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FCAL Management System

Presented to the Faculty of the Department of Information and Technology

In Partial Fulfillment of the Requirements for the Degree of Bachelor of Information and Technology

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ABSTRACT

This study aims to develop and deploy a multi-platform (web and mobile) management system for the Feed Chemical Analytical Laboratory of Department of Agriculture Region 10. FCAL provides laboratory services to all feed manufacturers, distributors, dealers, small livestock and poultry raisers, and other clients who mix their own feed. This is to ensure that their products conform to the standards set by the Bureau of Animal Industry. The study covers on developing a multi-platform (mobile and web) application that will provide a management system of the Feed Chemical Analysis Laboratory (FCAL) under Department of Agriculture (DA) Region 10 only. The mobile application is only applicable at an Android Operating System and will cater to the clients of FCAL – DA R10. The web application will be used by the personnel of FCAL – DA R10.

The researchers were not able to complete, test and implement this project due to the quarantine declaration.

APPROVAL SHEET

The thesis attached hereto, entitled **FCAL Management System"**, prepared and submitted by **Ali Haydar B. Halbutogullari, Kathleen Kaye B. Lozada, Winona Joesa B. Ramos,** and **Nest Jasfer P. Robles,** in partial fulfillment of the requirements for the degree **BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY**, is hereby recommended for approval.

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CHAPTER I

INTRODUCTION

1.1. Rationale/ Background of the Study

The Department of Agriculture is the principal agency of the government responsible for the promotion of agricultural development growth. In pursuit of this, it provides the policy framework, helps direct public investments, and in partnership with local government units (LGUs) provide the support services necessary to make agriculture and agri-based enterprises profitable and to help spread the benefits of development to the poor, particularly those in rural areas (Lawphil, 2019). The Region 10 Office of Department of Agriculture is located in Cagayan De Oro City, accommodating clients from Bukidnon, Camiguin, Lanao del Sur, Misamis Oriental, and Misamis Occidental.

One of the support services a regional office of the Department of Agriculture offers is the Feed Chemical Analytical Laboratory (FCAL). FCAL provides laboratory services to all feed manufacturers, distributors, dealers, small livestock and poultry raisers, and other clients who mix their own feed. This is to ensure that their products conform to the standards set by the Bureau of Animal Industry. Its vision is to adequately supply food from animal source manifested by reliable quality feed materials and ingredients to sustain and enhance a dynamic livestock and poultry industry. Its mission is to provide updated technological information on the nutritional requirement of the livestock sector with the ultimate objective of increasing their productivity (DA R10 – FCAL, 2019). The location of the FCAL DA Region 10 Office is alongside Antonio Luna Street, Cagayan de Oro City.

For a laboratory to provide efficient services of its client, it is advantageous that such will have a management information system that will ease the storage, monitoring and extraction of needed information. For the DA R10 – FCAL, the laboratory has yet to establish a management information and monitoring system. The laboratory's client and sample

information are received from the Laboratory Request, which is being manually inputted by the receiving personnel while interviewing the client. In receiving the client, the personnel will have to identify the following information: laboratory request number, type of transaction (from regulatory, corn or walk-in), type of client (individual or group), sample code, sample descriptions, test, test methods, unit cost and such. After the laboratory request form is filled-up, and then the FCAL client will go to the cashier to pay for the necessary balance. After an OR is given from the cashier, the client will go back to the FCAL personnel and finish the necessary information and signatures from the Laboratory Request Form. Then, the client's samples will be approved to run the tests requested. After the tests are conducted, which usually are finished from 3-7 days, the FCAL client will be ready to receive a laboratory test results.

At the laboratory, there is one assigned receiving officer to receive clients and their samples; however there are instances that the assigned receiving officer is not available, thus the remaining personnel will receive the client and samples. A problem occurred is in the speed of transaction, which can be impended due to personnel not memorizing the name of the corresponding test method and cost to a test. In times of reporting targets conducted per month, quarter or year, they would have to manually count from the laboratory report forms or previous reports to monitor. There is also a problem in the accuracy of the information given in the lab request form to the laboratory test result. Sometimes the test requested is not the test done due to inaccuracy of passing the information.

The study focuses on creating multi-platform (web and mobile) management system for the Feed Chemical Analytical Laboratory. FCAL client can access queuing procedures through mobile and personnel can use web-based software to have an efficient and secured repository of laboratory, client, sample and test information in every transaction. In this digital age, the use of mobile phones is rampant. With the propagation of the internet, transactions can be accessed through online. Thus, the researchers opted to use mobile application for the access of the clients. The use of the web because as an administrator, more features and more screen-space can be used compared to the mobile.

1.2. Statement of the Problem

The major problem of the Region 10 Department of Agriculture Feed Chemical Analysis Laboratory is that the laboratory does not have a management information and monitoring that will collect, store and connect easily the data of the laboratory requests, billing, sample records, test results, clients' information and employees' information. Personal would have to result in manually exploring the Microsoft Word and Microsoft Excel just to gather the necessary information.

1.3. Objectives of the Study

1.3.1 General Objective

The general objective of the study is to develop and deploy a multi-platform (web and mobile) management system for the Feed Chemical Analytical Laboratory of Department of Agriculture Region 10.

1.3.2 Specific Objective

This system seeks to achieve five specific objectives as follows:

1. To determine and analyze the procedures of the FCAL and the problems encountered necessary for our research.
2. To design and develop a mobile application of which FCAL client can access laboratory request and notifications when and what to bring.
3. To design and develop a web-based management system for FCAL to store and monitor their records and files.

1.4. Scope and Limitations

The study covers on developing a multi-platform (mobile and web) application that will provide a management system of the Feed Chemical Analysis Laboratory (FCAL) under Department of Agriculture (DA) Region 10 only. The mobile application is only applicable at an Android Operating System and will cater to the clients of FCAL – DA R10. The web application will be used by the personnel of FCAL – DA R10.

1.5. Significance of the Study

Development of this system will be advantageous to the following groups of people:

Feed Chemical Analytical Laboratory – DA R10 Admin and Personnel. This will provide an easy way for them to collect, store and gather the information from the laboratory requests, billing, sample records, test results, clients' information and employees' information. Through the use of its mobile application, it will have farther reach.

Feed Chemical Analytical Laboratory - DA R10 Clients. Clients need no longer to go to the FCAL to fill up the initial information for a laboratory request and test results. It can save them time and money, such as for transportation in going to the FCAL office.

Future Researchers. The findings of this study can be used as a reference for their studies and systems to be developed.

CHAPTER II

REVIEW OF RELATED LITERATURE

2.1 Sources

2.1.1 Classification of the Information Technology Sector as a Dependency for the Food and Agriculture Sector

The research questions presented were intended to evaluate the current classification of the IT sector as a minor dependency for the food and agriculture sector and re-evaluate if the classification is currently correct. The literature review process was intended to create a fuller understanding of the current dependence of food and agriculture on technology. The literature review process also helped to identify reasons that a particular individual, business, sector or technology may be targeted for attack. This research revealed that the food and agriculture sector does have a critical dependency on the IT sector. It is recommended that further research be conducted at a more granular level in order to determine the specific cybersecurity weaknesses of the various businesses that comprise the food and agriculture sector (Wheeler, 2015).

2.1.2 Informational support as an element of state control of agriculture

Today, there are large information resources at the federal and regional levels that are directly related to the agricultural sector. They can be accessed mainly via the Internet, through the official website of the RF Ministry of Agriculture and its specialised information portals, as well as official websites of the Federal State Statistics Service, the Federal Customs Service, the Federal Service for Veterinary and Phytosanitary Surveillance and regional executive bodies controlling the AIC. In addition, there are some automated information systems developed by companies, rather than state authorities, that can be used for some specific purposes, e.g. to monitor livestock productivity, keep records and analyse accounting data, etc. (Bychkova, Zhidkova, Eliashev, 2018)

2.1.3 What is a LIMS?

A LIMS or Laboratory Information Management System is a software solution to address the data management, automation, and regulatory challenges of laboratories across the globe. As the name suggests, a LIMS is used to effectively manage laboratory samples and the associated data, thus standardizing operations by maintaining workflows, tests, and reporting procedures. With the growing needs of laboratories, the traditional LIMS too has evolved, with the system being able to do much more than just tracking samples. Implementing a LIMS improves the overall operational efficiency of a laboratory. A LIMS saves time otherwise spent on manual data logging and maintenance, thus offering an efficient data management solution. This leads to a decrease in human-error and a more accurate information system to support various decisions. It also comes with an audit trail, that automatically reduces the time taken for manual auditing. Additionally, a LIMS is most useful when dealing with voluminous data that requires batch analysis and repetitive daily operations. It also covers various compliance standards, helping laboratories maintain their regulatory, safety and privacy standards.(Cloud LIMS, 2018)

2.1.4 Laboratory information management systems in the work of the analytic laboratory

Laboratory information management systems belong to the class of application software intended for storage and management of information obtained in the course of the work of the laboratory. The systems are used to control and manage samples, standards, test results, reports, laboratory staff, instruments, and work flow automation. Integration of laboratory information management systems with the enterprise's information systems will make it possible to promptly transmit required data to the laboratory and the enterprise administration (Skobelev, Zaytseva, Kozlov, et al., 2011)

2.1.5 Seamlessly Configure Agriculture Laboratory Workflows using CloudLIMS, An Agriculture LIMS Offered as SaaS

Agricultural testing laboratories face several challenges such as tracking and managing

samples submitted by various sources, managing a diverse range of tests, following regulatory guidelines such as ISO/IEC 17025:2017, GLP, etc. A LIMS is indispensable to meet the data management, automation, and regulatory requirements of agricultural testing laboratories. CloudLIMS, a configurable cloud-based LIMS, empowers agricultural testing laboratories to manage various types of agricultural samples such as soil, seed, plant tissue, etc., in addition to various types of tests. It helps in generating comprehensive test reports in accordance with customers' requirements and state and federal regulations. Furthermore, it helps to automate experimental workflows and follow regulatory guidelines, thereby enhancing efficiency, improving workflow standardization, and assuring quality and food safety. (Cloud LIMS, n.d.)

2.1.6 Management information systems: an information portal for a major with limitless interpretations

Throughout the remaining phases (design, development, testing, and implementation) the portal was brought to life and made visible to the world. The portal now serves as a resource of vital information relating to the MIS program at UNI. The portal contains content for three primary audiences: prospective students, current students, and alumni. The various audiences can find information relating to what MIS is, why to choose MIS as a major, what MIS majors can do, and what the MIS program at UNI entails. In addition, the portal provides current undergraduates with key resources for success such as potential employers, what alumni have done, and job opportunities. The portal will be a resource utilized by students for years to come as UNI Business continues to grow and expand the MIS program (Lahue, 2014).

