools to distribute promotions and information to the public, SMP Negeri 2 Tulangan encountered difficulties in the promotion and information field in the past. So they created a website containing detailed information about the school, registration, and etc. This website is also a forum for promoting SMP Negeri 2 Tulangan because this website can be accessed by public. "An arrangement for managing information to achieve company goals" is how the information system defines itself [4].

The existence of the website can be a solution to the problems faced by SMP Negeri 2 Tulangan. In this decade the quality of education has become a public event and the focus of government work [5].

In this test we used the blackbox testing method, where we and the website owner can find out that the website created can function properly and has an attractive appearance. the research function has the ability to upgrade science so that it remains up-to-date, sophisticated, applied, and axiological for society [6], so that improvements and upgrades can be made to the website.

Thus, testing using the blackbox testing method can help SMP Negeri 2 Tulangan to ensure that the website they create can run properly according to its functions and needs and have an attractive design appearance for its users.

2. LITERATURE REVIEW

2.1. Blackbox Testing

Black Box Testing is a method of software testing in which the functions of an application are tested without looking into the internal structure or source code of the application. This test focuses on the input and output of the software to ensure that the application works in accordance with the specified specifications and requirements. In black box testing, the tester checks the functionality of the app by providing various inputs and checking the result, to detect possible errors or defects.

2.2. Flowchart

A flowchart is a type of diagram that represents algorithms or sequential instructions in a system. Flowcharts use various symbols and arrows to describe workflows or processes, thus facilitating understanding and analysis.

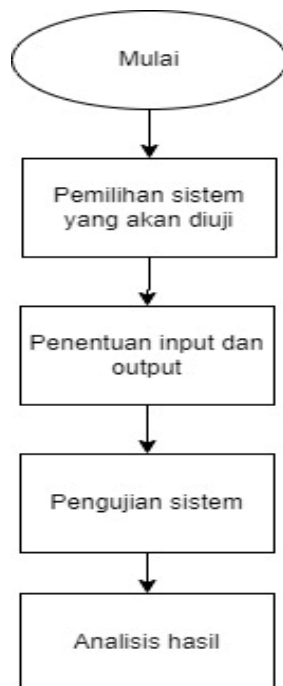
2.3. Education System

The educational system is a set of structures and processes designed to provide education to the community. It covers all the institutions, policies, procedures, and practices related to teaching and learning. The primary objective of the education system is to develop the knowledge, skills, values, and attitudes necessary for individuals to participate effectively in society and the world of work.

3. RESEARCH METHOD

A blackbox test method (or black box test) is an approach by conducting software testing without paying attention to the internal structure and implementation logic of the program being tested. The term "blackbox" refers to conditions in which testing is carried out from the outside, such as from the end user's point of view.

The phase of this research begins with [8] observing the behavior of the system or function tested. These tests are performed because of specifications and functional requirements, without knowledge of how the system is implemented. This method involves input into the system and checking the output generated, without paying attention to what happens inside the system. The diagram of the research methodology can be seen in the Figure [9] below.



Gambar 1. diagram alur figure 1 flowchart

Start – selected system to be tested-input and output determination-system testing-result analysis

Figure 1 is the flow of the blackbox testing, the meaning of the diagram above will be described below

- System Selection to be Tested:** Testers first must select a website to be tested. Here we use SMP Negeri 2 Tulangan website to test.
- Determination of Input and Output Expected:** Researchers determine the input for each website, such as the amount of information provided
- System testing:** This phase involves the development of two websites according to defined needs. The specified input will be inserted into the system, and the actual output will be compared to the expected output. Tests are carried out without paying attention to internal system details, focusing only on input and output functions.
- Result Analysis:** If the output from the website is as expected, then the system is considered successful. However, if there is a difference between actual and expected outputs, corrective measures will be required to ensure the system works properly

Based on the data collected through our field observations, which have been adapted to the problem formula and the purpose of the test [7]

4. RESULT AND DISCUSSION

Based on the data we have collected through observations that we have done in the field, which has been adapted to the formula of the problem as well as the purpose of the test [10], then obtained the test results as below.

In the initial phase of testing of the website of the SMP Negeri 2 Tulangan we will test the homepage of the SMP Negeri 2 Tulangan website which has a function to display the latest information and menus on this website.

Tabel 1. Gallery Testing

No	Testing Description Testing description	Expected Output
1	Checks content and information on the port	The homepage displays complete information such as History of the SMP Negeri 2 Tulangan
2	Testing the function of buttons on the homepage	The buttons on the menu work well and meet their functions

The following test is on the profile menu that is the completeness of the information and functions of the buttons that are present in the profile view. The self profile view contains some information such as History, written speech of the head of school, list of teachers and extracurriculars.

