



## Web Tv Streaming Design In The National University Information System

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### ABSTRACT

The development of information is currently growing rapidly, in the era of globalization television media (TV) is still the favorite choice for the public in getting an information as needed. With the advancement of technology in television and internet media, television broadcasting can not only be done on television sets but can also be broadcast via computer devices, laptops and cellphones with streaming technology based on websites and mobile. Streaming technology services are already widely used in website-based television stations in the user's need to facilitate online television broadcasts. But not only television stations that have streaming TV websites, every university has a streaming TV based website. To build a TV streaming website design, the WordPress blog engine application is used using the PHP programming language with the xampp application needed on the MariaDB database, as well as the local apache web server and YouTube Unas TV as a server in the streaming process. The final results of this study with the campus TV streaming website can make one of the electronic media that can inform campus activities streaming through the TV streaming website application, by using the internet students can view campus information media and can access it anywhere

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## 1. Introduction

The development of technology and information is currently growing rapidly, especially in the development of internet technology. This has led to the tendency of people today to hang their activities on the internet. So that internet technology becomes a model of new information and communication media. With this direction in mind, internet technology can now be utilized as a media tool for the dissemination of mass information and also as a one-way communication medium known as internet broadcasting. Not only TV stations, but several universities implement Website-based TV Streaming media

With the development of increasingly advanced technology that has a positive impact on humans, one of them is on digital information media, namely a television (TV) that functions as a mass communication media. With advances in technological developments in the field of information media and the internet, television broadcasts are not only enjoyed by using television sets but can also be enjoyed by using computer media devices, laptops or mobile phones through a website-based or mobile-based streaming system. With the presence of campus TV makes it one of the information media that can inform the media of theoretical and productive learning activities as well as seminar activities on and off campus. By using internet facilities students can see live streaming TV website information system without having to come to the campus area using a laptop or mobile. This campus TV streaming application is based on a website so you can access it anywhere.

Streaming TV website is a video content that is produced to broadcast on the internet through the World Wide Web, with the process of streaming through the process of transferring data or information from one user to another user, either directly or through certain applications, which are not necessary to download and will be directly displayed for data that has been successfully moved. This type of Streaming Prerecord is run by first recording the video or content to be broadcast, then storing it on certain media (can be online media or physical media such as hard drives). After being saved, only then the host can access the content if access is given freely by the content owner.



## 2. Research Methods

In the design of building streaming TV websites, some of these applications are made through several stages, as follows:

### 2.1 Streaming

Streaming is the process of transferring data or information from one user to another user, either directly or through a particular application, whose nature does not need to be downloaded and will be directly displayed for data that has been successfully transferred.

### 2.2 Prerecord Streaming

Prerecord Streaming This first type is run by first recording the video or content to be broadcast, then storing it on certain media (can be online media or physical media such as hard drives). After being saved, only then the host can access the content if access is given freely by the content owner.

### 2.3 Youtube

Youtube is a social media with a website that provides various kinds of information in the form of videos to movies, on the youtube site there are information searches and videos - videos that can be made by youtube users themselves. By using the youtube source from Unas TV, it is used as streaming for making campus TV streaming websites.

### 2.4 Website

Website is a collection of various site pages that are summarized in a domain or subdomain that are interrelated where each is connected with a network of pages or hyperlinks, which are in the WWW (World Wide Web) and of course, are found on the Internet. Web pages are usually in the form of documents written in Hyper Text Markup Language (HTML) format.

### 2.5 Analysis of Software and Hardware requirements

The need for software and hardware in building this research is needed to smoothly build research as follows.

#### a) Software

Here is the software used in building applications, namely:

1. OS Windows 10 Home
2. Wordpress version 5.4
3. XAMPP version 7.4.5
4. Visual Studio Code e. Adobe Photoshop CS6
5. Mozilla Firefox

#### b) Hardware

The following is the hardware used to build this research, namely:

1. a. Laptop Asus X441U
2. b. Processor Intel Core I3-
3. 6006U CPU @ 2.00GHz
4. c. Ram 4 GB
5. d. Hardisk 1 TB

### 2.6 System Design

The design of this system is done by making a general picture by making a display design in the proposed system so that the program is made in accordance with needs.

### 2.7 Implementation

The writer implements it as a testing material for the website creation process By collecting methods on the data used as follows:

#### 1. Observation

The author makes observations that are used as material in research writing.

#### 2. Literature Study

Using data collection methods by studying a number of books, looking for references in journal facilities, visiting sites submitted for analysis and looking for TV Streaming website references at other universities as reference material in the process of making Web TV streaming at the National University.