2.1.7 Android Based Mobile Order Management System

The whole designed is based on client server model. Another important feature of this application is its network connectivity needed to pull real-time data from a backend server. In addition, an off-line use of the application is also possible. However, in order for this option to work we have to provide a local of the database to each SmartPhone, assuming the database contains the most up to date information regarding products, customers, history, etc. This information requires to be synchronized with the central database daily as and when the

internet access becomes available. Newly created orders are transmitted to the server only after

they are saved to the local database. After new orders have been sent to the server successfully, the status of existing orders is updated in the local database. Orders can also be converted to HTML or PDF format to present to the customer with additional functionality (Oupraxay, Wyne and Olson, 2010).

2.1.8. Design of Database Applications in Mobile Devices with OS Android

This system has been tested and more demanding variant communication with the server PHP and speed of response was satisfactory for making changes in the data table or a selection of records. This system can be further developed into a program that modifies itself according to demand changes in the structures of database tables. This system could be implemented as an application in the mobile

phone or tablet and limited by the problem of errors that can occur while editing the

project. Asynchronous processing of individual threads in Java allows the use of Internet communications on the mobile device and eliminates the problem with different connections. The model was tested with 3G 4G where speed of response was very good. The system can be further elaborated to link multiple tables with primary keys, which in practice also occurs in information systems businesses. (Petrucha, Jurča, and Bartoněk, 2016).

2.2. Summary

Most of the related works stated proved that there is already a need and use of multi-platform management system. The development of technology and demands in business and information pushes the growth for laboratories to enhance their multi-platform management systems.

CHAPTER III

METHODOLOGY

This study will be accomplished through the following

3.1. Data Gathering and Requirement Analysis

Since this system will be tested in the Feed Chemical Analytic Laboratory of Department of Agriculture Region 10, it is necessary to collect information needed from the personnel such as the flow of their manual process, what forms and reports are they using, who are the authorized personnel to do such tasks, who have access in computers or laptops, and the office physical arrangements. Pictures are shown in Appendices. After the facts have been gathered, the information will be interpreted to identify problems and recommend functionalities in the system.

3.2. System Designing and Developing

Describing the desired operation in detail that includes process diagrams.

3.2.1. Context Diagram

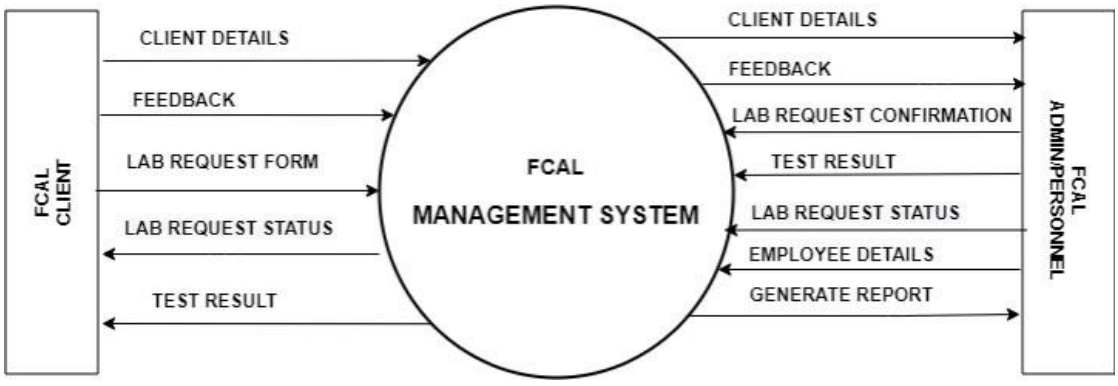

Figure 3.2.1. FCAL Management System Context Diagram

Figure 3.2.1 shows the FCAL Management System Context Diagram. As shown in the figure, the FCAL Client will input client details, lab requests and feedback to the system; and the system will give notification and test results to the FCAL Client. The system will give to FCAL Admin/Personnel client details, feedback from the

clients, and notifications of their lab requests. The FCAL Admin / Personnel will give to the system the test results, employee details and requests confirmation.

3.2.2. Use-Case Diagram

Figure 3.2.2. FCAL Management System Use-Case Diagram

Figure 3.2.2 shows the Use Case Diagram of the system. An FCAL admin can use all features of the system: login and logout; register user; create, edit, delete and view the admin, personnel and client details; access request form, view test results, receive request forms, view request details, receive request status notification, see reports, manage/monitor system. A FCAL personnel is prohibited with the following feature: access to other personnel details. An FCAL client can use login and logout; register user; access request form, view test results, and receive request status notification.

3.2.3 Data Flow Diagram (DFD)

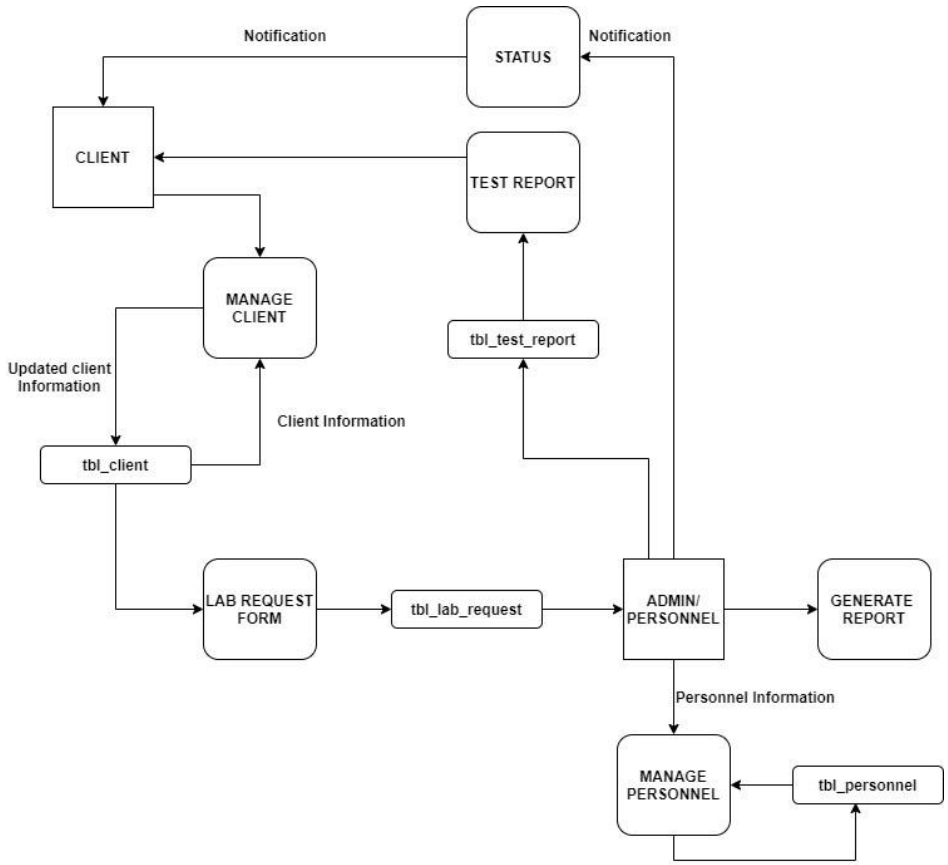

Figure 3.2.3. Data Flow Diagram (DFD)

Figure 3.2.3 shows the Data-Flow Diagram of the FCAL Management System.

3.2.4 Entity-Relationship Diagram (ERD)

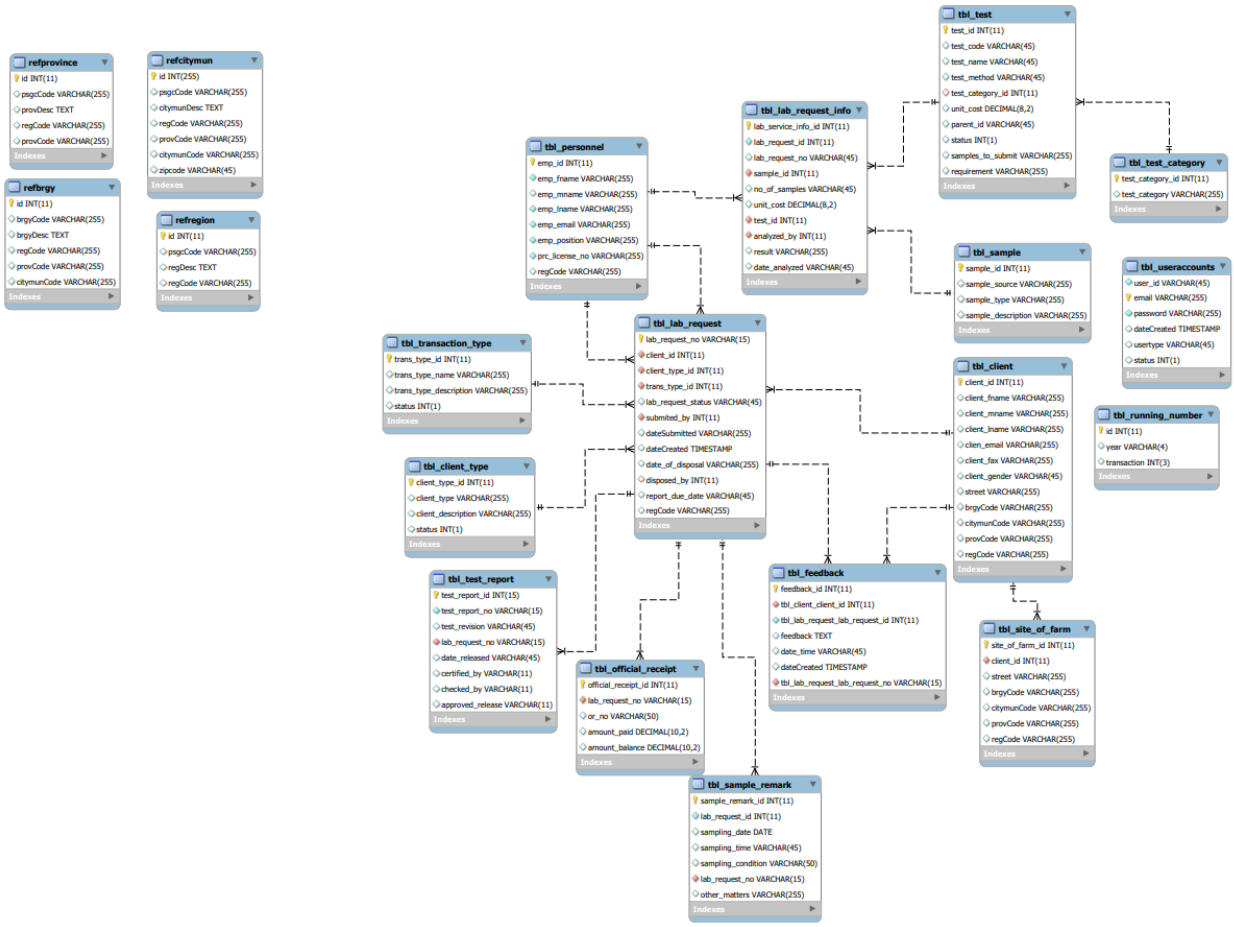

Figure 3.2.4. FCAL Management System Entity-Relationship Diagram (ERD)

Figure 3.2.4 shows the Entity-Relationship Diagram of the FCAL Management System. This shows the different entities in the system and their relationship with each other, together with the attributes inside an entity.

