

## Web-Based Application for Filling in Animal Sample Data at the Medan Veterinary Center

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### ABSTRACT

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Current advances in information technology have provided great benefits in the business world, be it selling goods or renting services. Information technology makes it possible to process data quickly and easily so that when presenting reports the required information can be obtained precisely and efficiently.

The aim of creating this system is to overcome the problem where in the service process the service user has to go to the agency, so that the process becomes inefficient and takes time.

The system design was carried out using a modeling language using UML. Meanwhile, the programming used was PHP using a MySQL database.

The final result of this design produces a web-based animal sample testing information system for the Medan Veterinary Center which is expected to make it easier for internet users to provide or obtain information about the Medan Veterinary Center and the procedures carried out.



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### INTRODUCTION

Talking about developments over time, current technological developments have become increasingly advanced and sophisticated. It could be said that technology has penetrated various aspects of life, one of which is the business world. Nowadays, the business world is increasingly connected to computers. This happens because of technological advances, which always provide various kinds of facilities and infrastructure to facilitate business-related performance.

The development and use of information technology, especially in the use of computer technology for data processing, is also a concern for business circles. Various programs can be developed into systems whose performance uses computer devices, and one of these programs is being able to publish business information from an agency as well as offering business services or goods using internet media or using a web-based system. Websites are one of the media for publishing information via the internet, because the nature of the

internet can be accessed 24 hours non-stop with a very wide coverage area. A website is a collection of site pages, which are usually summarized in a domain or sub-domain, which is located on the World Wide Web (WWW) on the Internet.

Web applications or what can also be called web-based software have grown rapidly in terms of use, size, language used and complexity. In creating websites the programming languages used are PHP and MYSQL. At the beginning of the development of the world wide web it was only used for academics and research, but now the world wide web is used for business.

One of the agencies that the author observed was the Medan Veterinary Center. Medan Veterinary Center is a government agency which has the task of providing animal sample testing services. This agency works under the orders of the agricultural department. The Medan Veterinary Center also has its own system for filling in sample data, but the system used is still local-based and can only be used on computers at the Medan Veterinary Center.

## METHODS

### Systems Analysis

System analysis is the initial stage carried out to identify and evaluate a problem or obstacle that occurs in a system. So that improvements can be proposed according to expected needs. The things that will be analyzed at this system analysis stage are analysis of running system procedures, problem analysis, and evaluation of the running system.

### System planning

Through the results of the evaluation of the system that has been running, the author proposes a new system design. The new system design will be implemented using UML (Unified Modeling Language) which consists of 3 parts, namely: Use Case Diagram, Activity Diagram, and Class Diagram

### Use Case Diagrams

A use case describes an interaction between one or more actors and the information system to be created. Roughly speaking, use cases are used to find out what functions exist in an information system and who has the right to use those functions. Here is the plan Use Case Diagram of the new system to be created:

