

FINAL DOCUMENTATION

Developing Team:

- Guanlao, Claire Zeni
- Pagcanlungan, Evitha
- Reyes, Jewel Anne
- Soriao, Kyra Jean
- Yambao, Roxanne

I. **System Name:** Purrfect Veterinary Clinic Database

II. **Description:** This database system will list, compile and handle the appointments or services that happened throughout a specific work day. This system will also secure the records of all the information needed in the service/s and will compute its cost appointed by the pet's owner. This way, the clinic can easily track down the appointments made in a day and the expected total income of the business.

III. Problem Statement/s:

The aim of the system is to create a computerized database wherein it addresses the following concerns or problems:

1. The clinic has difficulty in storing or keeping information about their patients.
2. The clinic has difficulty in quickly finding or searching information about their patients.
3. The clinic has problems with computing the total payment or transaction of every pet.

IV. Objectives:

Veterinary clinic system had been established with the objective:

1. To help the clinic develop and improve the processes used in the veterinary clinic to generate a management system.
2. To provide accurate and secure record management.
3. To develop a fast and accurate system for services inventory for the current work day.
4. To easily perform record handling of pet's information.
5. To monitor pet's health medication and services such as grooming, dental care, wound treatment, X-Ray, spay/neuter, tick and fleas care.
6. To have a computerized patient's information, client's information and transaction.
7. To give the veterinary clinic staff an easy way in doing information maintenance and updates.

V. System Definition

- **Components of the System**

a. Client's Details - Recording of the pet owner's information.

b. Pet's Details - Recording of the Patient's (Pet) information.

c. Time Record - Date of the transaction and service/s.

d. Service Details - Type of services to perform on patients.

e. Patient's List - Compiled Summary of the coded information.

f. Payment Details - The total payment of the service.

- **Variables to be Used**

a. Client's Details

- Name, Contact Number, Address

b. Pet's Details

- Name, Breed, Color, Age, Species, Sex

c. Time Record

- Date when the service performed, Time when the service performed

d. Service Details

- Grooming, Dental Care, Wound Treatment, X-Ray, Spay/Neuter,
Tick and Fleas Care

e. Patient's List

- Client's Name, Client's Contact Number, Client's Address. Pet's Name, Pet's Breed, Pet's Age, Pet's Species, Pet's Sex, Total Amount of Service

f. Payment Details

- Price of the service, Total amount of the service transaction

VI. Data Collection Process

Data gathering techniques are used to collect data and information from a variety of sources. The following are the data gathering techniques used and the sources of data and information used for the project:

a. *Technique/s*

- **Benchmarking** — is a technique by which an organization compares its actual or planned practices, to those of comparable organizations. It can be used to identify best practices, generate ideas for improvement and provide a basis for measuring performance. In this project, the team used benchmarking to generate and improve the databases regarding the inventory and logistics of veterinary clinics.
- **Brainstorming** — is a technique used to identify a list of ideas by holding a group discussion, led by a facilitator. It can be enhanced through nominal group technique with a voting process. In this project, the team used brainstorming to generate creative ideas as to how the system will work.
- **Checklists** — are often used as reminders. It can be a list of items, actions, to-dos or points to be remembered. It helps to ensure consistency and completeness in carrying out a process. In this project, the team used a checklist for quality control, project plan,

debugging, and to remind the project manager of the various requirements that needed to be checked.

- **Internet Search** — is the practice of using the Internet, especially the World Wide Web, for research. The internet is widely used and readily accessible to hundreds of millions of people in many parts of the world. It can provide practically instant information on most topics, and has a profound impact on the way ideas are formed and knowledge is created. In this project, the team used internet search to gather information about the functionality and efficiency of the system.
- **Questionnaires and Surveys** — are a cost-effective way of obtaining data from stakeholders, regarding their needs and expectations. These are designed to quickly collect information from a large set of respondents. In this project, the team used questionnaires and surveys to know the possible ideas or recommendations from a set of respondents.

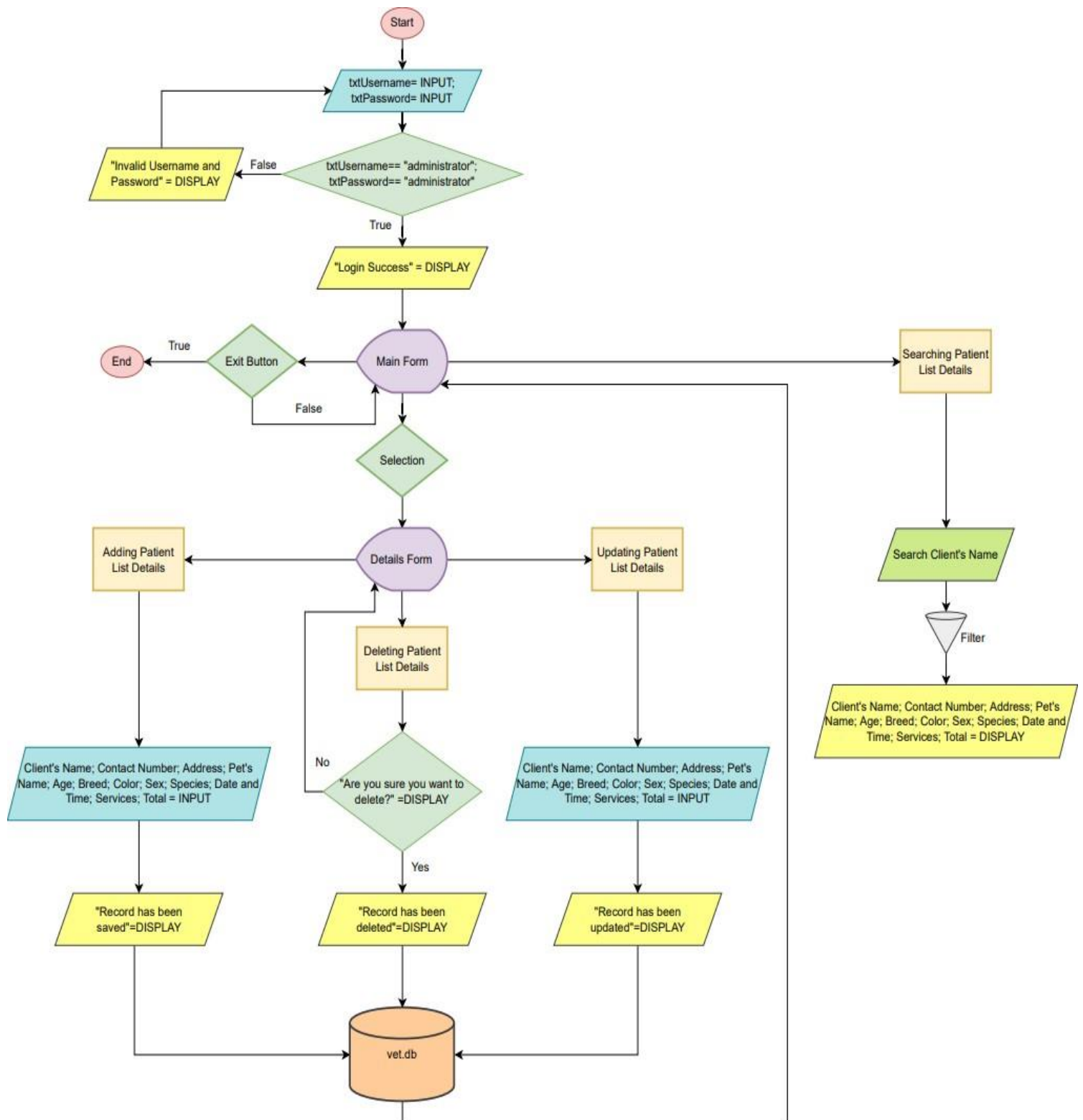
b. Source/s

- **Websites** — Websites such as youtube, google scholar, and other sites were used to gather information about the function and statistics regarding veterinary clinics and systems.
- **Primary** — means original data that has been collected specially for the purpose in mind. The team collected the data from the original source at hand. It can include surveys, observations, or the team themselves.
- **Lectures** — this can be helpful in gathering information on how the system and the project works.

VII. Model Translation

- Flowchart

VETERINARY CLINIC DATABASE FLOWCHART



- **Summary of Major System Operations**

- Logging In
- Add
- Update
- Delete
- Search

- **Programming Languages Used**

- **VB.NET** will be used for the development of the system because it is an object-oriented programming language used for Microsoft-based system application product development and has all features of the .NET framework. This language can easily format our code automatically. We can create web forms easily using the visual form designers by doing the drag and drop capability to place the needed elements on the project.
- **Microsoft SQL Server Management Server** will be used as a database because it reduces the risk of attacks on the database due to it not being an open-source database server.

- **Development Process of the System**

- **Logging In**
 - a. Inputting the Username and Password of the administration.