3.2.5 System Design

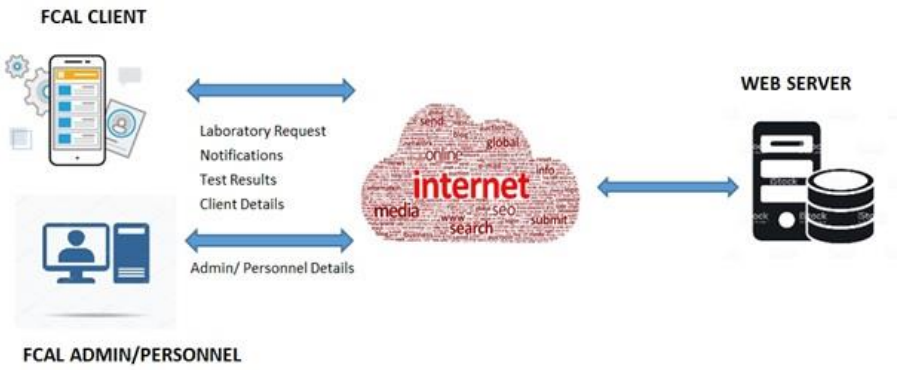

Figure 3.2.5. FCAL Management System Design

Figure 3.2.5 shows the FCAL Management System Design. A FCAL Client through the mobile application and an FCAL Admin/Personnel can access the laboratory requests, notifications, test results and client details. An FCAL Admin/Personnel through the Web Application can access the Admin/Personnel details. All those data will be stored at a web server via the internet.

3.3. Hi-Fi System Prototype

3.3.1. Mobile Application

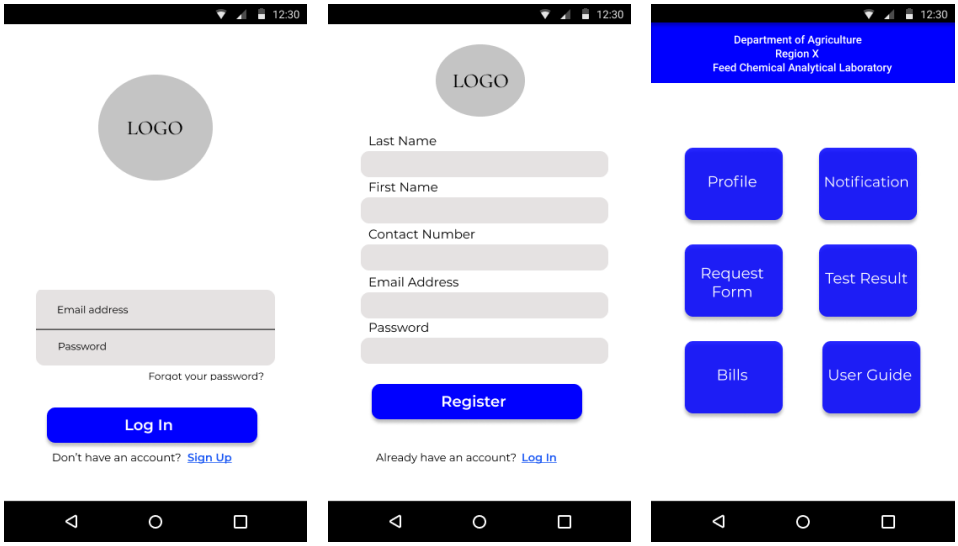

Figure 3.3.1.1. (from left to right) (a) login, (b) registration, (c) home

Figure 3.3.1.1 shows a registered user can (a) log-in or if not yet registered; the user will have to (b) register. After the user logged-in or registered, the user will be shown of the (c) home page which one can choose to go through their profile, request form, bills, notification, test result and user guide.

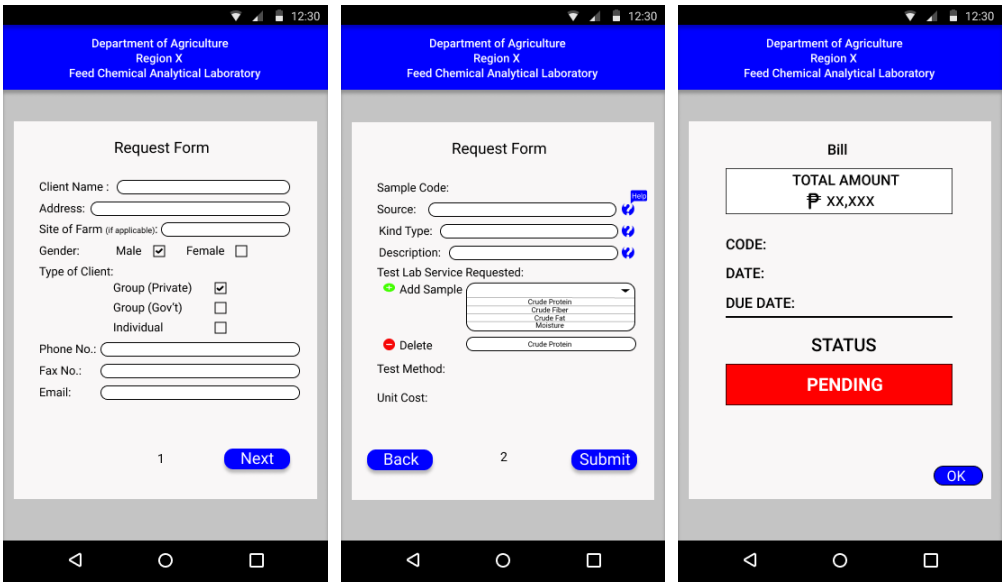

Figure 3.3.1.2 (from left to right) (a) lab request form – part 1, (b) lab request form – part 2, (c) billing

In clicking the request form button from the home page, Figure 3.3.1.2 shows the next procedures. For (a) and (b), the user will need to fill in necessary information for laboratory request. To help a user understand some information, a tooltip is at the end of a detail. For example, at (2) there is a question mark after the “source” text field. After all details are inputted, the user will be given a billing and its request status, as shown in (c).

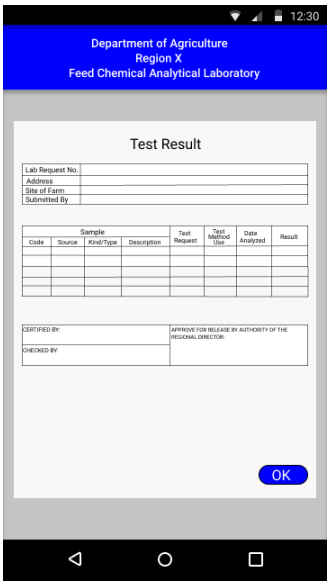

Figure 3.3.1.3. Laboratory Result Interface

In clicking the test result button from the home page, Figure 3.3.1.3 shows the laboratory results, with the necessary information.

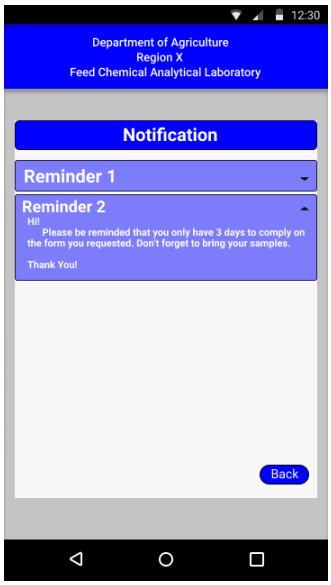

Figure 3.3.1.4. Notification

In clicking the notification button from the home page, Figure 3.3.1.4 shows the notification for the transaction made. A sample message of notification: “Hi! Please be reminded that you only have 3 days to comply on the form you requested. Don’t forget to bring your samples. Thank You!”