Table 2 profile testing

No	Deskripsi Pengujian Testing description	Expected Output by public
1	Testing the availability of information on the profile view	Information on the profile view is complete and understandable by the public
2	Tests the functionality of the buttons on the profile view, whether they meet the needs.	The button on the profile menu works well and according to its needs
3	Testing the functionality of the dropdown	Dropdown works well and can provide a complete menu

The next test is to test the gallery of this website. This test tests the completeness of the information from the menu gallery and tests the buttons and images on this site.

Tabel 3 Gallery Testing.

No	Testing Description	Expected Output
1	Testing the availability of information in the gallery view	Information on the full gallery view and there are pictures that are easily understood by the public
2	Testing the availability of information in the gallery view whether they meet the needs	The button on the gallery menu is already functioning properly and suited to its needs

The next test is on the contact section. The test focus on some parts of the contact menu like integration with whatsapp and google maps as well as testing the information and functionality of the buttons.

Table 4. Contact Display Testing

No	Testing Description	Expected Result
1	Testing the availability of information in the contact view	Information on the gallery view is complete and understandable by the public
2	Tests the functionality of the buttons on the contact display,	The button on the gallery menu works well and according to its needs

No	Testing Description	Expected Result
	whether they meet the needs.	
3	Testing web integration with whatsapp	The web can be integrated with the whatsapp application
4	Testing web integration with google maps	Testing web integration with google maps

5. CONCLUSION AND SUGGESTION

During this test we can find out that the website owned by the State Department of MSM 2 Tulangan can perform its functions well that is to inform the news and do the identification of the profile of SMP Negeri 2 Tulangan itself. We need to know that the purpose of this test is to find out how well this website can work and whether it can attract the public to use it and we also test the information on the website. From this test results obtained as follows, the information on this website is good and in accordance with the standards of this test, while on the function of buttons on the web SMP Negeri 2 Tulangan already function well and no bug that makes this website already in line with our testing standards, then the last is testing on the integration of the website against other applications, here the website can be integrated directly with whatsapp and google maps. Overall, this website has worked well; however, it would be even better if the developer could fix or update the SMP Negeri 2 Tulangan website's appearance in the next update.

REFERENCE

- [1] "[No title found]," *hjimb*.
- [2] K. J. Baso, Y. D. Y. Rindengan, and R. Sengkey, "Perancangan Aplikasi Catering Berbasis Mobile," no. 2, 2020.
- [3] S. Maharsi, "PENGARUH PERKEMBANGAN TEKNOLOGI INFORMASI TERHADAP BIDANG AKUNTANSI MANAJEMEN," *Jurnal Akuntansi*, vol. 2, no. 2.
- [4] M. Andarwati, "DESAIN SISTEM INFORMASI DAN LAPORAN KEUANGAN PADA ORGANISASI NIRLABA," *JTMI*, vol. 2, no. 1, May 2016, doi: 10.26905/jtmi.v2i1.619.
- [5] H. Asy'ari, "Perbandingan Sistem Manajemen Mutu ISO 9001:2008, Standard BANPT dan Total Quality Management di UIN Maulana Malik Ibrahim Malang," *Jurnal Pendidikan Islam*, vol. 4, no. 1, p. 141, Jun. 2015, doi: 10.14421/jpi.2015.41.141-157.
- [6] M. R. Fadli, "Memahami desain metode penelitian kualitatif," vol. 21, no. 1, 2021.
- [7] R. Rosaly, A. Prasetyo, and M. Kom, "Pengertian Flowchart Beserta Fungsi dan

- Simbol-simbol Flowchart yang Paling Umum Digunakan”.
- [8] F. D. Astuti and Y. Hermawan, “PEMANFAATAN FIREBASE REALTIME DATABASE PADA APLIKASI PEMBELAJARAN AGAMA ISLAM MENGGUNAKAN FRAMEWORK FLUTTER,” *FAHMA*, vol. 18, no. 2, pp. 1–11, Nov. 2023, doi: 10.61805/fahma.v18i2.65.
- [9] R. P. Sari and D. T. Santoso, “Pengembangan Model Kesiapan UMKM di Era Revolusi Industri 4.0”.
- [10] D. P. Dewi, H. Harjoyo, and A. Salam, “PROSEDUR ADMINISTRASI JASA PENGIRIMAN BARANG DI PT CITRA VAN TITIPAN KILAT TANGERANG,” *SEKRETARI*, vol. 7, no. 1, p. 1, Jun. 2020, doi: 10.32493/skr.v7i1.4570.