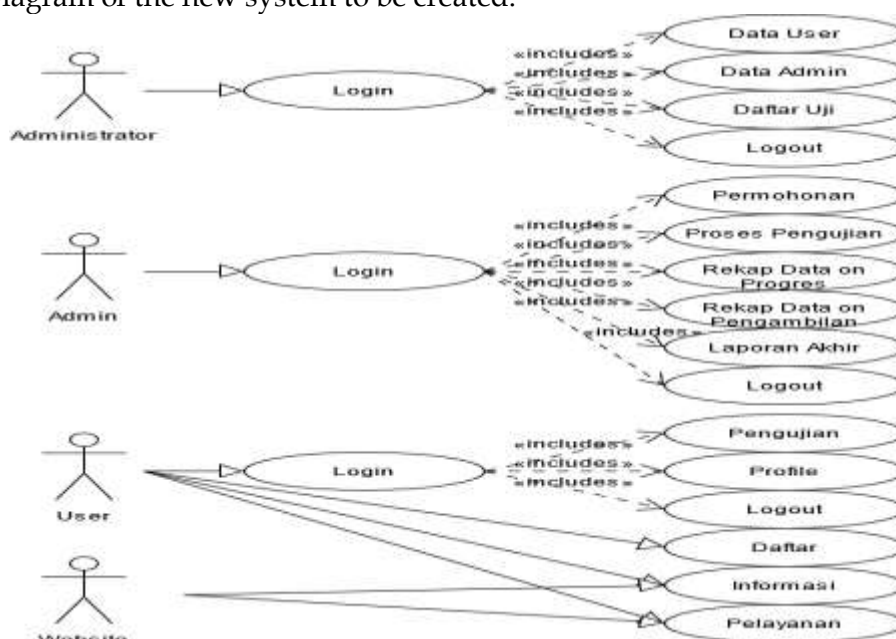
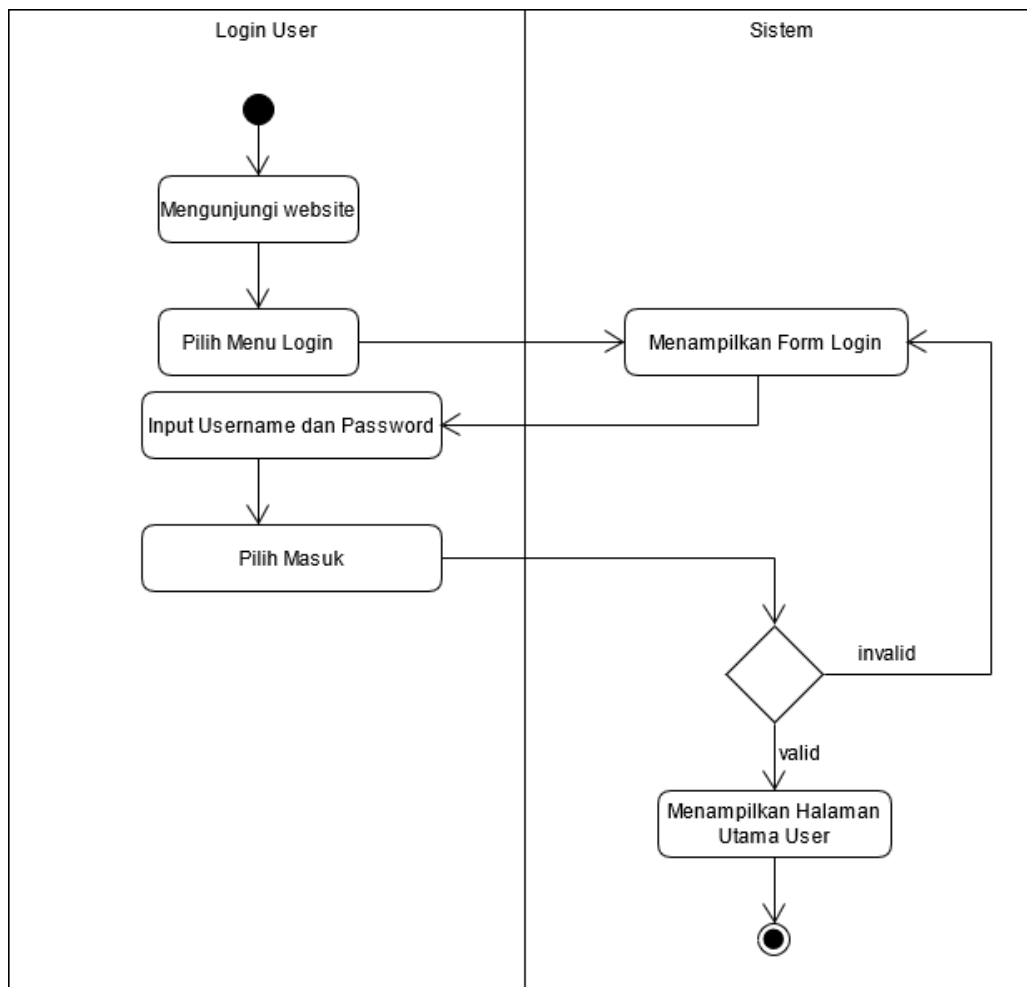


Figure 1. Use Case Diagrams

**Activity Diagram Login**



**Figure 2.**Activity Diagram login

**Database Design**

This database design aims to determine the content and arrangement of data needed to support various system designs.

**RESULTS AND DISCUSSION**

**Design Results**

Design Results are intended to describe the results of the system that has been designed. The following are the results of the design and appearance on the Animal Sample Testing Information System website at the Medan Veterinary Center:

**Main page**

This page is the first page displayed when accessing the website. This page is also the initial display of the website and can be opened without having to log in first.