3.3.2. Web Application

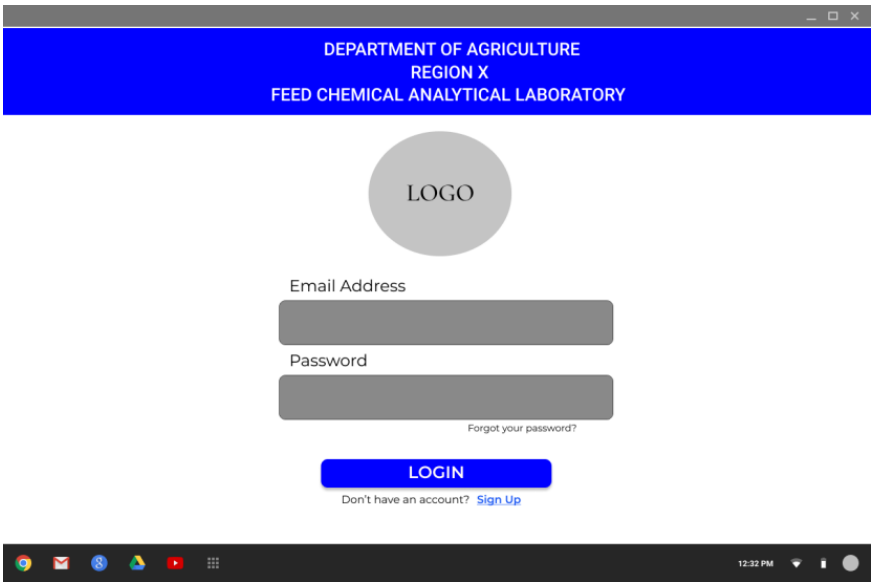

Figure 3.3.2.1. Desktop Log-In

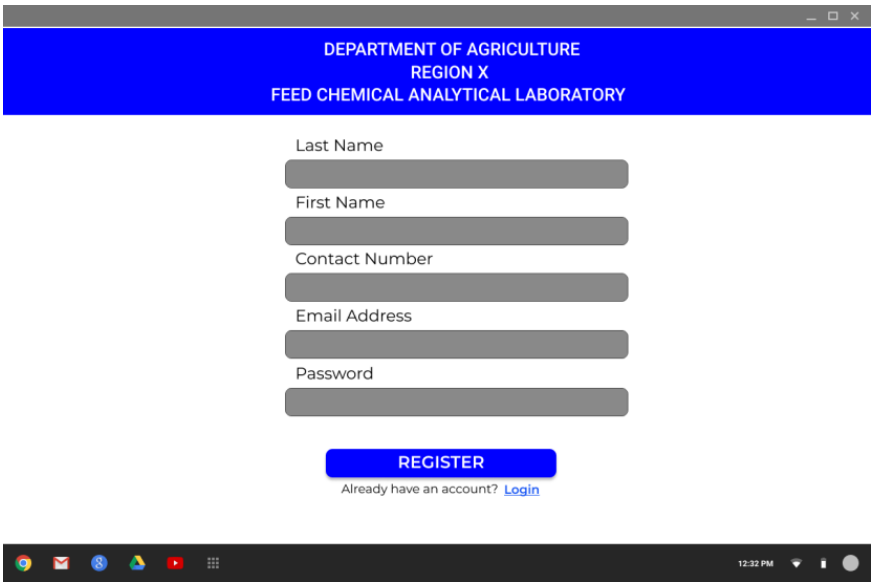

Figure 3.3.2.2. Desktop Registration

Figure 3.3.2.1 shows the desktop log-in page of a registered user. If not, there is a link for sign-up of which the user will be shown at Figure 3.3.2.2 the desktop registration page.

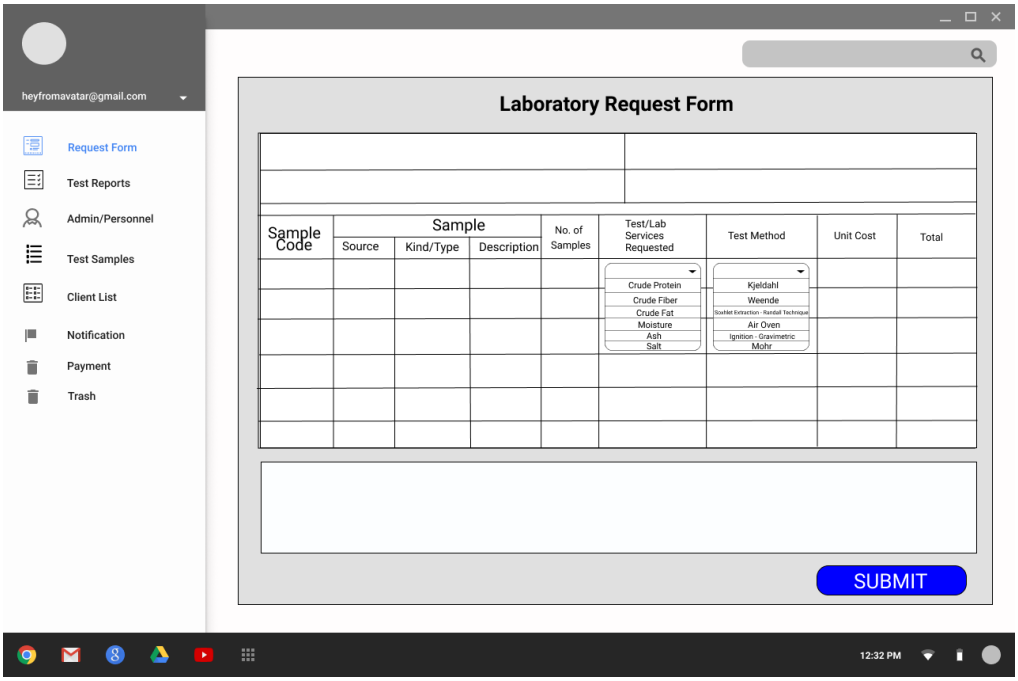

Figure 3.3.2.3. Desktop Request Form

If you click the Request Form tab at the sidebar, Figure 3.3.2.3 shows - the desktop request form. If you will look at the test requested and test method, there are drop-down choices.

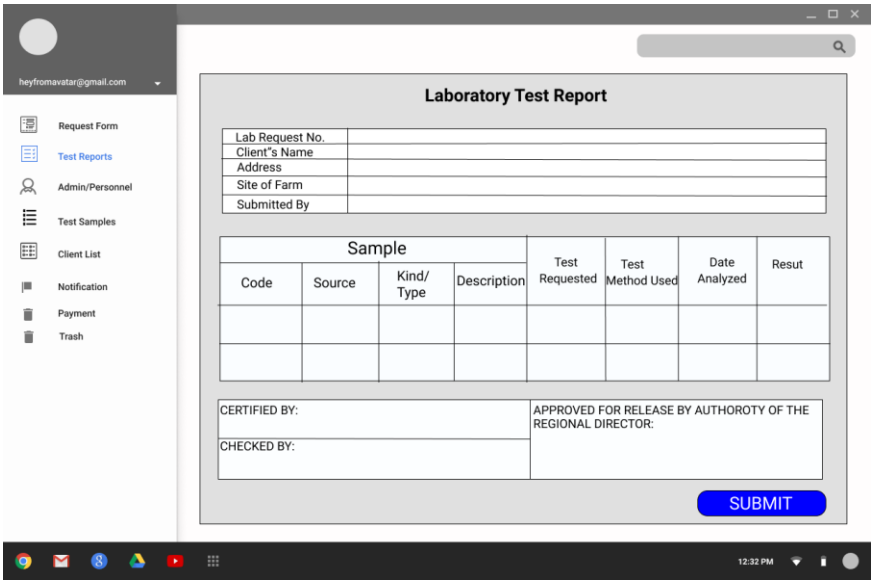

Figure 3.3.2.4. Desktop Test Report

If you click the Test Reports tab at the sidebar, Figure 3.3.2.4 shows - the desktop test report, of which the test results of the a certain laboratory request will be shown.

Figure 3.3.2.5. Desktop Profile

If you click the Admin/Personnel tab at the sidebar, Figure 3.3.2.5 shows – desktop profile of a certain FCAL admin or FCAL personnel with their necessary information.

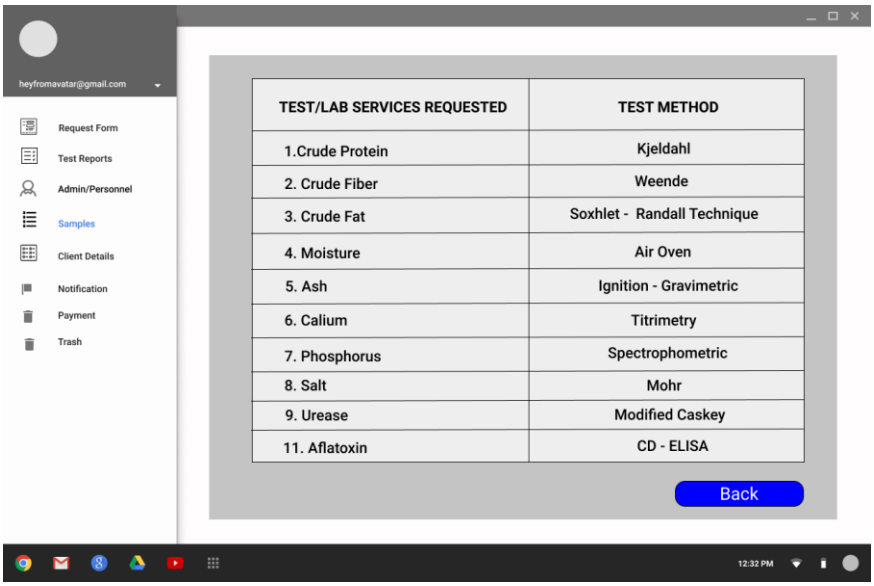

Figure 3.3.2.6. Samples Test

If you click the Samples tab at the sidebar, Figure 3.3.2.6 shows – samples test, the specific test and its respective test method displayed.

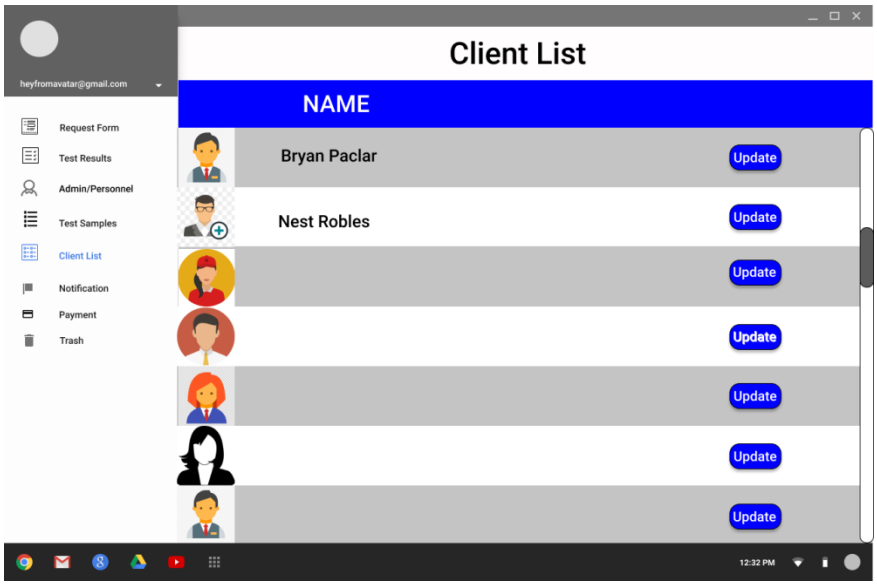

Figure 3.3.2.7. Client List

If you click the Client List tab at the sidebar, Figure 3.3.2.7 shows – client list where we can update each client's information.