### 2.8 Testing

Testing on TV streaming websites using a blog engine application, CMS (Content Management System) WordPress with a text format that uses a web programming language that is PHP (Hypertext Preprocessor) with the source code editor using the Visual Studio Code application to edit the text that functions to change the appearance design and fill the look of the website. For accessing databases using xampp applications that serve as a server on the local to process various types of data on a website that is in the process of making or developing process. The module in xampp that is needed is apache which is a web server while MySQL is a database server that functions as processing, editing and deleting database lists via localhost, but with the current development of the database not only MySQL but there is also the latest version of MariaDB now. In the final results of testing this website TV streaming website can be made with a display design through the WordPress blog engine so that the final results of this website test have a dynamic display.

## 3. Results and Discussion

### 3.1 Flowchart Diagrams

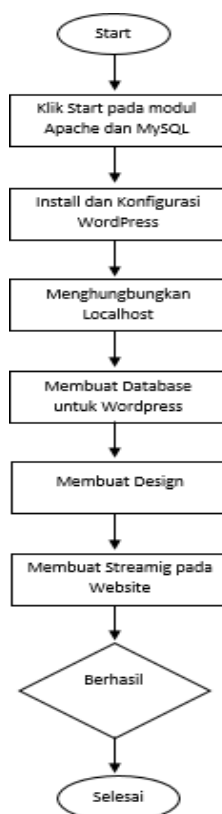
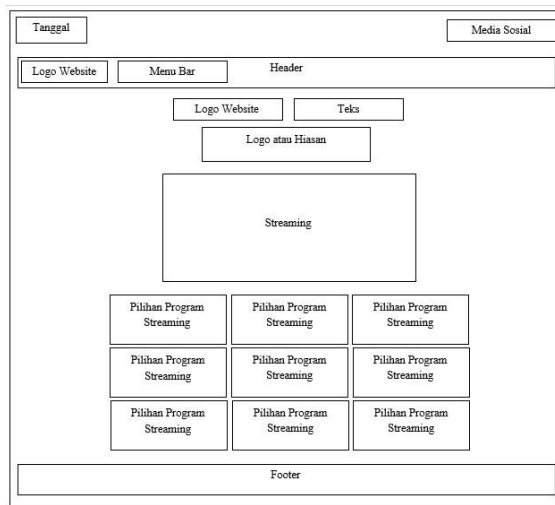


Fig 1. Website Development Process Flow Chart

Figure 1 is the beginning of the process at the start, then the next step is to start click on the xampp module in the form of Apache and MySQL. The purpose of Apache is to display a web page that matches the php script that was already created while MySQL to process the database, then after that do the installation and configuration of wordpress and activate the database via localhost to create a wordpress database, after the flow is run, the author can make the appearance of the website that is needed in accordance with the needs of each user.

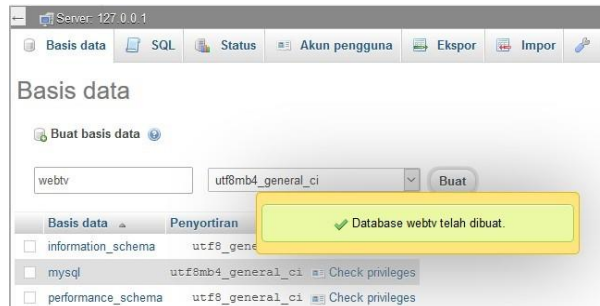
### 3.2 Display Design



**Fig 2.** Display Design

Display design that will be designed for making this Streaming TV Website uses the design and theme of the CMS (Content Management System) WordPress, display design uses the theme of Divi Elegant Themes. On this page is the first result after being accessed by users, this web page has a header image along with a logo and menu bar, for a web page containing streaming TV sourced from youtube and below streaming there are several other program menu options.

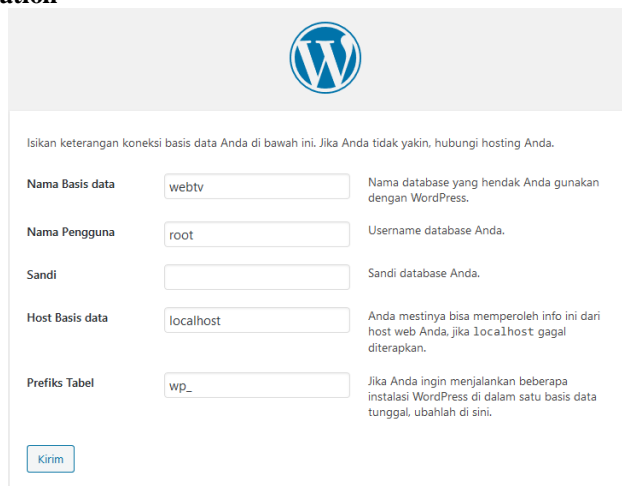
### 3.3 Creating a MySQL Database



**Fig 3.** Creating Database

Before entering the wordpress installation process, it is necessary to make a database first. To be able to access the link on the phpmyadmin localhost to create a database, click start on the Apache and MySQL modules in the xampp application.