Once either the username or password is wrong the system will not proceed to the main form. Once both the username and password are correct, the system will proceed to the main form where the adding, updating, deleting and search record will be featured.

- **Add**

- a. Inputting overall patient's list details that includes the client's details: Name, Contact Number & Address, pet's details: Name, Age, Breed, Color, Sex, Species, and transaction details: Date & Time, Services and Total.
- b. Record all the data.
- c. Adding the data to the local database.
- d. Shows the record on the main form.

- **Update**

- a. Selecting the desired row to edit then select the section desired to edit and change information.
- b. Updating the selected data in the local database.
- c. Shows the updated record on the main form.

- **Delete**

- a. Selecting the desired row of data to delete completely.
- b. Deleting the selected data in the local database.
- c. Shows the updated record on the main form.

- **Search**

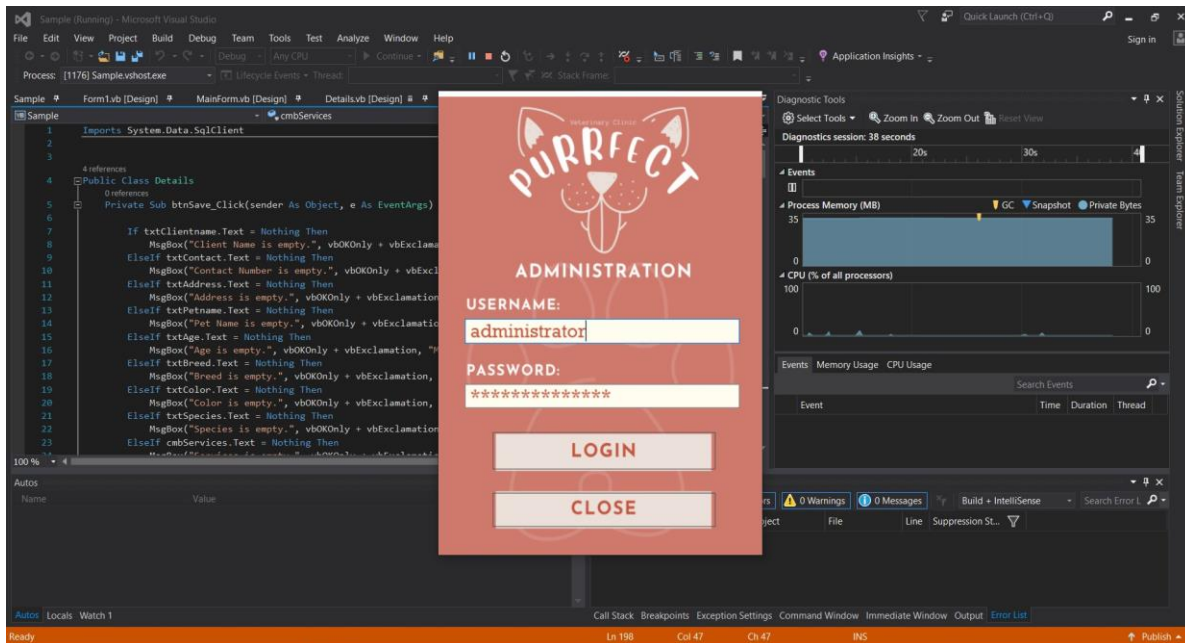
- a. Inputting the name of the client to search.
- b. The main record will filter the data based on the name of the client.
- c. Main record will only show the corresponding name of the client.
- d. Deleting the text field of the search will change the displayed main record to displaying all the data in the database.

VIII. Verification and Validation

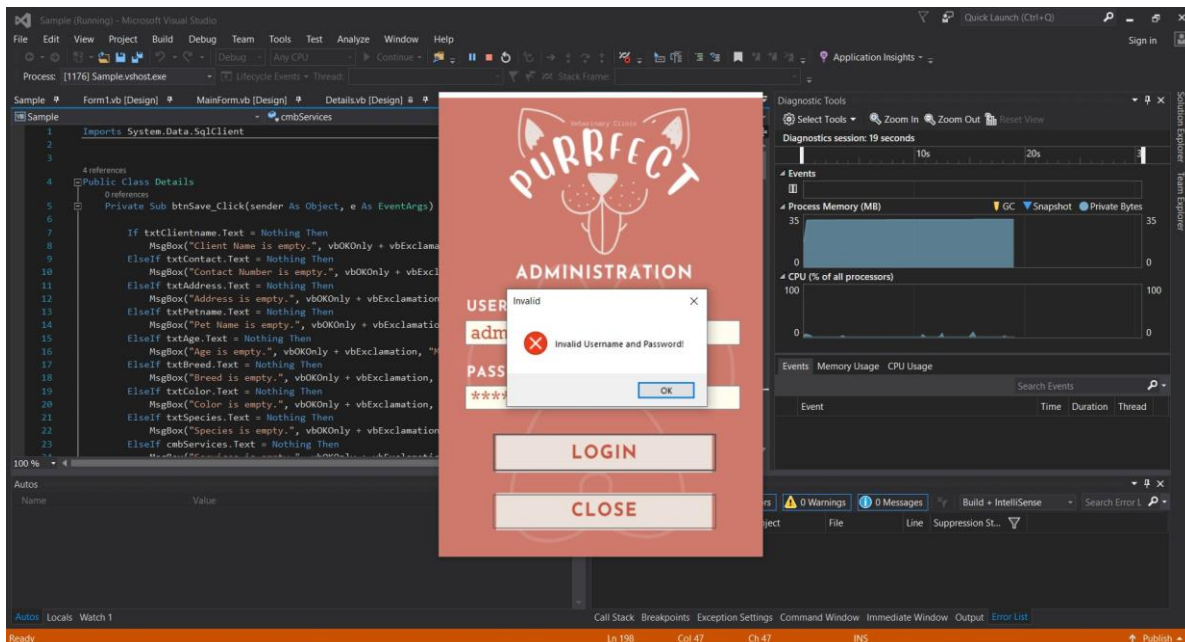
When we create a program, we write it using some kind of computer language. The language statements are the source program. Then we compile the source program with a special program called a language compiler. This programming language was vb.net. Then, the result is called an object program. Before executing the program, we write the **design document** to outline the features and what to intend to achieve with the project. This will help us to keep track of the development process.

After performing the program, we **verify** and **validate** that our application or software is free of bugs, meets all the technical requirements, abides by all the requirements of development and designing, and meets all the user requirements. Testing ensures that the intended application meets these requirements efficiently and effectively and handles all of the boundary cases and exceptional cases.

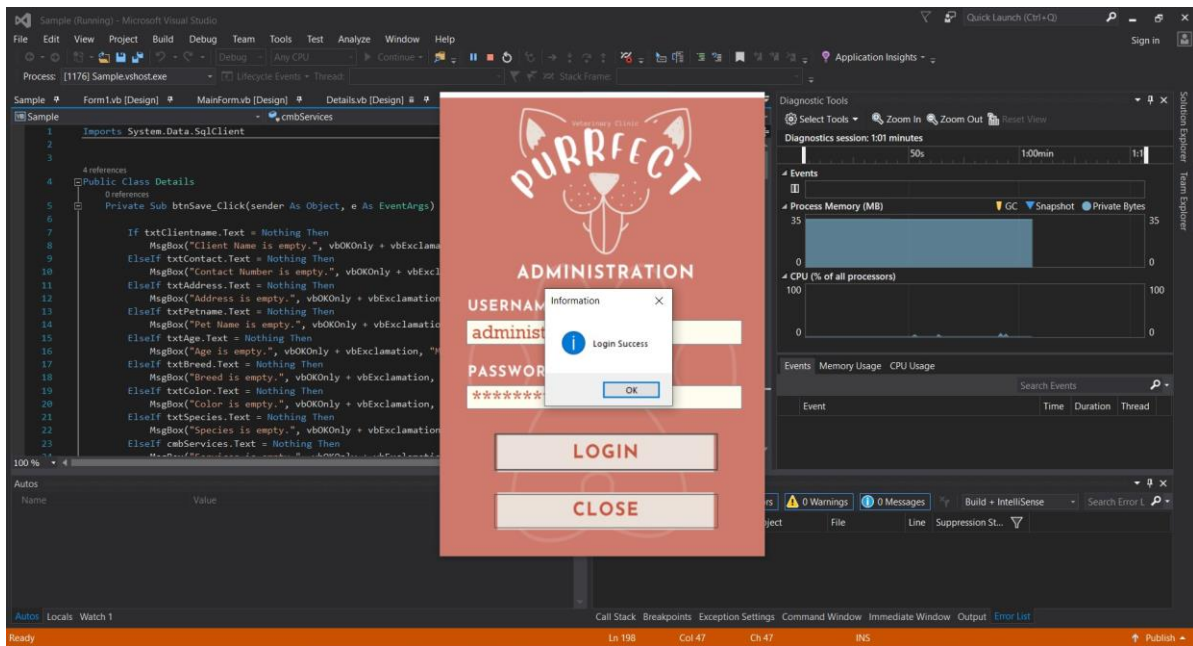
During the execution of the program, errors get displayed in the process. In order to solve it, we use the process of **testing** on which we fix any bug present in a software or application. In this, we first identify, then analyze, and then remove the errors. Debugging begins after the intended software fails in proper execution. We find the exact point where we made a programming mistake and then understand what corrections we need to make in the code. Errors get deducted and dissolved in the process making the program successfully executed.