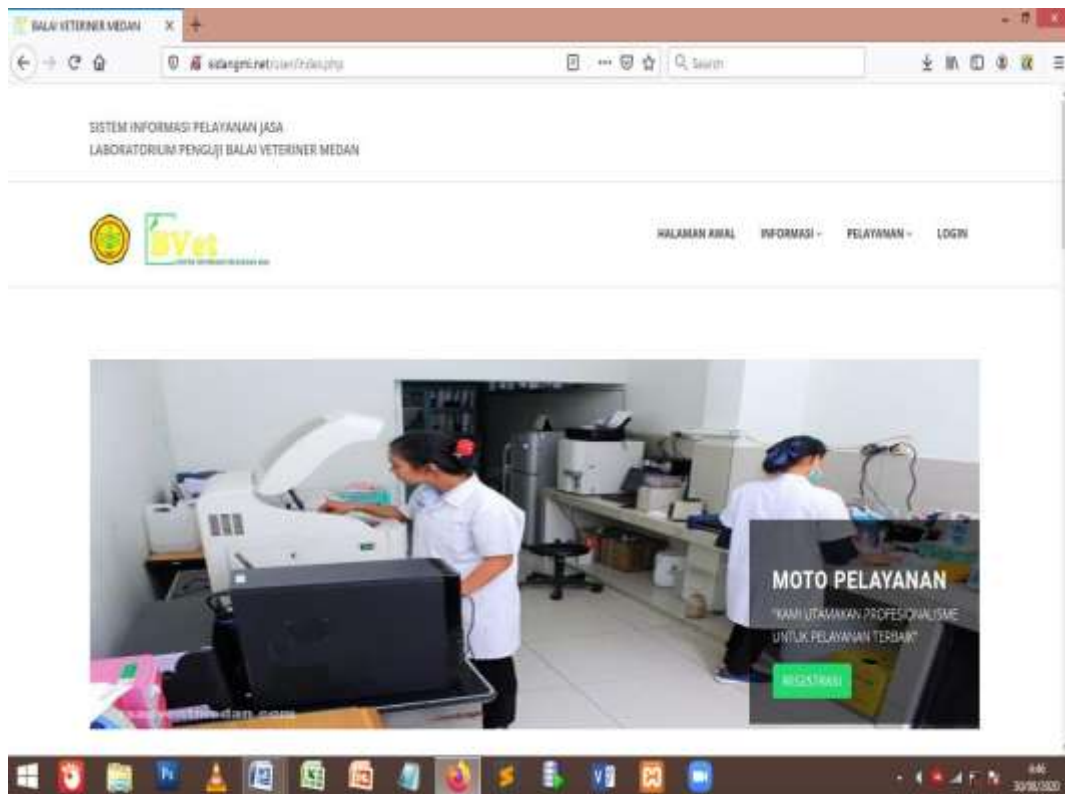


Figure 3. Main page

### Our Contact Information Page

This is a page that displays information regarding the address, email, fax, complaint SMS and telephone number from the agency.

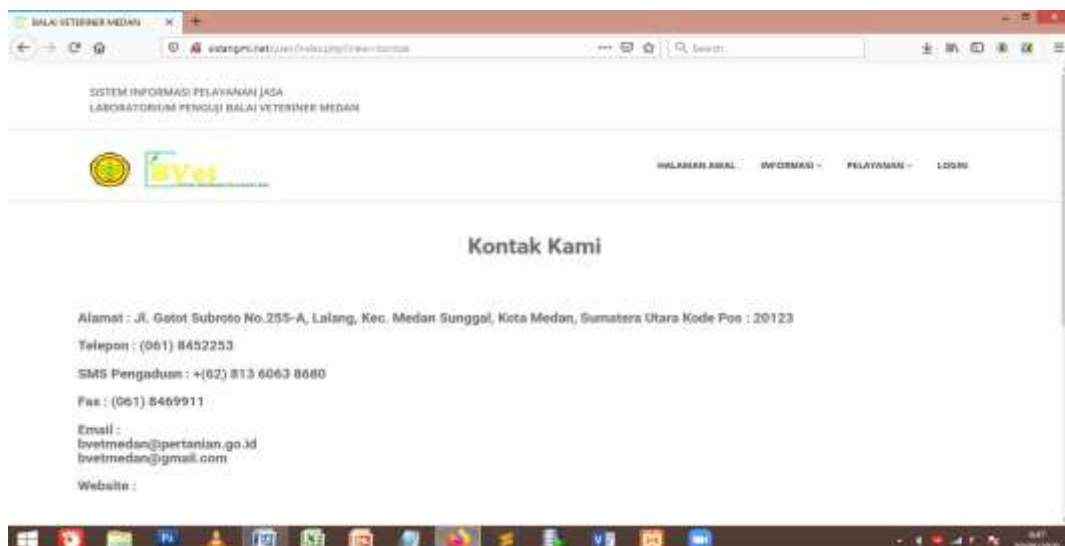
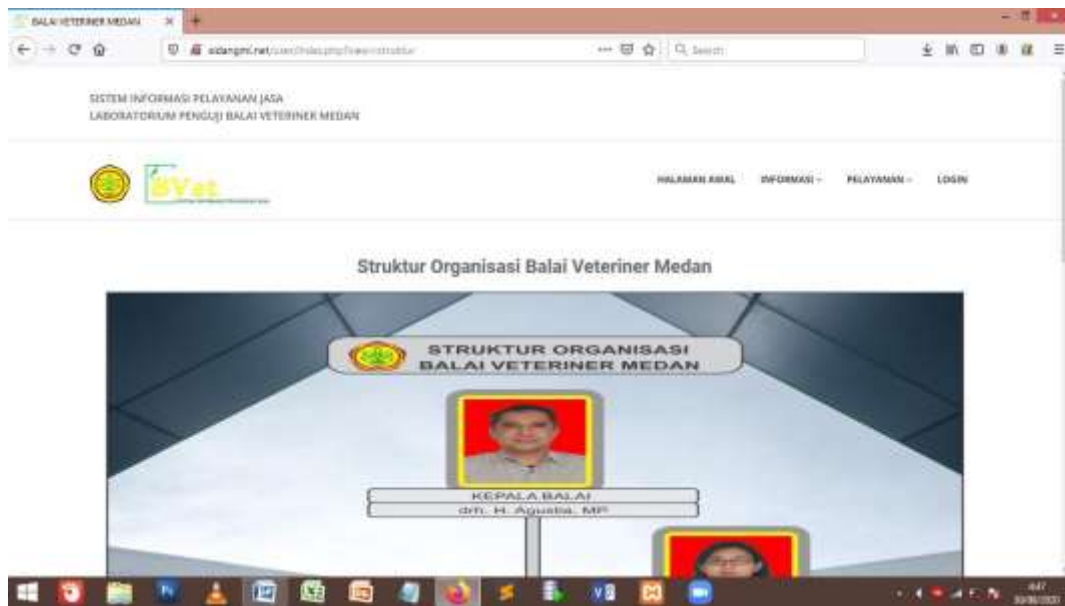