### 3.4 WordPress Configuration



**Fig 4.** WordPress Configuration

To install wordpress, you need to configure the file writing script wp-config-sample.php and rename the file to wp-config.php, and change the contents of the few lines of code according to user needs after that match the contents in the image below with the contents of the wp-config.php file

### 3.5 WordPress Installation

Silakan berikan informasi berikut. Jangan khawatir, Anda selalu dapat mengubah pengaturan ini nanti.

Judul Situs

Nama Pengguna   
Nama Pengguna hanya boleh berisi karakter alfanumerik (huruf dan angka), spasi, garis bawah, tanda minus, titik, dan simbol @.

Sandi  [Sembunyikan](#)  
Sangat lemah  
Penting: Anda butuh sandi ini untuk log masuk. Simpanlah di tempat yang aman.

Tegaskan (ulangi) Kata Sandi  Setujui penggunaan sandi yang lemah

Email Anda   
Periksa ulang alamat email Anda sebelum melanjutkan.

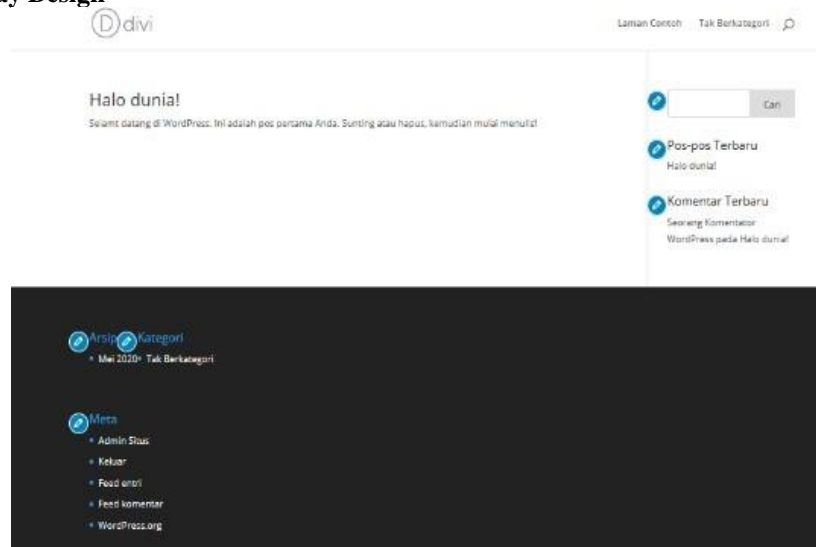
Penampakan pada Mesin Pencari  Halangi mesin pencari untuk mengindeks situs ini  
Sepenuhnya tergantung mesin pencari untuk menghormati permintaan ini.

[Instal WordPress](#)

**Fig 5. WordPress Installation**

After doing the above steps, just do the installation process before installing WordPress need to fill in the list of information needed for detailed requirements regarding the WordPress web to be used

### 3.6 Make Display Design



**Fig 6. Make a Design From the Divi Theme**

By using the WordPress blog engine, the writer can create a website appearance of the required theme. Display that will be created using the design design as in Figure 2. Display this design using the theme of the Divi Elegant Themes.

### 3.7 Display on Live Streaming



**Fig 7.** Display On Live Streaming

Display page on home is the first result after being accessed by users, this web page is a direct page that contains about streaming TV as Live Streaming. On this streaming use from the Youtube Unas TV source.

### 3.8 Views on Our Program



**Fig 8.** Display on Our Program

The page display on our program menu is the result of several menu choices available with the feature menu of our program, users can access our programs which can be directly directed to the source of TV Unas.