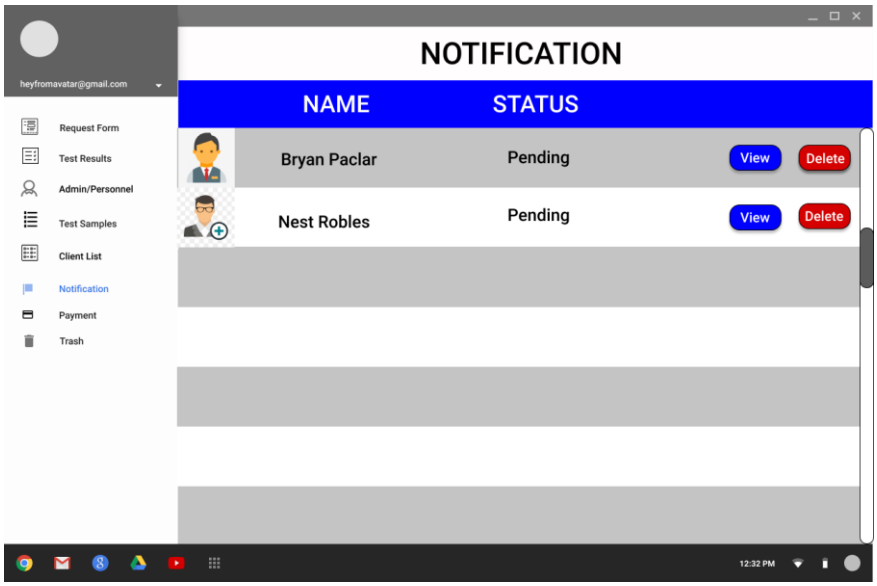

Figure 3.3.2.8. Notification

If you click the Notification tab at the sidebar, Figure 3.3.2.8 shows – notification, where list of clients that have given a laboratory request and their status.

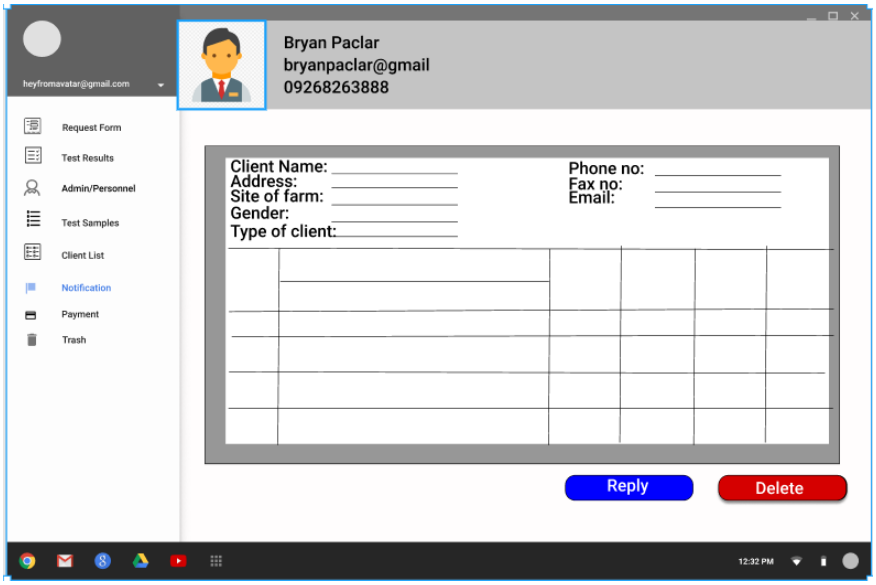

Figure 3.3.2.9. View in Notification

If the view button will be clicked from a client in the notification list (Figure 3.3.2.8) , client profile that send the laboratory request form will be shown (Figure 3.3.2.9). As an FCAL admin or personnel, you can either reply, delete or go back to the notification list.

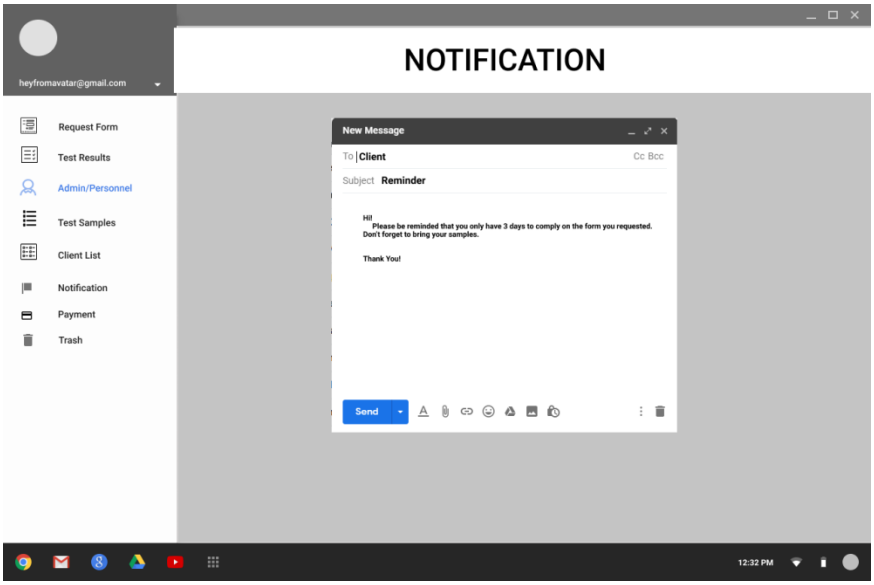

Figure 3.3.2.10. Reply in Notification

If you click the the reply button at the view in notification of a certain client, as shown in Figure 3.3.2.9, Figure 3.3.2.10 shows – reply in notification. If you send the message, it will notify in the mobile

app of the FCAL client.

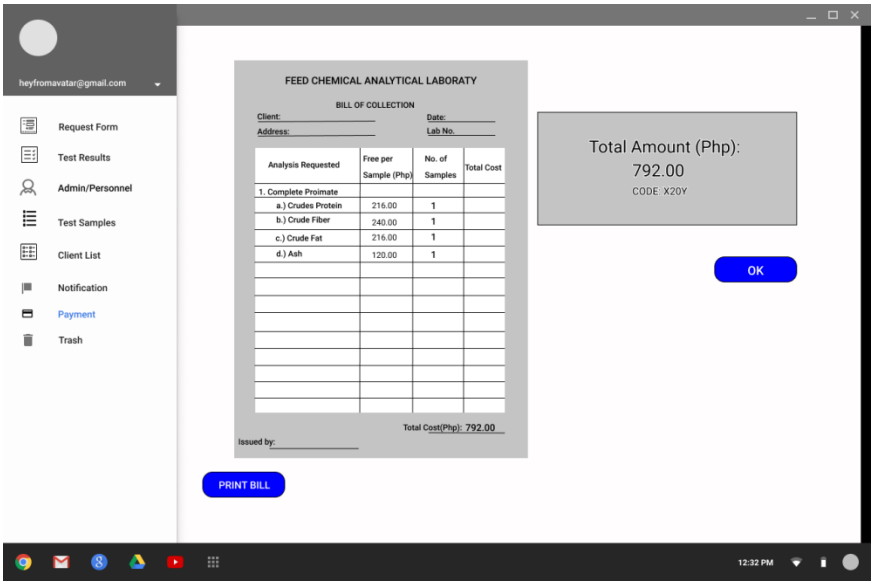

Figure 3.3.2.11. Desktop Payment

If you click the Payment tab at the sidebar, Figure 3.3.2.11 shows – desktop payment, of which we can see the bill of collection, total amount of the tests required from all samples, and the generated code for payment.

3.4. Architectural Design

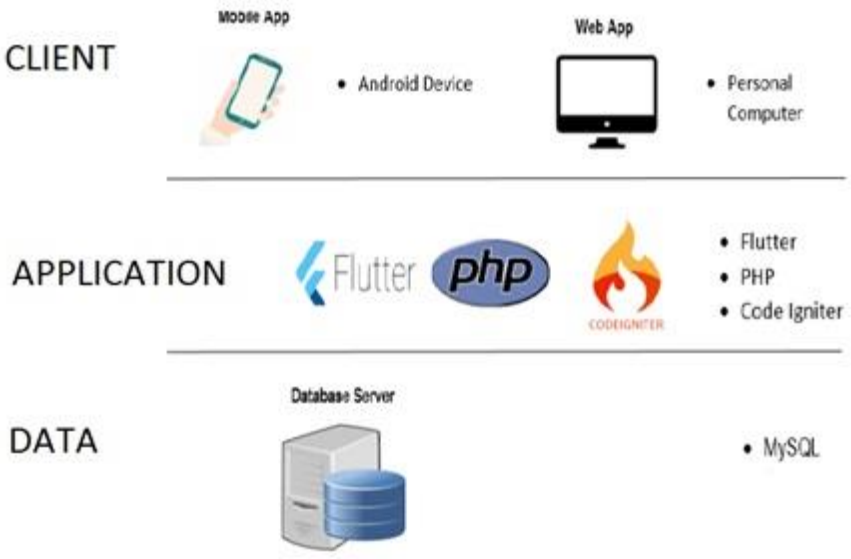

Figure 3.4. FCAL Management System Architectural Design

Figure 3.4 shows Three Tier Architecture Diagram composed of three layers: Client, Application and Data. Client Tier is contains applications which are the Mobile App FCAL and Clients the Web App for the FCAL Admin and Personnel. The Application Tier contains the functional logic which drives an application's core capabilities using Flutter for mobile application and PHP using CodeIgniter as its framework for the web application. Data Tier will have a Database Server run by MySQL.

CHAPTER IV

RESULTS AND DISCUSSION

This chapter shows the results and discussions that the researcher have done in the development of both the mobile application and the web application

4.1. Gathered Data

Based on the interviews conducted, the FCAL was using Microsoft Excel and Microsoft Word for recording and tracking all their transactions such as their laboratory requests, test results, sample lists and etc. This caused them some inaccuracies of information from the laboratory requests to the test results such as misspelling in the client's name or client's address, the re-iteration of sample code, etc. Pictures of the set-up of the FCAL Office are in Appendix A. Pictures of the sample forms are in Appendix B. Pictures of the sample printed laboratory request forms are in Appendix C.

4.2. System Design and Development

4.2.1. Web Application Wireframes

The Web Application has two options of views: (1) Admin and (2) Personnel. An Admin has all features of the Personnel. It is just that the admin can add, delete or update an employee or personnel. Both admin and personnel have the following wireframes.