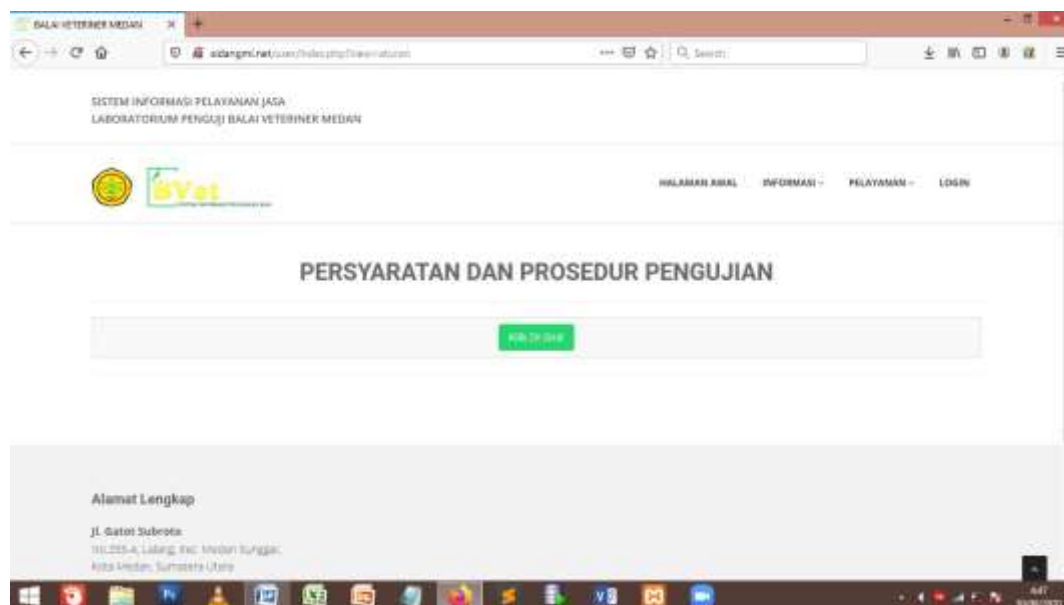
Figure 4. Our Contact Information Page  
Organizational Structure Information Page  
This is a page that displays information about the agency's organizational structure.



**Figure 5.**Organizational Structure Information Page

### Testing Service Standard Service Page

This page is a page that functions to serve website users to find out the requirements and testing procedures carried out by the agency.



**Figure 6.**Examiner Requirements and Procedures Service Page

### Service Page Service Hours

This page is a page that functions to serve website users to find out service hours from agencies.

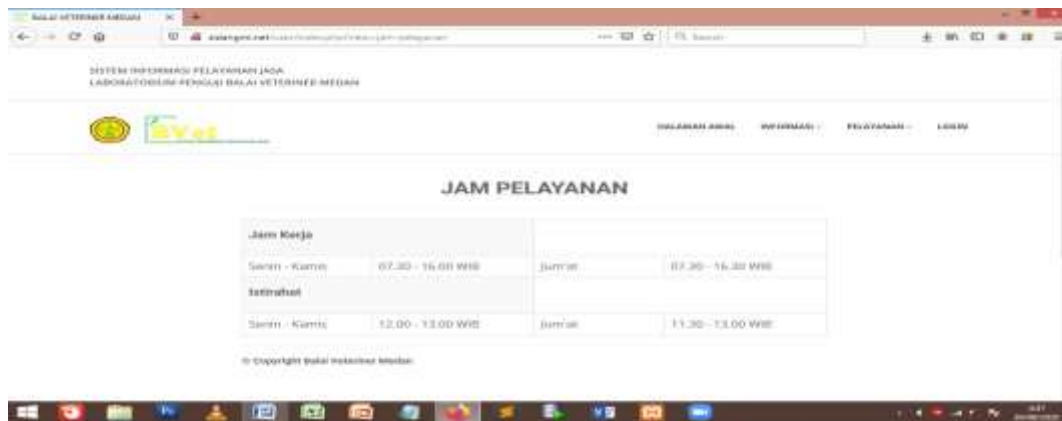


Figure 7. Service Page Service Hours

### Service Page Testing Fees/Tariffs

This page is a page that functions to serve website users to simulate the desired test price.



Figure 8. Service Page Testing Fees/Tariffs

### Service Page Service Flow

This page is a page that functions to serve website users to find out about the service flow for sample testing.



Figure 9. Service Page Service Flow

This page is a page that functions to serve website users to find out the rules for services

provided by the agency.



Figure 10. Complaint Handling Services Page

### User Login Page

This page is a page that displays a login form which functions to enter the user page by entering the registered username and password.