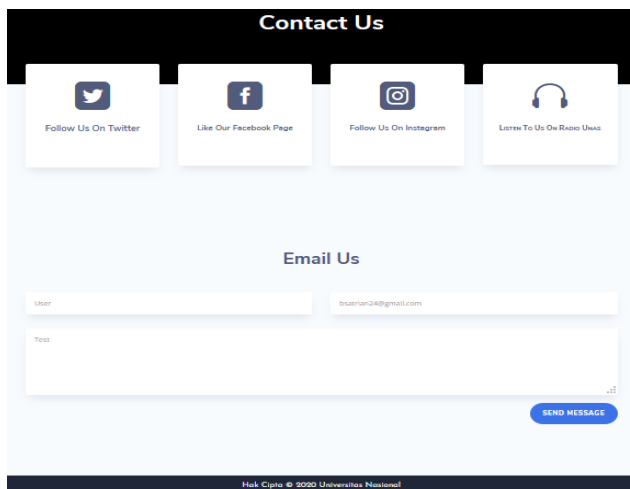
### 3.9 Views on About Us



**Fig 9.** Display on About US

The display on the about us menu page is a description of the information about the National University Streaming TV website.

**3.10 Display on Contact**



**Fig 10.** Display On Contact

Display on the contact menu there are several contact menus that can be directly connected to the social media and can send emails to provide suggestions and enter the National University TV Streaming Website admin

**3.11 Web TV Streaming Functionality Testing**

**Tabel 1**  
Website Functionality Testing

No	Pengujian fitur menu	hasil	status
1	home	The process of entering the home display Successful, first time access to the website will bring up the initial appearance.	sukses
2	Live	On the live menu the process is successful, the user can go directly to the Live view.	sukses
3	Program	On the successful program program menu, users can go directly to the Our Program view and can choose desired stream.	sukses
4	About Us	On the menu about our successful process, users can find out about the University National.	sukses
5	Contact	On the successful contact menu, users can contact the University National.	sukses

#### 4. Conclusion

Based on the results of the testing process on the Streaming TV Website application, it can be summarized as follows:

1. The system results of the testing process on the Streaming TV Website application, it can be summarized as follows.
2. Web TV Streaming information system can help National University students and also the public to get information from campus activities online.
3. Providing media information in facilitating the documentation process to support the activities of the National University.

#### 5. References

- [1] Kurniawati. Lia., "Pemanfaatan Teknologi Video Streaming Di LPP TVRI Jawa Barat", *Jurnal Komunikasi*, Vol 10, No. 1, Maret 2019 P-ISSN 2086-6178 E-ISSN 2579-3292
- [2] Putri, Asri Rahmi., Tulloh, Rohmat., & Hariyani, Yuli Sun. "Perancangan dan Implementasi Halaman Web Dinamis Untuk Papan Informasi Digital Pada Jaringan Ad-Hoc", *e-Proceeding of Applied Science* : Vol.4, No.3 Desember 2018, ISSN : 2442-5826.
- [3] Erfan, Rohadi., Siradjuddin, Indrazno., Andrie, Rosa., & Christine, Anastasia Merry. "Implementasi Video Streaming Lalu Lintas Kendaraan Dengan Server Raspberry Pi Menggunakan Protokol H.264", *Jurnal Teknologi Informasi dan Ilmu Komputer (JTik)*, DOI: 10.25126/jtiik201851138 Vol. 5, No. 5, Oktober 2018, hlm. 629-634 p-ISSN: 2355-7699 e-ISSN: 2528-6579
- [4] Christyono, Yuli., Santoso, Imam., & Zahra, Ajub Ajulian. "Perancangan dan Pengukuran Kinerja Video Streaming Menggunakan Red5 Pada Mesin Virtual", *TRANSMISI*, 19, (3), JULI 2017, e-ISSN 2407 6422, 140.
- [5] Yusnita, Amelia., Daud, Jundro., & Syahroni, Muchamad. "Membangun Web Streaming Wicida TV Sebagai Media Saluran Informasi dan Edukasi Pada STMIK Widya Cipta Dharma", *Eprints Repository Software*.
- [6] Nasution, Nurhamidah., "Aplikasi Media Televisi Online Berbasis Streaming", *Sinkron Jurnal & Penelitian Teknik Informatika*, Vol 2, No. 2, (2017): Sinkron, ISSN 2541-2019
- [7] Zampoglou, Markous., Kapetanakis, Kostas., Stamoulias, Andreas., Athanasios, G Malamos., & Spyros, Panagiotakis. "Adaptive streaming of complex Web 3D scenes based on the MPEG-DASH standard", (2017) *Multimedia Tools and Application*, Vol 77, Issue: 1, PP 125-148, DOI 10.1007/s11042-016-4255-8.
- [8] Chakraborty, Ayon., Bhattacharya, Arani., Ghosh, Santosh., & Samir R. Das. "A First Look at Performance of TV Streaming Sticks", *IEEE Sarnoff Symposium*, pp 1-6, DOI : 10.1109/SARNOF.2017.8080388.