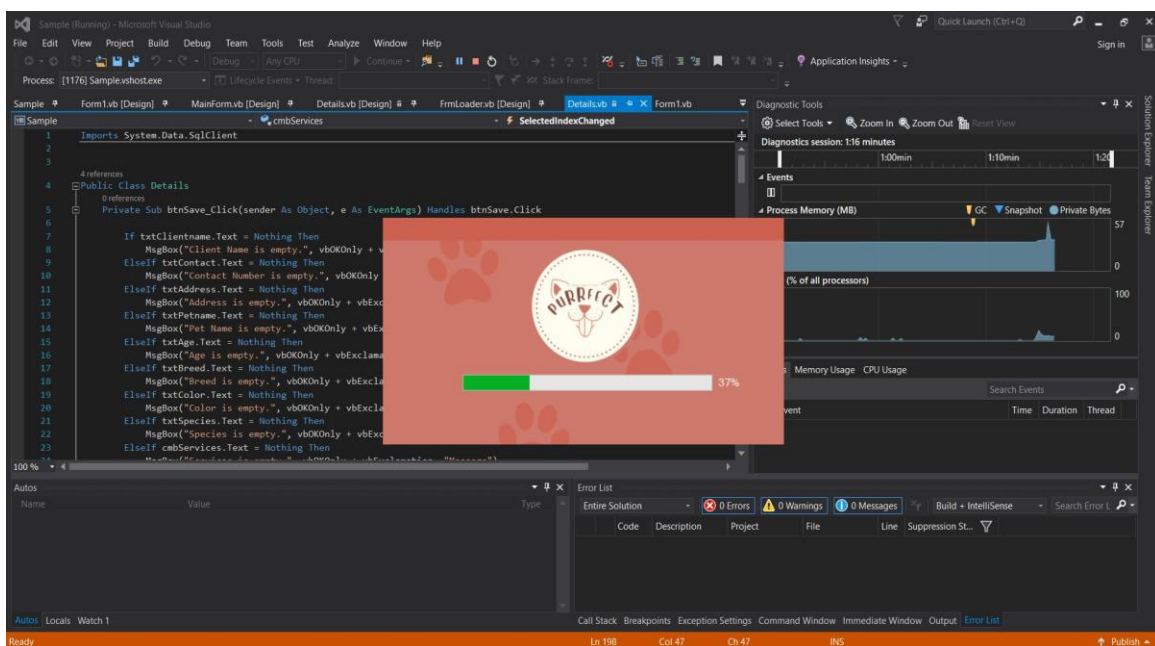
This figure shows the login form of the user. The login form component is a simple username and password form that lets users log in to the system. It utilizes the credentials of a user, in order to authenticate their access. It generally consists of the typical username and password.



If the user input an incorrect username or incorrect password, it will show an error message dialog telling “Invalid username and password.”



If the user input a correct username and password, there will be a message dialog that says “login success” and then it will show a graphical display or a loading screen while a program loads.






P A T I E N T ' S L I S T




Transaction No.	Client's Name	Contact No.	Address	Pet's Name	Age	Breed	Color	Sex
1	Claire Guanlao	09871234567	Muntinlupa City, NCR	Murphy	1	chow	black	Male
2	Kyra Soriao	09786545321	Pasig City, NCR	Kerin	1	Persian	white	Female
3	Jewel Anne Reyes	09875612341	Calamba City, Laguna	Jace	3	half persian half shorthair	black and white	Male
5	Roxanne Yambao	09987818765	City of San Pedro, Laguna	Arya	1	Siberian Husky	white	Female
6	Arya Stark	09087656432	Muntinlupa City, NCR	Claire	1	ragdoll	white	Female

create new record




P A T I E N T ' S L I S T




Transaction No.	Client's Name	Contact No.	Address	Pet's Name	Age	Breed	Color	Sex	Species	Date	Time	Services	Total
2	Kyra Soriao	09786545321	Pasig City, NCR	Kerin	1	Persian	white	Female	cat	3/8/2022	3:21:53 PM	Grooming	500.00

create new record

After the login form and loading screen, it will bring you to the main form which consists of a table that shows the patient's list and its specific data. This form also includes a button to create a new record and a search box to know the patient's information you are looking for.

Client's Details

Transaction No.: 7

Name: Tony Stark

Contact Number: 09782345678

Address: Pasig City

Pet's Details

Name: Zilong

Age: 1

Breed: Golden Retriever

Color: golden brown

Sex: ☒ Male ☐ Female

Species: dog

Transaction

Date and Time: 3/ 9/2022 6:37:16 PM

Services: Dental Care 1000.00

Total Payment: 1000

Message: Record has been saved.

Buttons: Add, Update, Delete, Cancel

Once you create a new record, it will bring you to the main data gathering. This is where you can input the client's, pet's and transaction details. It consists of a non-editable transaction number because it is incremented. The user will input the name of the client, contact number, address, the name of his/her pet, age, breed, color, sex, specie, date/time, what kind of services and the total payment. After inputting all the data, you can save it by clicking the add button then it will automatically save in the database and to the patient's list table. A message dialog box will show saying "Record has been saved." Otherwise, if you click the cancel button, the data you input will be unsaved. On the other hand, if you choose to create a new record, only the add button is accessible. The update and delete button are disabled.




PATIENT'S LIST



X



Transaction No.	Client's Name	Contact No.	Address	Pet's Name	Age	Breed	Color	Sex
1	Claire Guanlao	09871234567	Muntinlupa City, NCR	Murphy	1	chow	black	Male
2	Kyra Soriao	09786545321	Pasig City, NCR	Kerin	1	Persian	white	Female
3	Jewel Anne Reyes	09875612341	Calamba City, Laguna	Jace	3	half persian half shorthair	black and white	Male
5	Roxanne Yambao	09987818765	City of San Pedro, Laguna	Arya	1	Siberian Husky	white	Female
6	Arya Stark	09087656432	Muntinlupa City, NCR	Claire	2	ragdoll	white	Female

create new record

Now if you want to update or delete a data, you can go back to the main form and double click the specific patient you are seeking for. Once you double click it, the system will go directly to the data gathering form. With that, you can edit the information. It involves an update button. The same goes if you want to delete a data, you will simply click the delete button but before deleting, a message dialog will pop up asking “Do you want to delete this record?”. After deleting the input data, a message dialog will occur saying “Record has been deleted.” On the contrary, the add button was disabled.



Client's Details

Transaction No.:

Name:

Contact Number:

Address:

Pet's Details

Name:

Age:

Breed:

Color:

Sex: ☐ Male ☒ Female

Species:

Transaction


Date and Time:

Services:

Total Payment:

Add
Update
Delete
Cancel

Message

 Record has been deleted.

OK

Client's Details

Transaction No.: 6

Name: Arya Stark

Contact Number: 09087656432

Address: Muntinlupa City, NCR

Pet's Details

Name: Claire

Age: 2

Breed: ragdoll

Color: white

Sex: ☒ Male ☐ Female

Species: cat

Transaction

Date and Time: 3/ 8/2022 4:34:35 PM

Services: Wound Treatment 200.00

Total Payment: 200.00

Buttons: Add, Update, Delete, Cancel

Message Dialog: Record has been updated. OK

Client's Details

Transaction No.: 7

Name: Song Kang

Contact Number: 09127689361

Address: Tanay, Rizal

Pet's Details

Name: Goku

Age: 2

Breed: Ragdoll

Color: white

Sex: ☒ Male ☐ Female

Species:

Transaction

Date and Time: 3/ 9/2022 6:44:42 PM

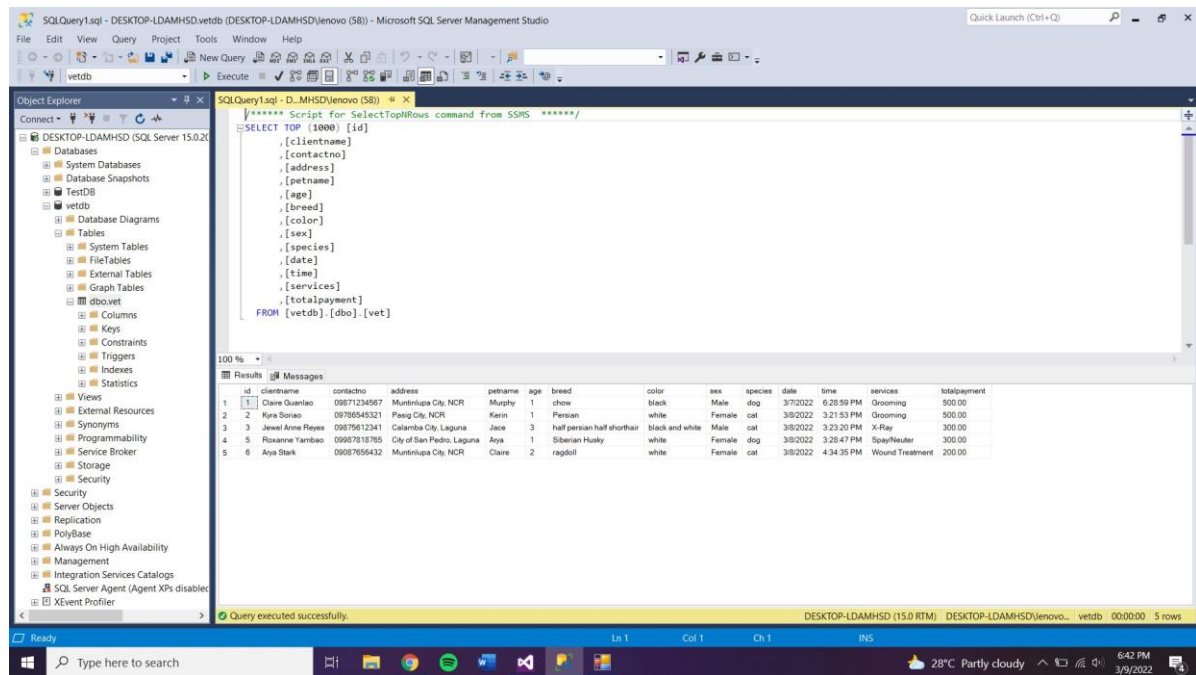
Services: Wound Treatment 200.00

Total Payment: 200.00

Buttons: Add, Update, Delete, Cancel

Message Dialog: Species is empty. OK

If you are inserting data and forgot to type in a textbox then the field is unoccupied. You cannot add or save it in the database and table. A message dialog will pop up telling you that the data is empty. After running the system, you can simply close it.



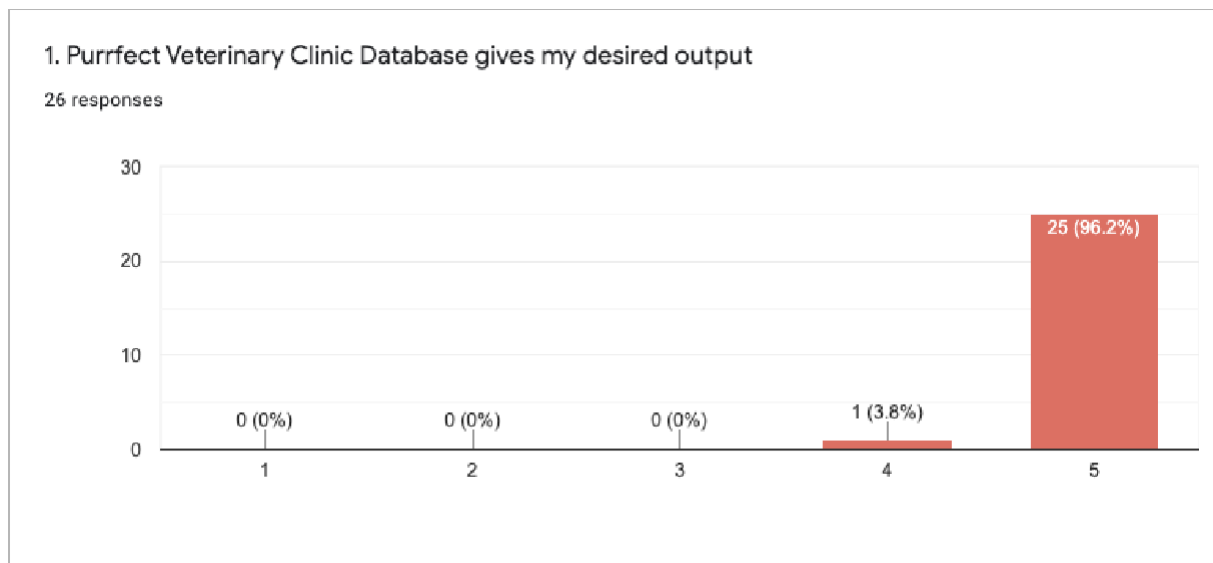
Once you are done executing the program, the collection of structured data will automatically be stored electronically in a computer system. This systematic collection is stored in a database and accessible in various ways. This can be useful in easy access, management and updating.

If you don't want to store the data in the database, you can easily disconnect it to the main program before executing.

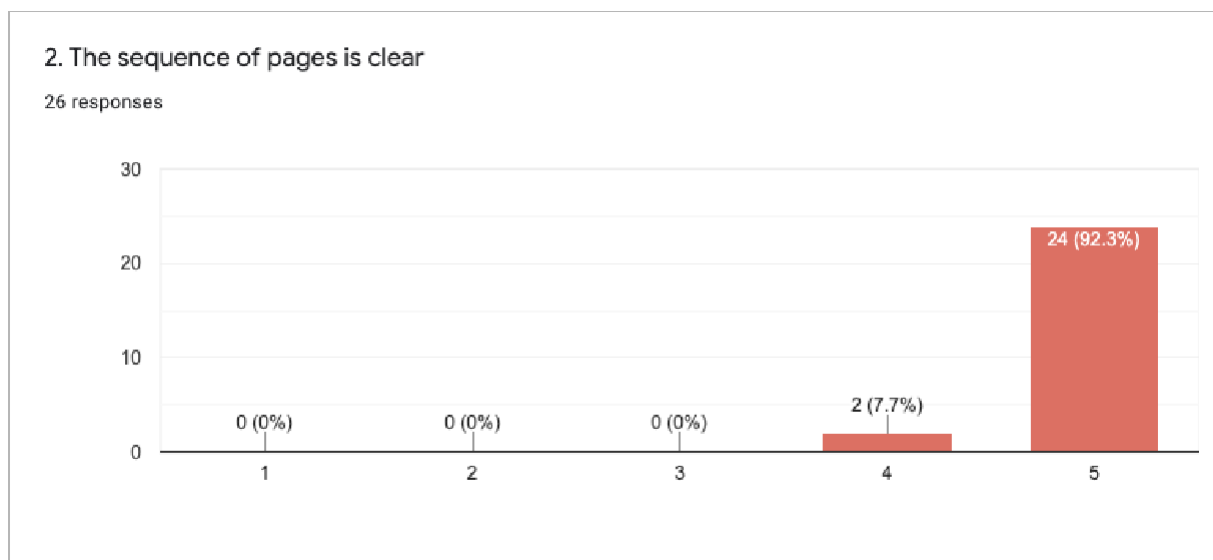
Detecting and removing all the existing errors made our system run smoothly without crashing and problems occurred.

IX. Testing Results

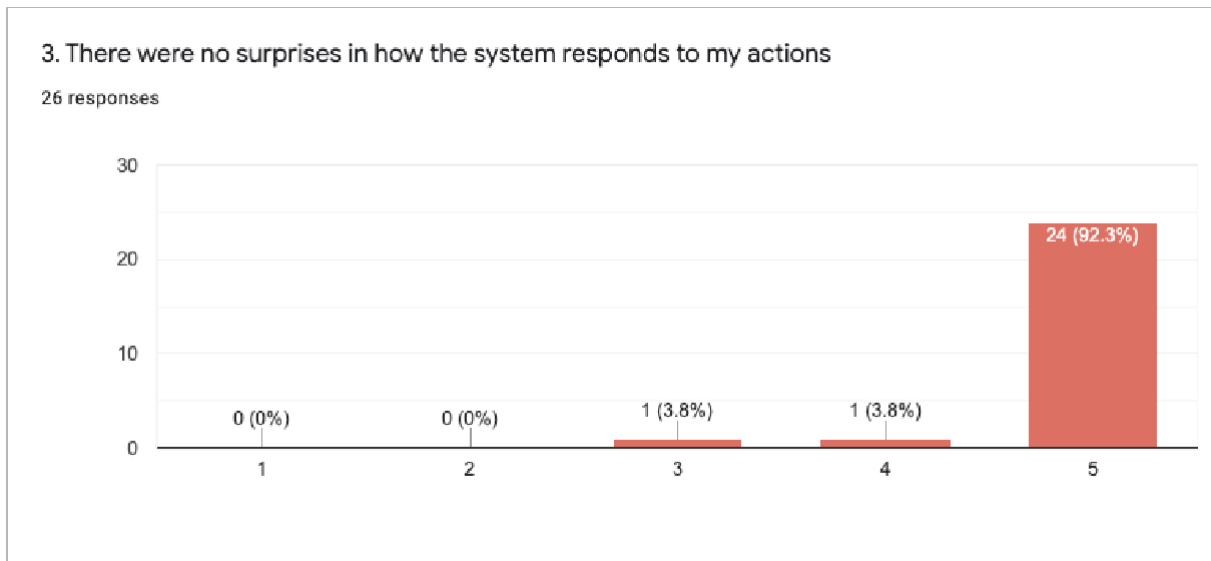
ACCURACY



As for the 1st statement in Accuracy, out of 26 respondents, 25 Strongly agree (96.2%) that the database gives the user's desired output, while 1 respondent (3.8%) agrees that the database gives the desired result. Overall, the majority of the respondents Strongly agree that our system provides the user with the desired outcome.