Admin's View

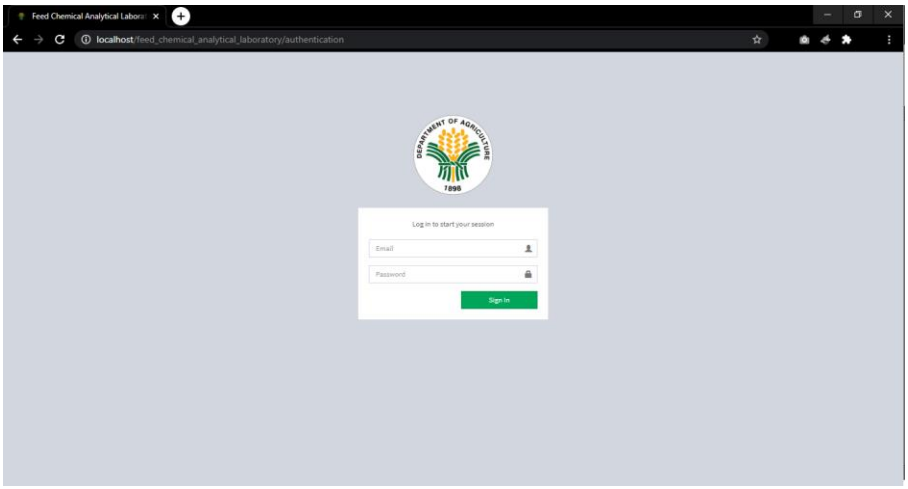

Figure 4.2.1.1. Web Page Login

Figure 4.2.1.1 Web Page Login Admin shows the registered e-mail and password of the admin.

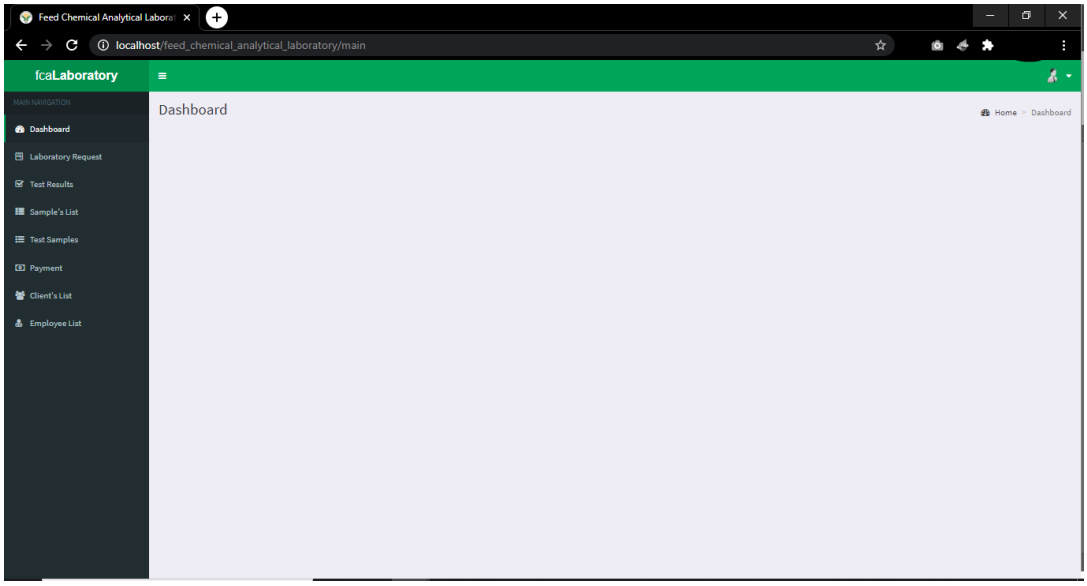

Figure 4.2.1.2 Web Dashboard

Figure 4.2.1.2 shows the Web Dashboard of which we can see the following tabs on the right: Laboratory Request, Test Results, Sample's List, Test Samples, Payment and Client's List, and Employee's List.

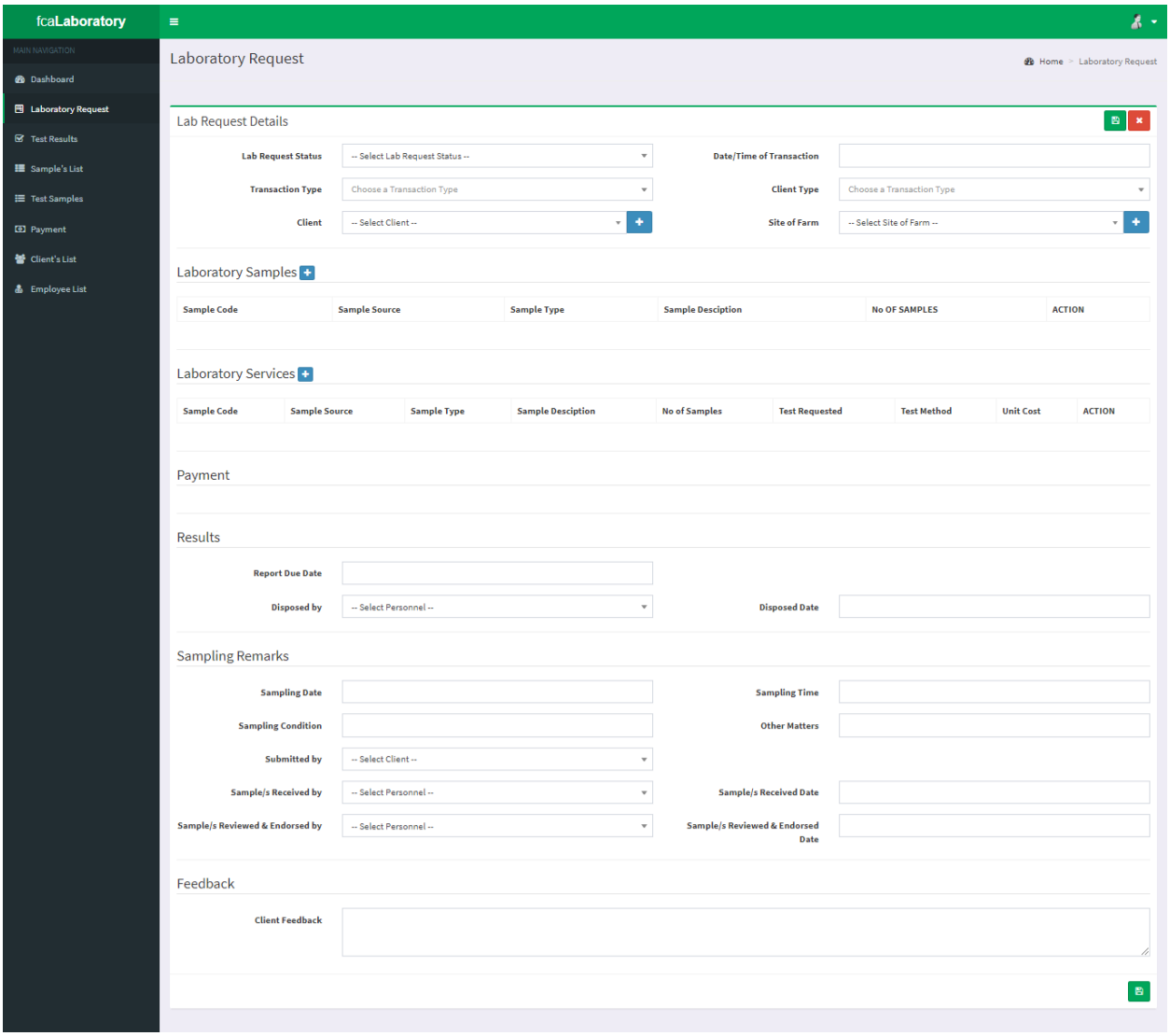

Figure 4.2.1.3. Laboratory Request

Figure 4.2.1.3 shows the Laboratory Request divided by the following sections: (1) Laboratory Request Details, (2) Laboratory Samples, (3) Laboratory Services, (4) Payment, (5) Results, (6) Sampling Remarks, and (7) Feedback.

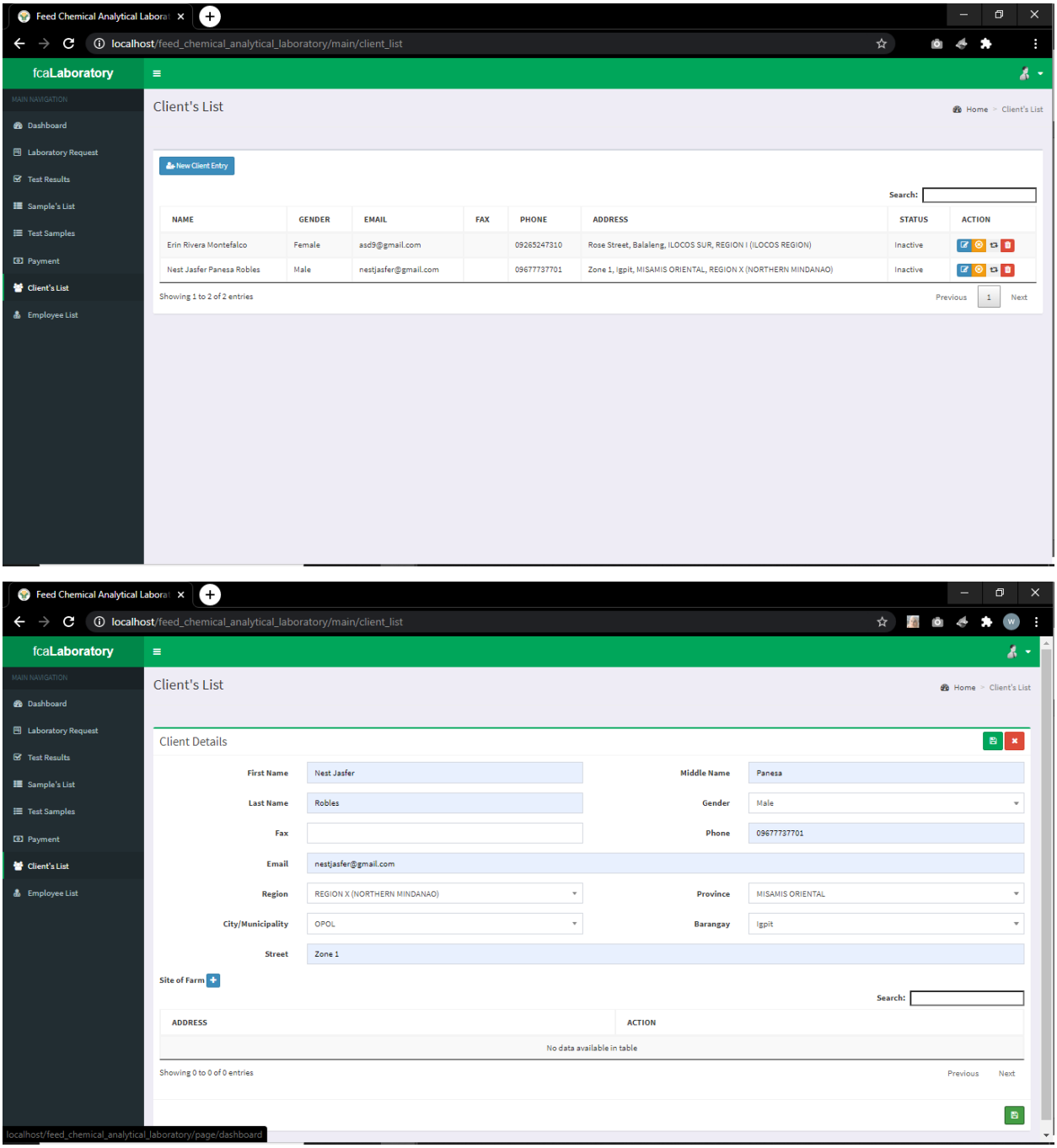

Figure 4.2.1.4. Client List and New Client Entry

Figure 4.2.1.4 shows the Client List tab (above) and the New Client Entry (below). For the Client List, the following information is shown in every client: name, gender, e-mail address, fax number, phone number, address, status and action icons. In the Client's Details we see the following information are asked: first name, middle name, last name, gender, fax, phone, e-mail address, region, province,

barangay and an option to go to site of farm.