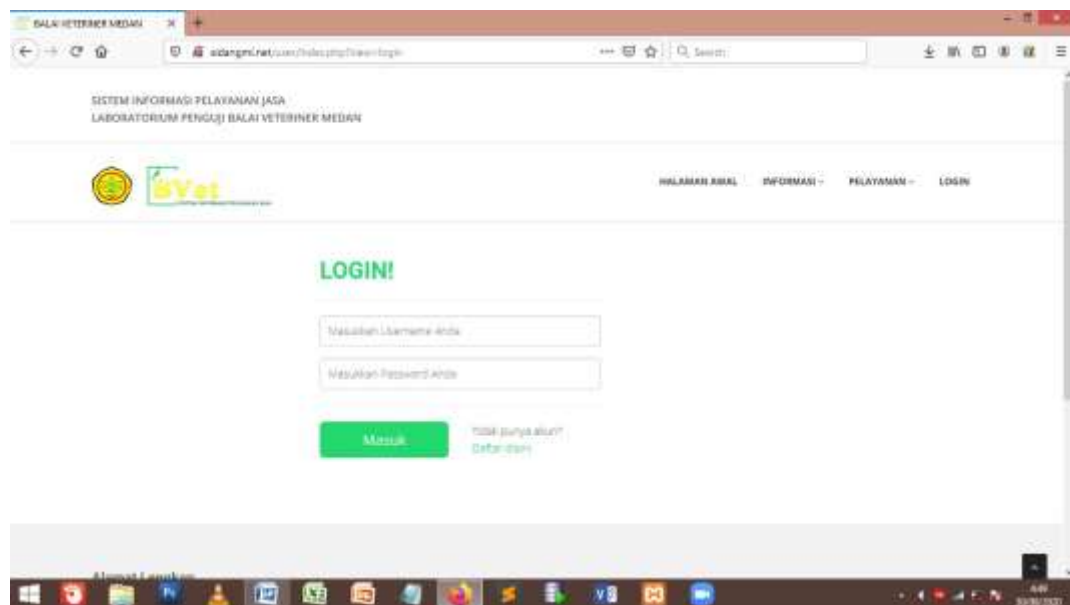


Figure 11. User Login Page

### User List Page

This page is a page that displays a registration form which functions so that users can create their accounts so that they are registered in the system.

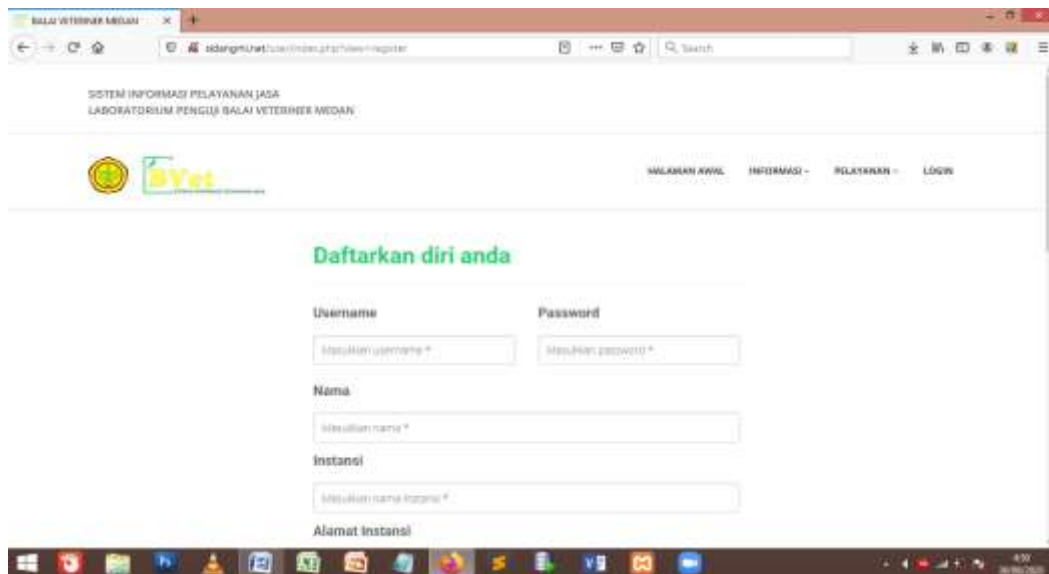


Figure 12. User List Page

### Main Page After User Login

This page is the first page displayed when the user logs in.

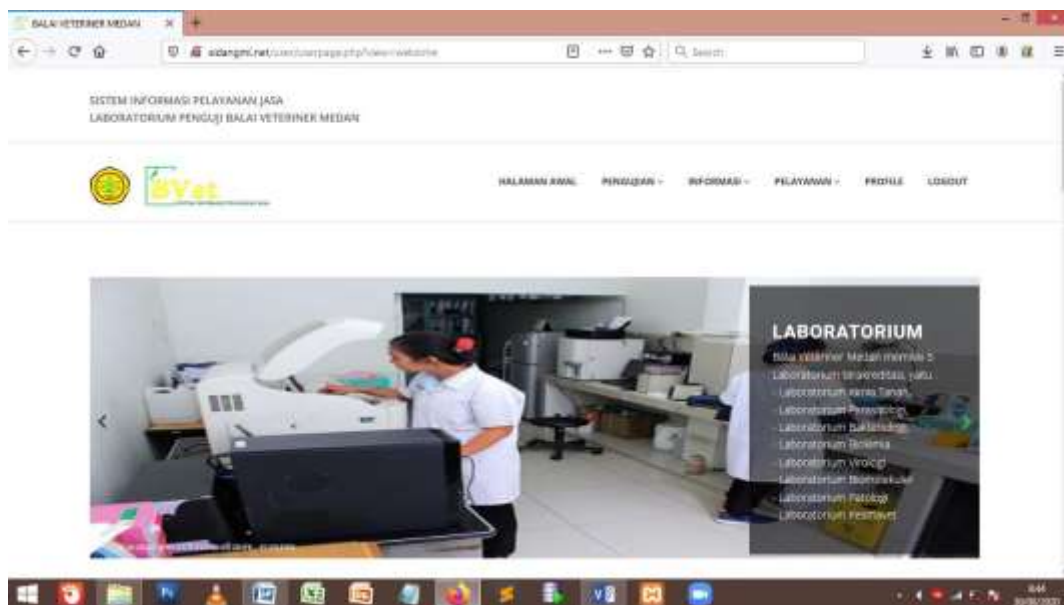


Figure 13. User Home Page

### Add Test Page

This page can be accessed if you have completed the login process. This page is a place where the user inputs the sample data he wants to test, the address and other data related to the data needed to be able to carry out the sample test.