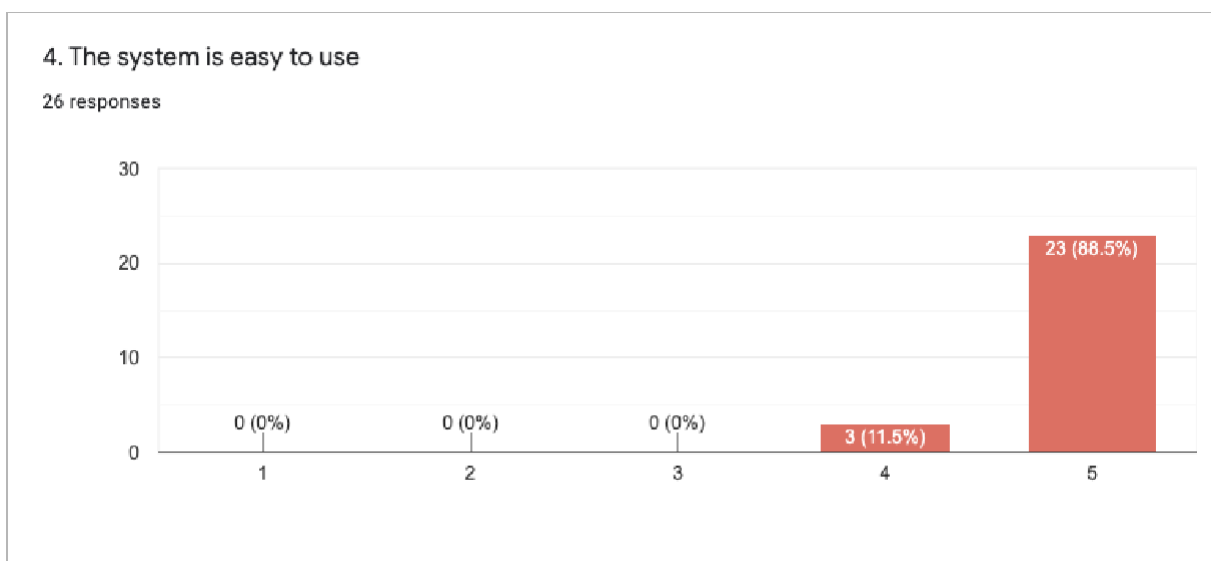


As for the 2nd statement in Accuracy, out of 26 respondents, 24 Strongly agree (92.3%) that the sequence of pages is clear while 2 respondents (7.7%) agree that the sequence of pages is clear. Overall, the majority of the respondents Strongly agree that the sequence of pages is clear.



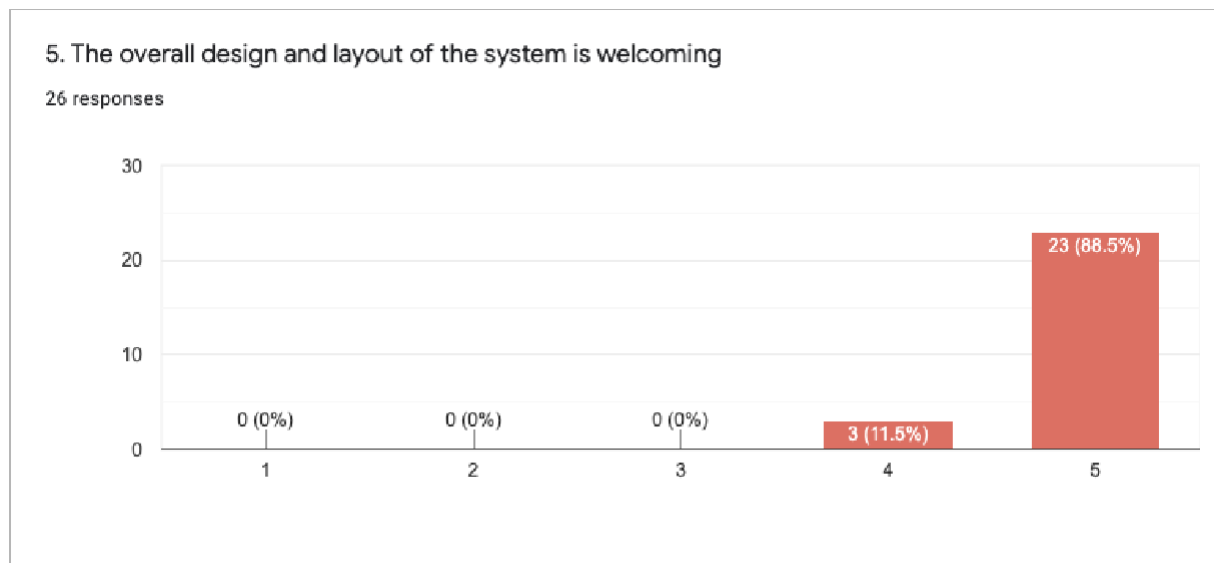
As for the 3rd statement in Accuracy, out of 26 respondents, 24 Strongly agree (92.3%) that there were no surprises in how the system responds to their actions, 1 respondent (3.8%) agrees that there were no surprises in how the system responds to their actions while 1 respondent (3.8%) was satisfied that there were no surprises in how the system responds to their actions. Overall, the majority of the respondents Strongly agree that there were no surprises in how the system responded to their actions.

USER-FRIENDLINESS

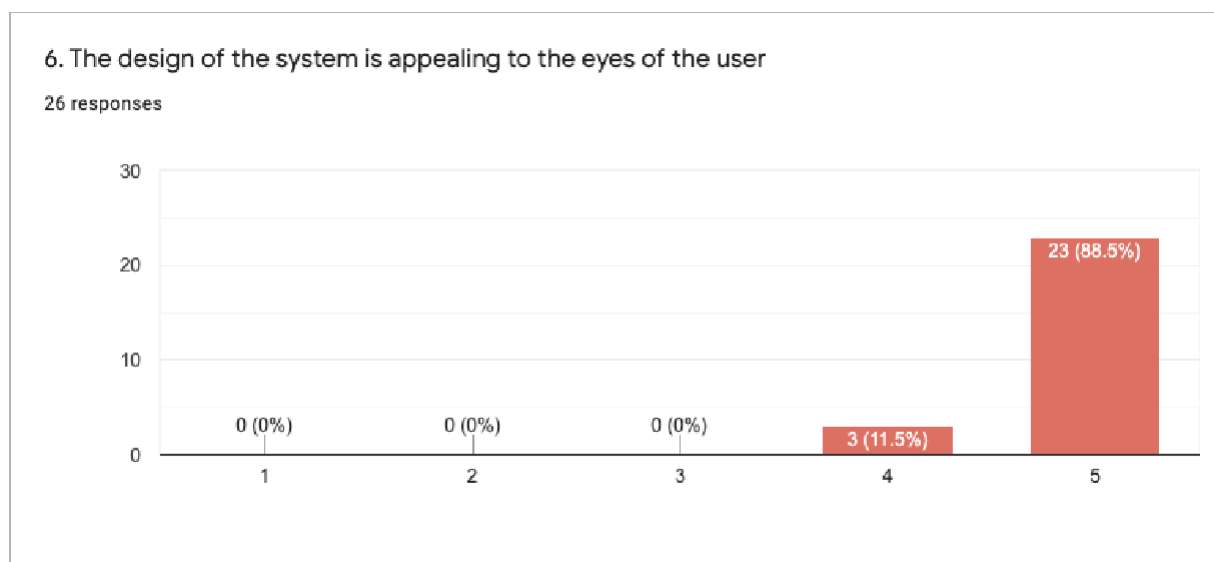


As for the 1st statement in User-friendliness, out of 26 respondents, 23 Strongly agree (88.5%) that the system is easy to use while 3 respondents (11.5%) agree that the

system is easy to use. Overall, the majority of the respondents Strongly agree that the system is easy to use.