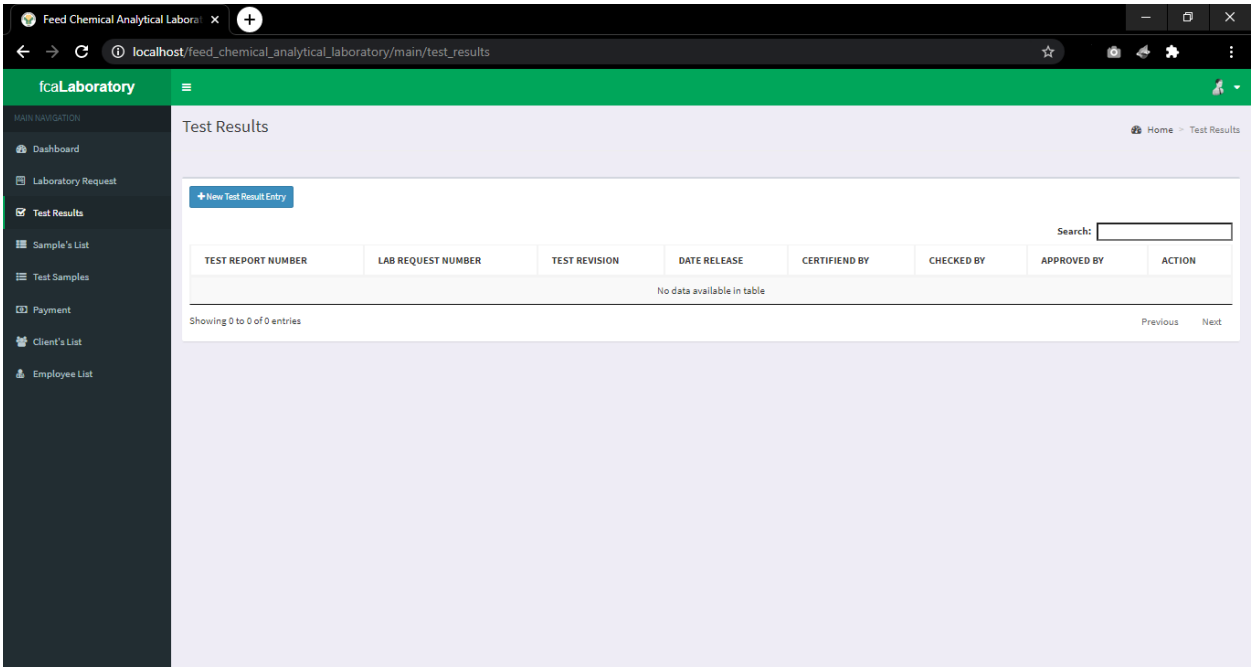

Figure 4.2.1.5 Test Result

Figure 4.2.1.5 shows the Test Result of which the following information are shown: test report number, lab request number, test revision, date release, certified by, checked by, approved by, and action.

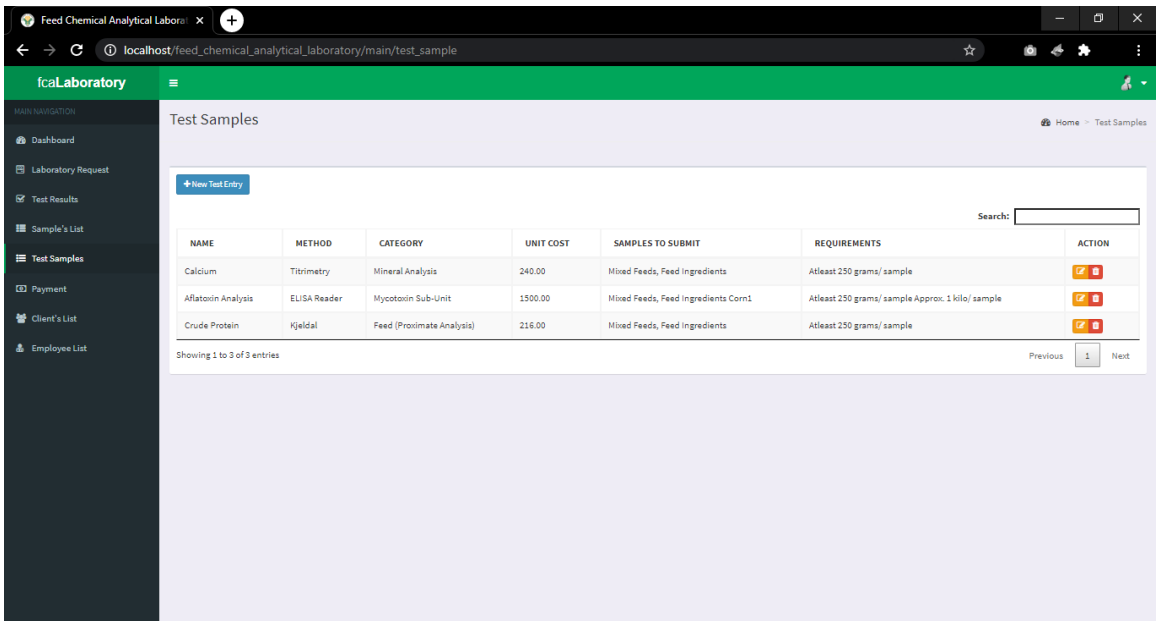

Figure 4.2.1.6 Test Samples

Figure 4.2.1.6 shows the Test Samples which the following information are shown: name (of the test), (test) method, category, unit cost, samples to submit, requirements and action.

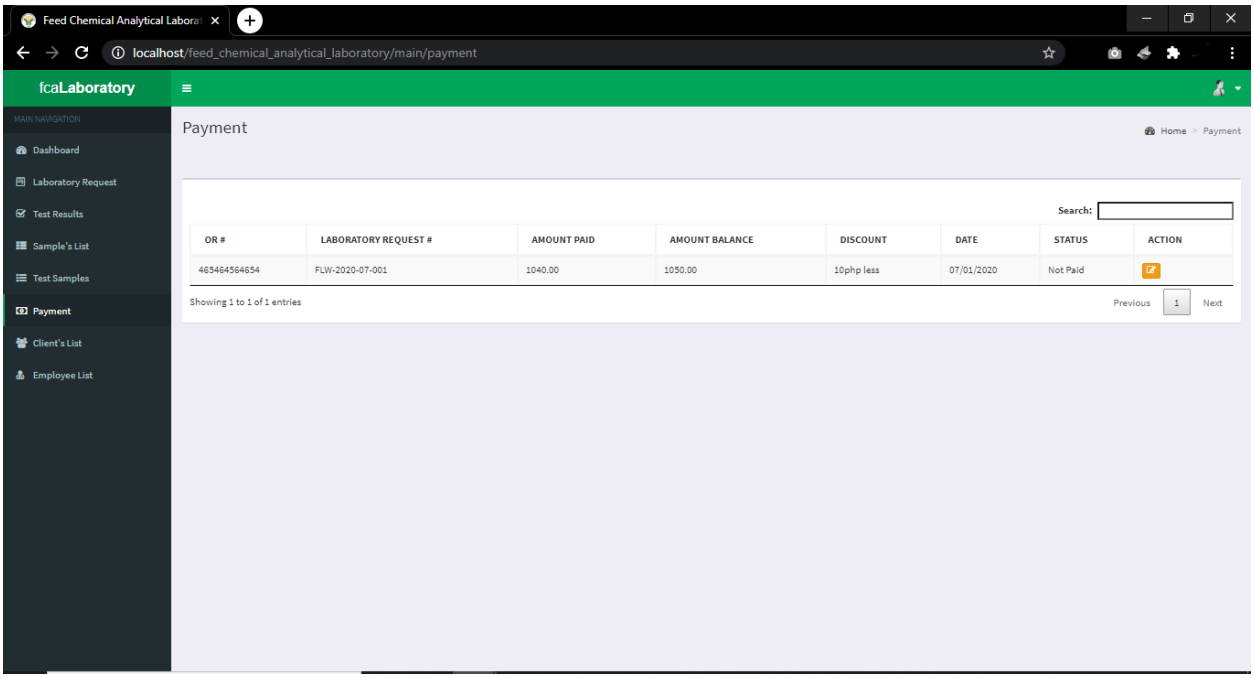

Figure 4.2.1.7 Payment

Figure 4.2.1.7 shows the Payment (Admin View) of which the following information are shown: OR #, Laboratory Request #, Amount Paid, Amount Balance, Discount, Date, Status and Action Bar.