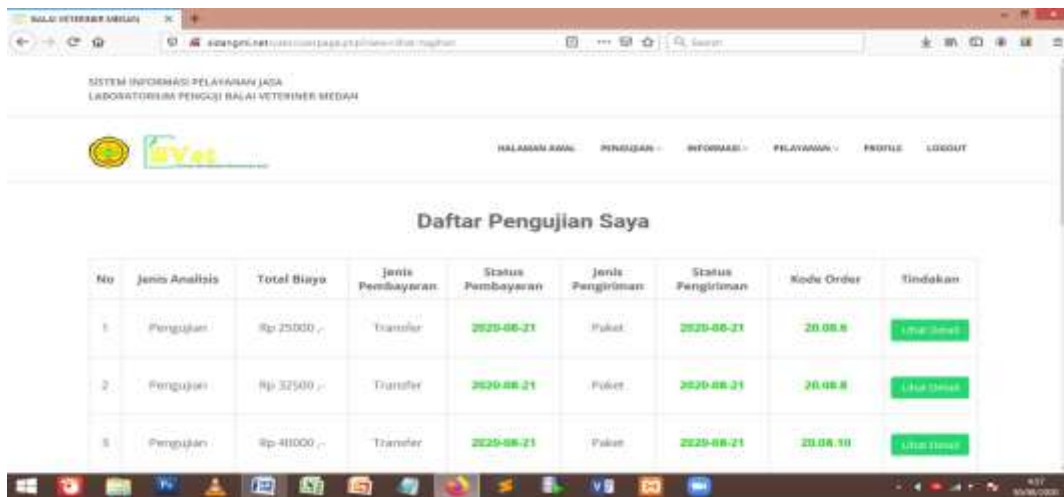


Figure 16. My Test Registration Page



Figure 17. View My Test List Details page

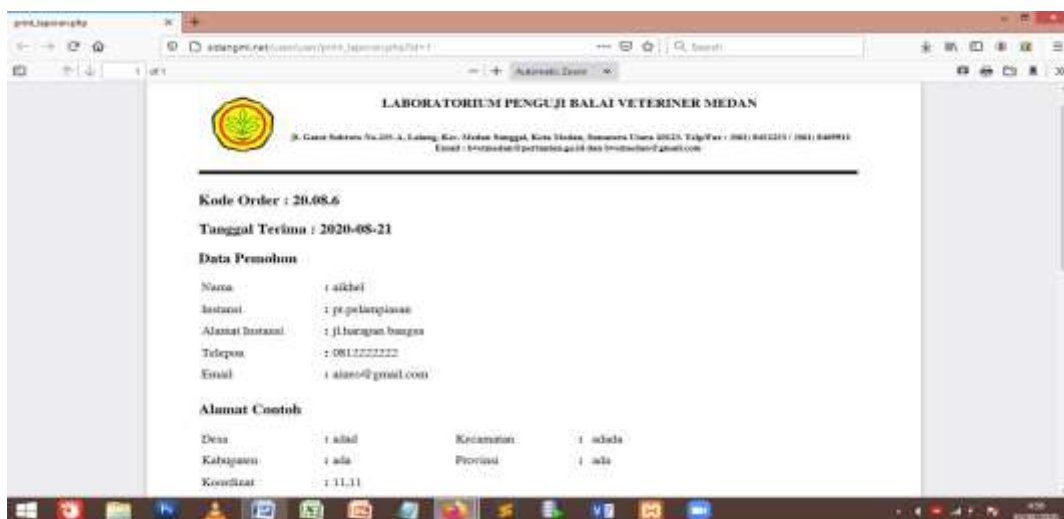


Figure 18. Print Invoice Page

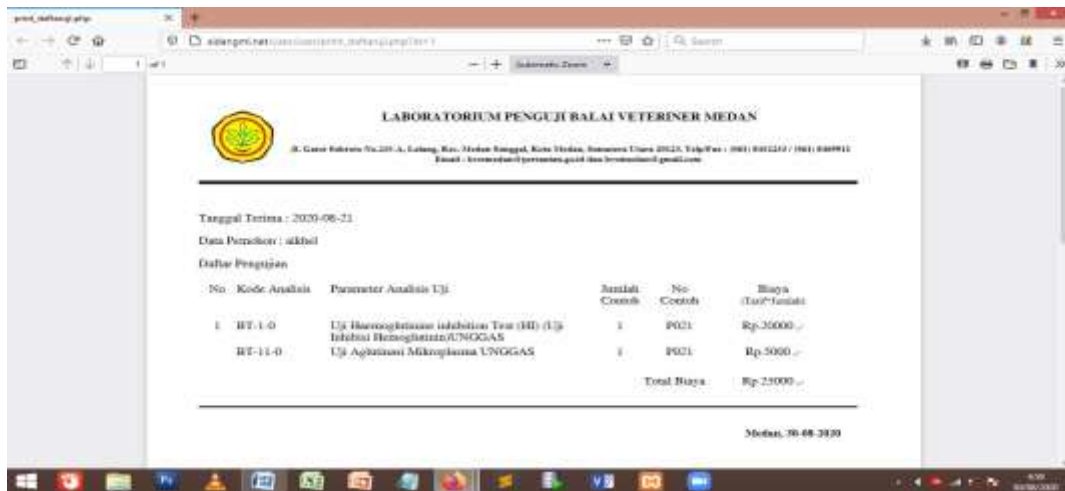


Figure 19. Test List Print Page

### Progress Tracking Page

This page can be accessed if you have completed the login process. This page contains information about the history of sample data that has been tested while having the account