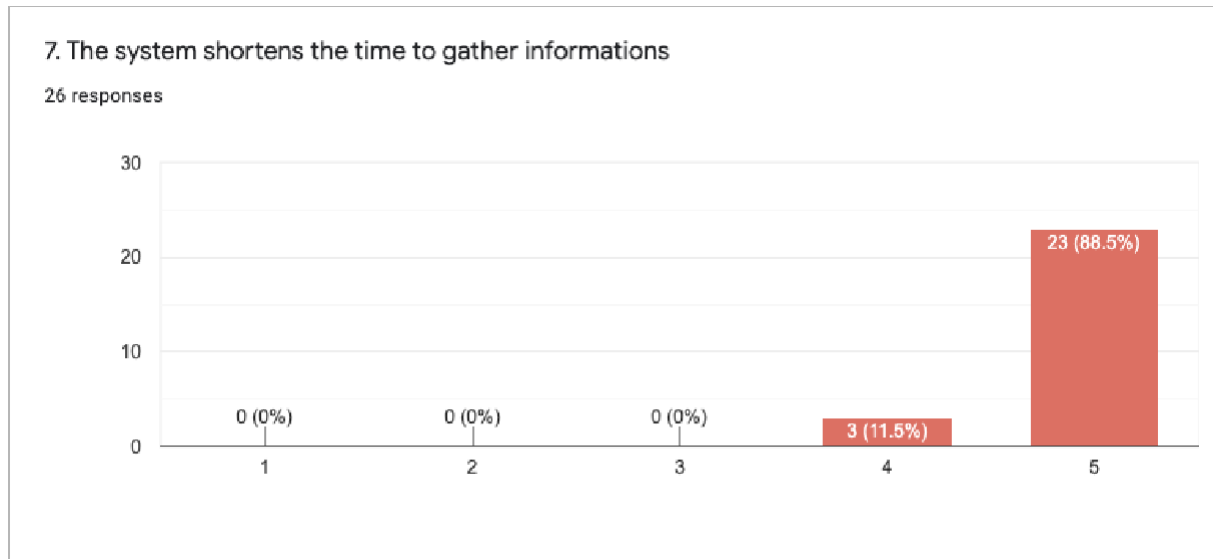
As for the 2nd statement in User-friendliness, out of 26 respondents, 23 Strongly agree (88.5%) that the overall design and layout of the system is welcoming while 3 respondents (11.5%) agree that the overall design and layout of the system is welcoming. Overall, the majority of the respondents Strongly agree that the design and layout of the system is welcoming.



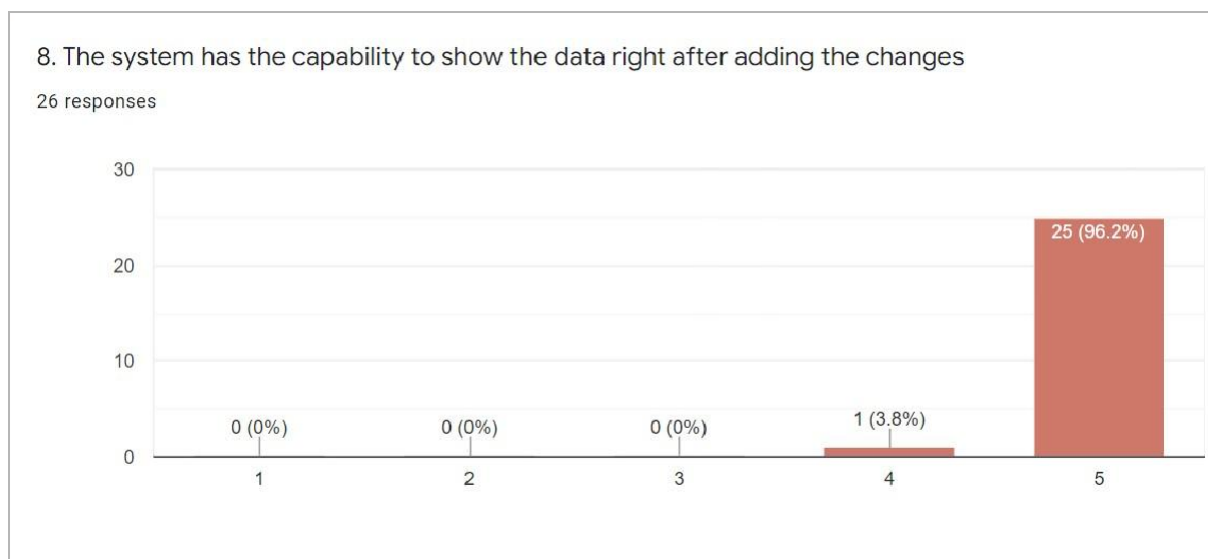
As for the 3rd statement in User-friendliness, out of 26 respondents, 23 Strongly agree (88.5%) that the design of the system is appealing to the eyes of the user while 3 respondents (11.5%) agree that the design of the system is appealing to the eyes of the

user. Overall, the majority of the respondents Strongly agree that the design of the system is appealing to the eyes of the user.

EFFICIENCY

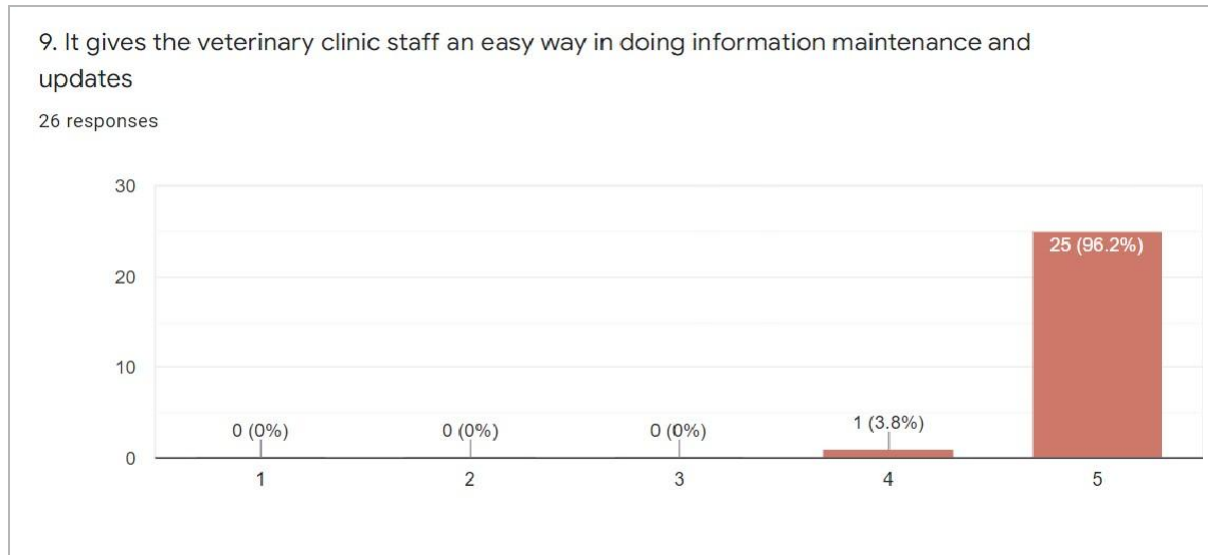


As for the 1st statement in Efficiency, out of 26 respondents, 23 Strongly agree (88.5%) that the system shortens the time to gather information while 3 respondents (11.5%) agree that the system shortens the time to gather information. Overall, the majority of the respondents Strongly agree that the system shortens the time to gather information.

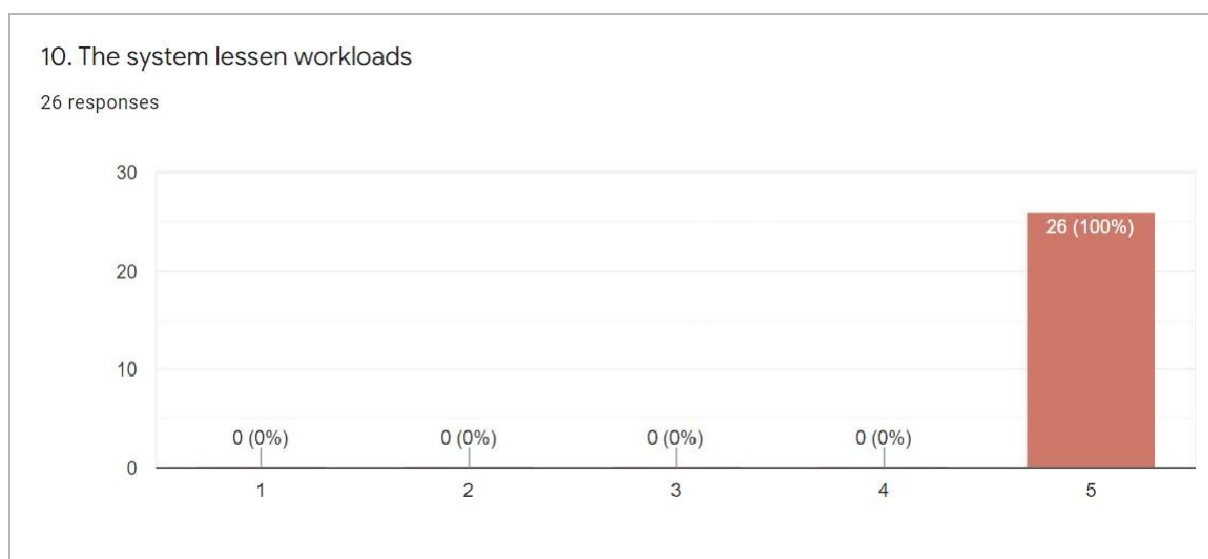


As for the 2nd statement in Efficiency, out of 26 respondents, 25 Strongly Agree (96.2%) that the system has the capability to show the data right after adding the changes,

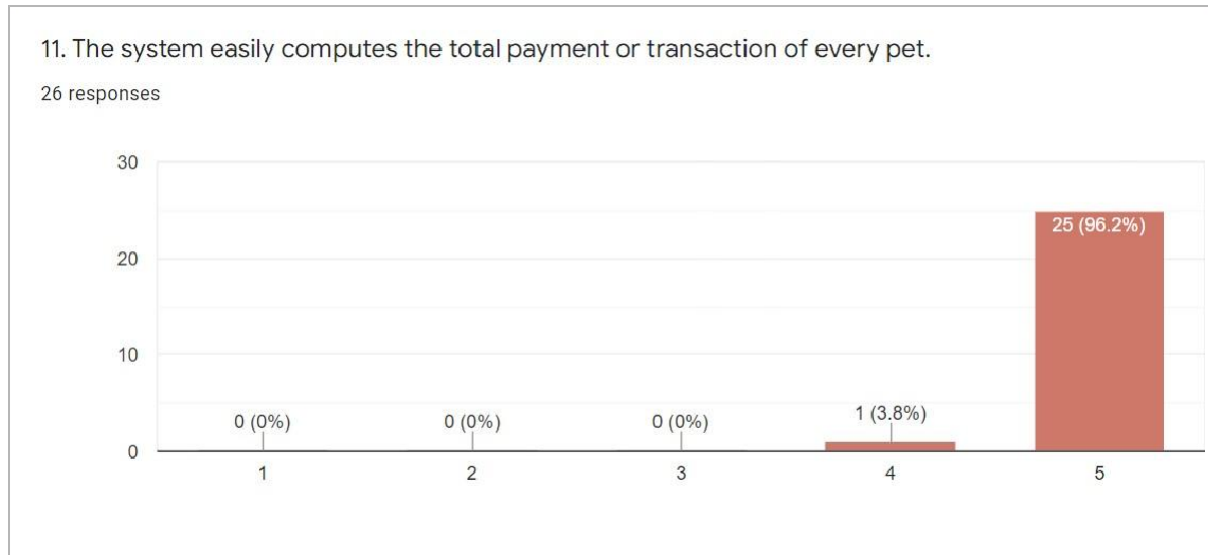
while 1 respondent (3.8%) agrees that the system has the capability to show the data right after adding the changes. Overall, the majority of the respondents Strongly Agree that the system has the capability to show the data right after adding the changes.



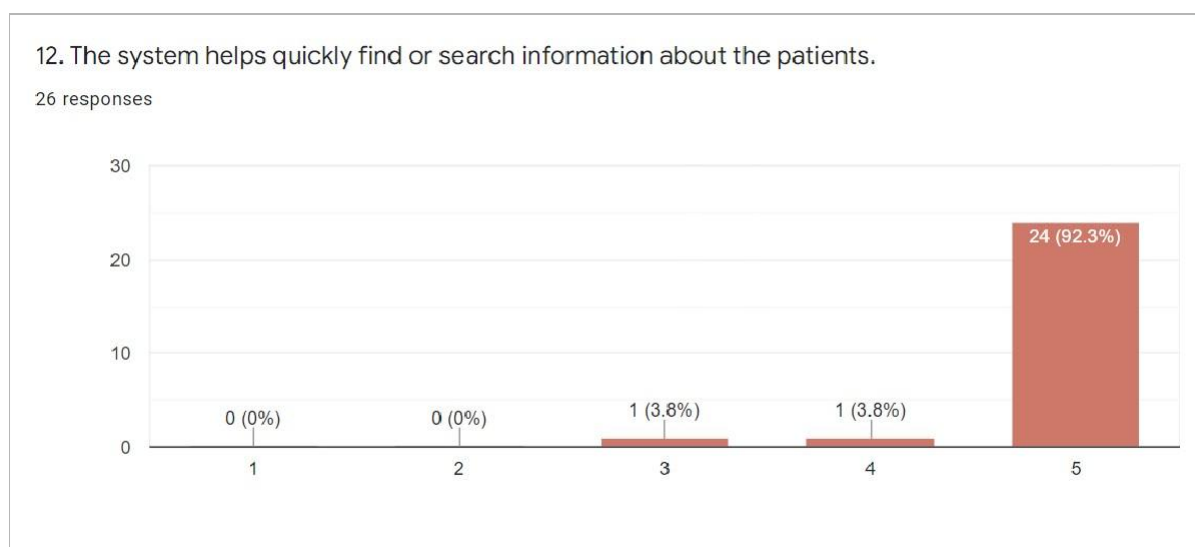
As for the 3rd statement in Efficiency, out of 26 respondents, 25 Strongly Agree (96.2%) that the system gives the veterinary clinic staff an easy way in doing information maintenance and updates, while 1 respondent (3.8%) agrees that the system gives the veterinary clinic staff an easy way in doing information maintenance and updates. Overall, the majority of the respondents Strongly Agree that the system gives the veterinary clinic staff an easy way in doing information maintenance and updates.



As for the 4th statement in Efficiency, out of 26 respondents, 26 Strongly Agree (100%) that the system lessens workloads. Overall, all of the respondents Strongly Agree that the system lessens workloads.

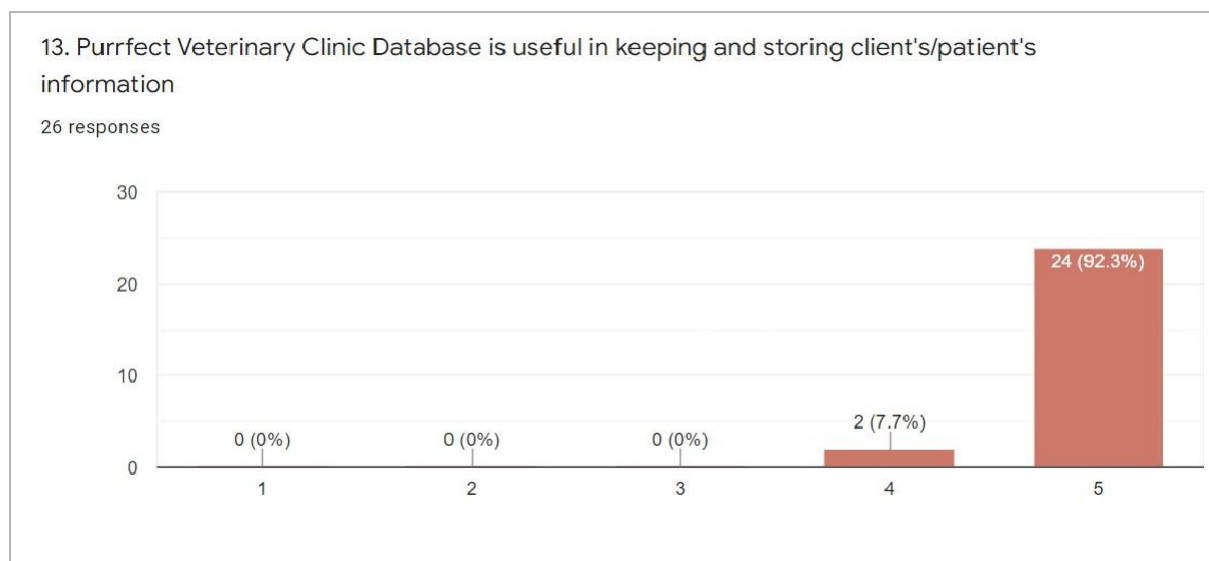


As for the 5th statement in Efficiency, out of 26 respondents, 25 Strongly Agree (96.2%) that the system easily computes the total payment or transaction of every pet, while 1 respondent (3.8%) agrees that the system easily computes the total payment or transaction of every pet. Overall, the majority of the respondents Strongly Agree that the system easily computes the total payment or transaction of every pet.