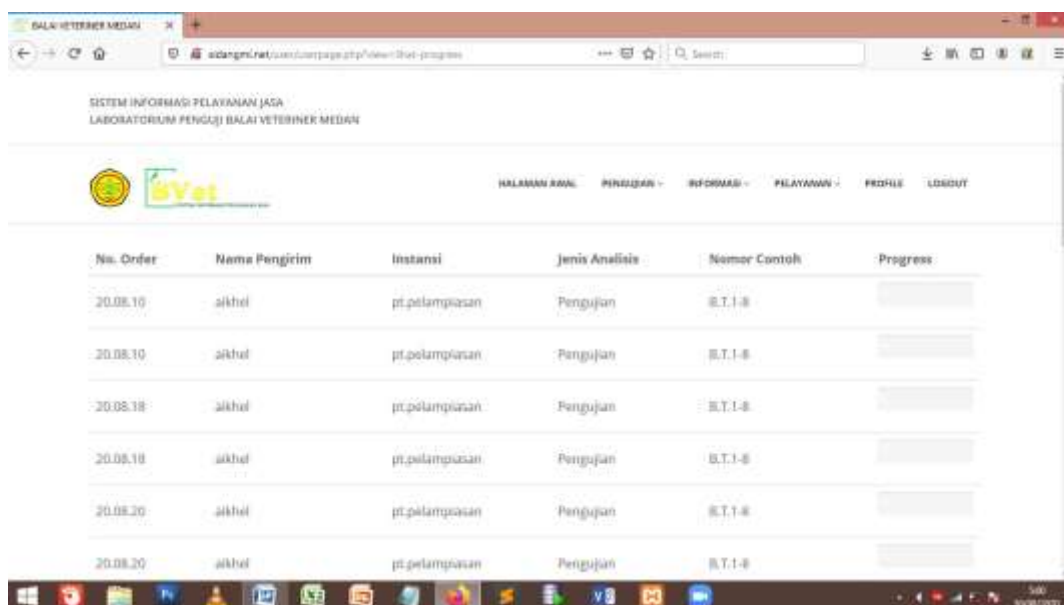


Figure 20. Progress Tracking Page

### User Profile Page

This page can be accessed if you have completed the login process. This page is tasked with displaying information about the user's profile.



Figure 21. User Profile Page



Figure 22. Edit User Profile page

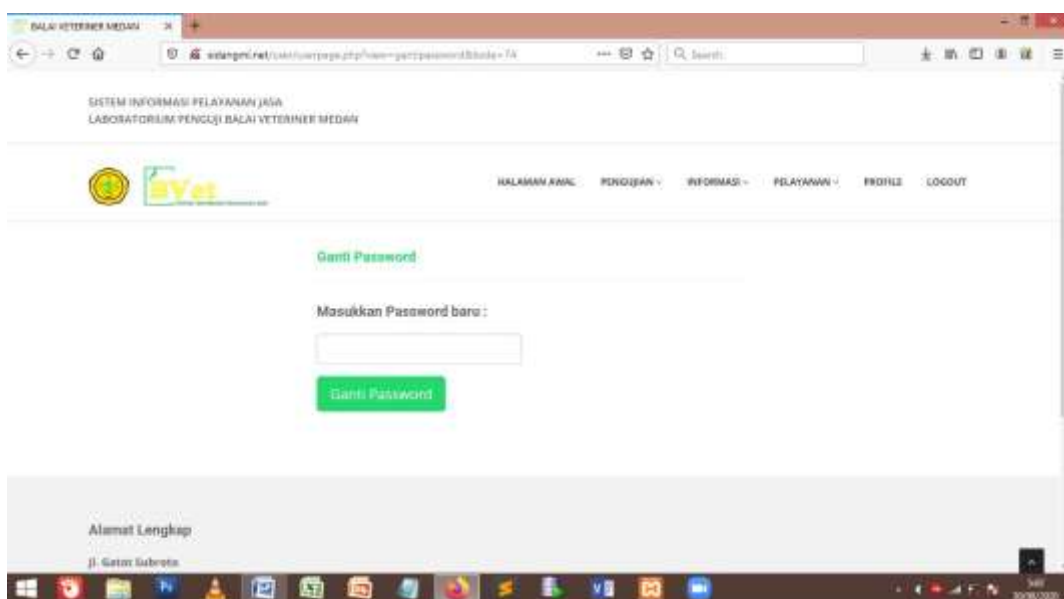


Figure 23. Change User Password page

### Admin Login Page

This page is a page that displays a login form which functions to enter the admin page by entering the username and password.