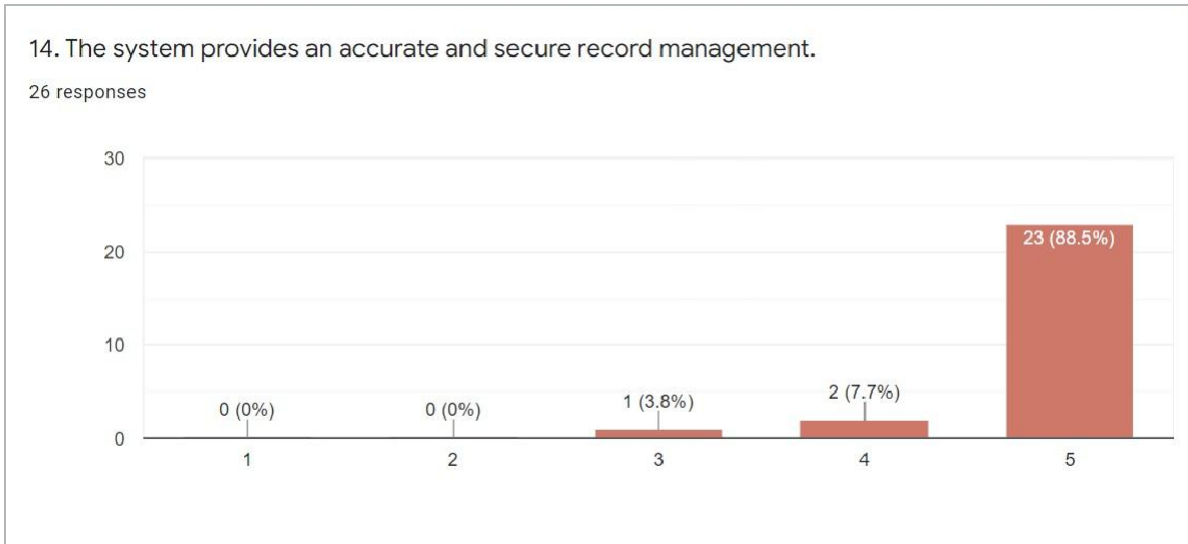


As for the 6th statement in Efficiency, out of 26 respondents, 24 Strongly Agree (92.3%) that the system helps quickly find or search information about the patients, 1 respondent agrees (3.8%) that the system helps quickly find or search information about the patients, while 1 respondent (3.8%) was satisfied that the system helps quickly find or search information about the patients. Overall, the majority of the respondents Strongly Agree that the system helps quickly find or search information about the patients.

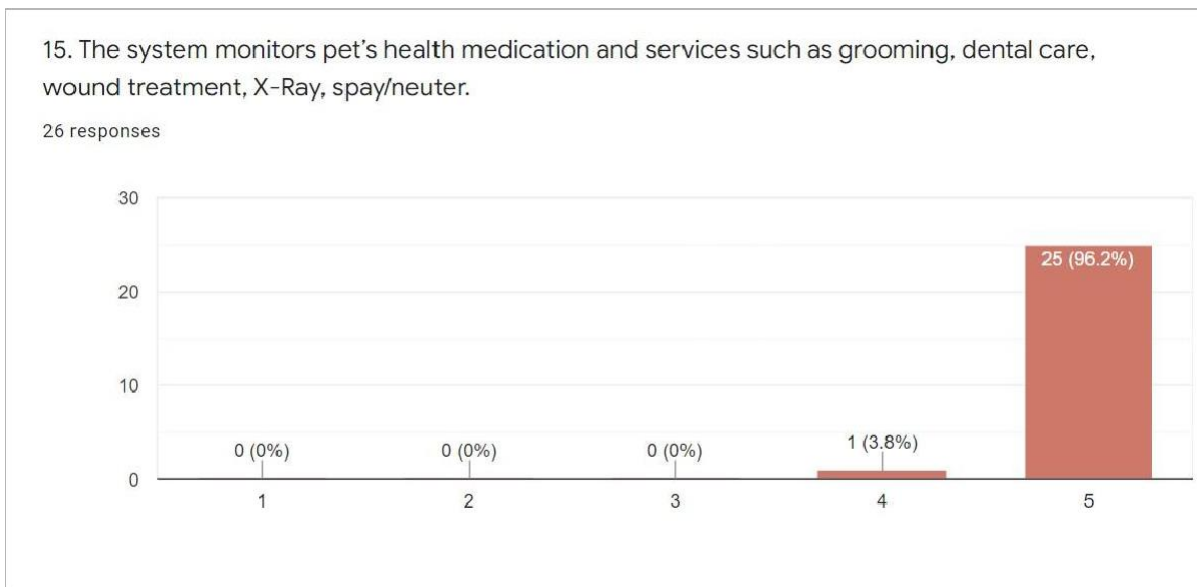
FUNCTIONALITY



As for the 1st statement in Functionality, out of 26 respondents, 24 Strongly Agree (92.3%) that Purrfect Veterinary Clinic Database is useful in keeping and storing client's or patient's information, while 2 respondents (7.7%) agree that Purrfect Veterinary Clinic Database is useful in keeping and storing client's or patient's information. Overall, the majority of the respondents Strongly Agree that Purrfect Veterinary Clinic Database is useful in keeping and storing client's or patient's information.



As for the 2nd statement in Functionality, out of 26 respondents, 23 Strongly Agree (88.5%) that the system provides an accurate and secure record management, 2 respondents agree (7.7%) that the system provides an accurate and secure record management, while 1 respondent (3.8%) was satisfied that the system provides an accurate and secure record management. Overall, the majority of the respondents Strongly Agree that the system provides an accurate and secure record management.



As for the 3rd statement in Functionality, out of 26 respondents, 25 Strongly Agree (96.2%) that the system monitors pet's health medication and services such as grooming, dental care, wound treatment, X-Ray, spay/neuter, while 1 respondent (3.8%) agrees that

the system monitors pet's health medication and services such as grooming, dental care, wound treatment, X-Ray, spay/neuter. Overall, the majority of the respondents Strongly Agree that the system monitors pet's health medication and services such as grooming, dental care, wound treatment, X-Ray, spay/neuter.

X. Conclusion and Recommendation

The outcome of this work indicates the Accuracy, User-friendliness, Efficiency and Functionality of Purrfect Veterinary Clinic Database. In conclusion, in terms of Accuracy, the system provides the desired output, with a clear sequence of pages and there are no surprises in how the system responds to the user's actions. In regards to User-friendliness, the database is easy to use, its overall design and layout is welcoming and appealing to the eyes of the user. On the subject of Efficiency, the system shortens the time to gather information and displays the changes added. It also makes the maintenance and update of the clients' data easier which lessens their workload. In addition, the transactions done are easily computed by the system and if a specific client's data is needed, it can be easily found through the use of the search function. Lastly, for Functionality, the system is reliable in storing the clients' data, provides a secure and accurate record management, and monitors the pet's health medication and services such as grooming, dental care, wound treatment, X-Ray, spay/neuter.

The developers would recommend the additional implementations to the system:

1. The capability of the system to create receipts for every transaction accomplished.
2. The capability to have multiple services in one transaction as well as computing for its total cost.
3. The capability to sort the data based on the user's preference.
4. The capability to book reservations for future dates.
5. The capability to compute the total sales of the day.

Polytechnic University of the Philippines
College of Computer and Information Sciences
Sta. Mesa, Manila

Name (optional): _____

Date: _____

Group No.: _____

General Directions: Put a cross mark (X) on the box of your answer. Please follow the given legend below.

Legend:

5 – Strongly Agree/Very Acceptable

4 – Agree/Acceptable

3 – Satisfied

2 – Disagree/Not Acceptable

1 – Strongly Disagree/Not very Acceptable

Accuracy	5	4	3	2	1
1. Purrfect Veterinary Clinic Database gives my desired output					
2. The sequence of pages is clear					
3. There were no surprises in how the system responds to my actions					
User-friendliness					
4. The system is easy to use					
5. The overall design and layout of the system is welcoming					
6. The design of the system is appealing to the eyes of the user					
Efficiency					
7. The system shortens the time to gather informations					
8. The system has the capability to show the data right after adding the changes					
9. It gives the veterinary clinic staff an easy way in doing information maintenance and updates					
10. The system lessen workloads					
11. The system easily computes the total payment or transaction of every pet.					
12. The system helps quickly find or search information about the patients.					
Functionality					

13. Purrfect Veterinary Clinic Database is useful in keeping and storing client's/patient's information					
14. The system provides accurate and secure record management.					
15. The system monitors a pet's health medication and services such as grooming, dental care, wound treatment, X-Ray, spay/neuter.					