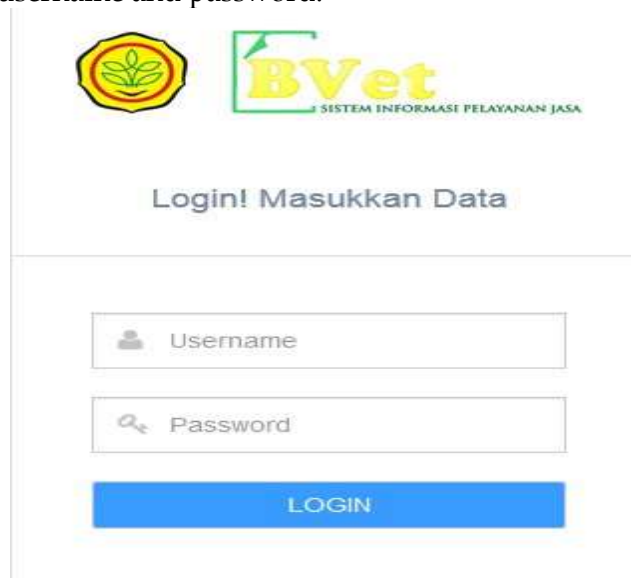


Figure 24.Admin Login Page

### Admin Main Page

Page This is the first page displayed when you have carried out the admin login process.

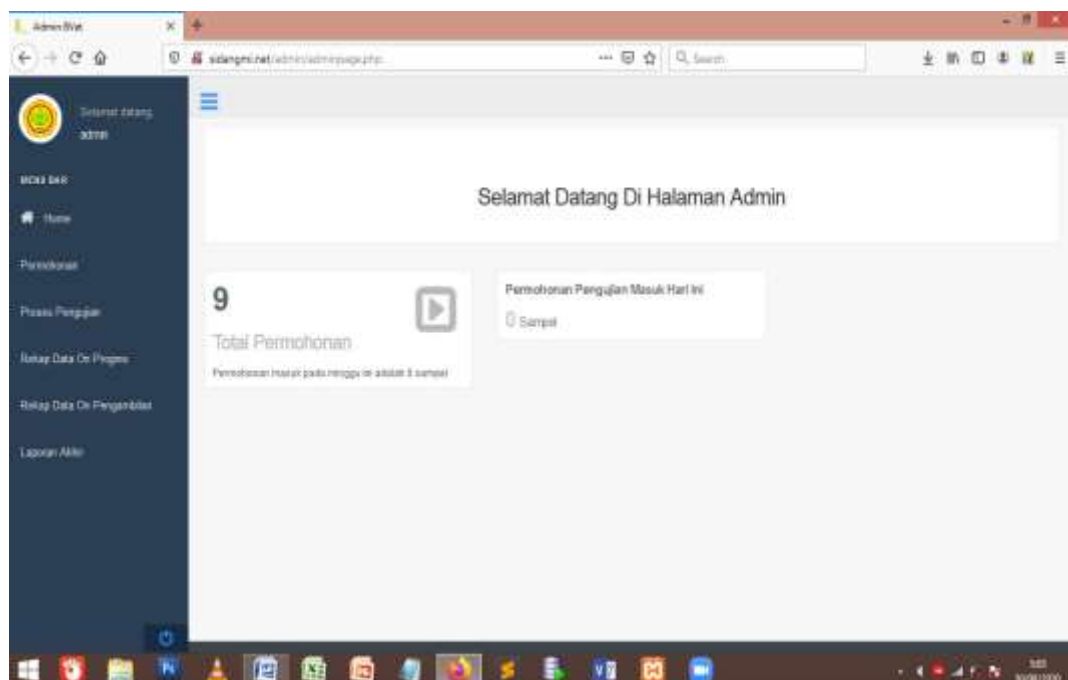


Figure 25.Admin Main Page

### Analysis of Results

Based on the analysis of the results of the design and creation process of the Web-Based Sample Data Filling Application at the Medan Veterinary Center, there are advantages and disadvantages of the system that has been created, namely:

### System Advantages

The following are some of the advantages of designing and creating a Web-Based Application for Filling in Sample Data at the Medan Veterinary Center, namely:

1. The display is responsive, so it can run well on several computer devices, tablets and smartphones with several different browsers and versions.
2. Speed up the process of entering sample data.
3. Makes it easier for Admins and Administrators to manage data because it can be used anywhere.

### System Weaknesses

The following are some of the weaknesses of designing and creating a Web-Based Application for Filling in Sample Data at the Medan Veterinary Center, namely:

1. The security of the existing system still uses the PHP security system and does not use case sensitivity (every lowercase and capital letter written in a variable is considered the same).
2. There is no forget password feature, so if the user forgets it
3. his account password, then the password cannot be reset.
4. Lack of system security verification in the user registration process, so the possibility of fictitious owners may occur.
5. Application is only for filling in sample data.
6. Samples must be delivered in person.
7. The appearance of the website is still simple.

### CONCLUSION

Based on the results of the discussion in the previous chapters of the Animal Sample Testing Information System at the Medan Veterinary Center, the following conclusions can be drawn. The application provides information and service features in the form of contacts, organizational structure, testing service standards, service hours, costs, service flow and complaint handling. Through this application, the Medan Veterinary Center can carry out the data collection process more efficiently. This system makes it easier for the public to fill in sample data. The application has 4 actors. The administrator is in charge of managing user data, admin and test register. Admin is in charge of managing applications, the testing process and final results. The user is the actor who wants to test the sample. Meanwhile, the website can only see the page display. The application can be accessed using the internet because it uses hosting.

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