ONLY ADMIN CAN ACCESS

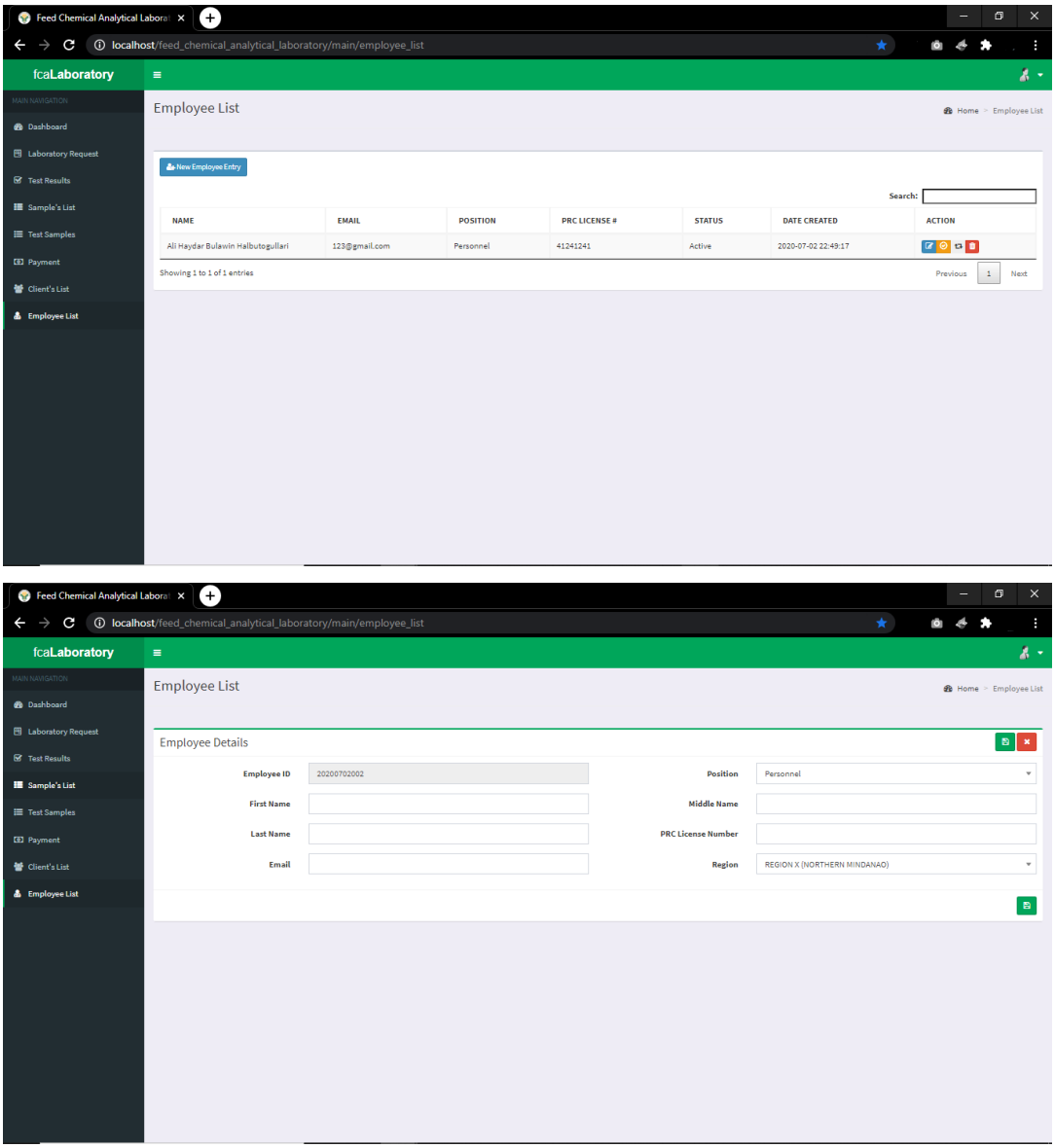

Figure 4.2.1.8 Employee List and New Employment Entry (Admin)

Figure 4.2.1.8 shows the Employee List (above) and New Employee List (below). For the Employee List, the following information is shown in every employee: name, e-mail, date created, PRC License #, status, date created and action icons.

4.2.2. Mobile Application Wireframes

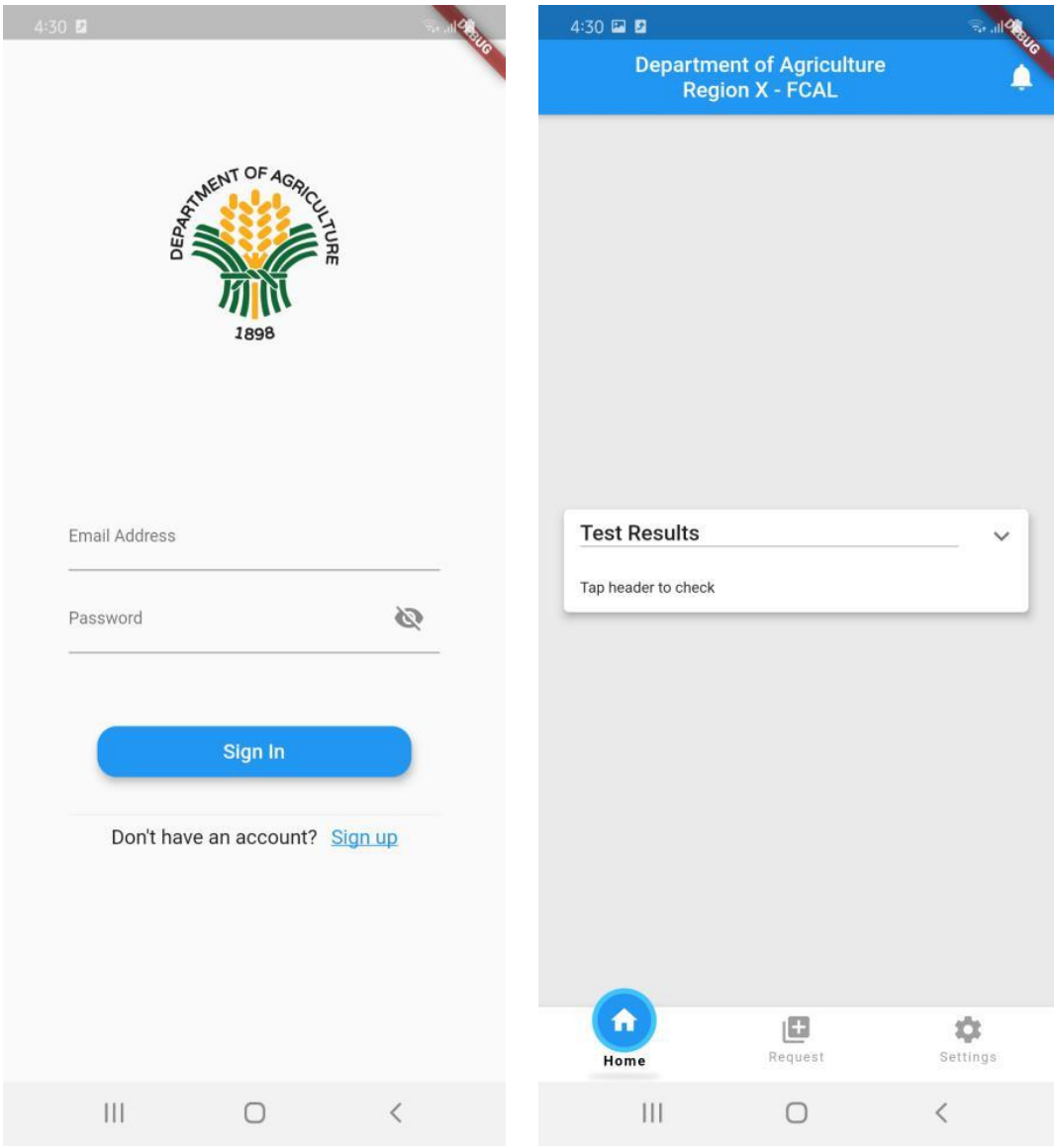

Figure 4.2.2.1 Login and Home (Mobile)

Figure 4.2.2.1 shows the Login and Home pages of the Mobile Application. User will input their e-mail address and password to sign in. The Home Page will show the test results that are requested.

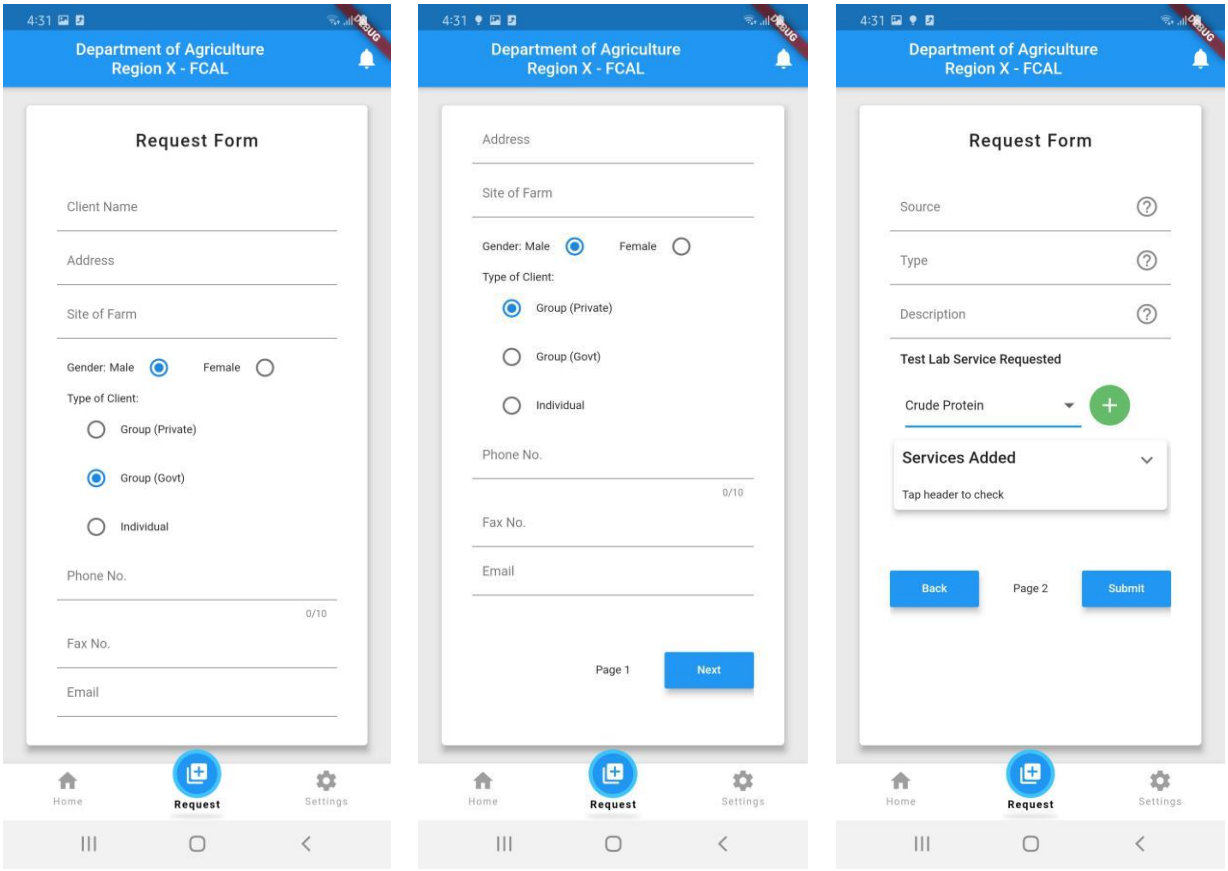

Figure 4.2.2.2. Laboratory Request Form (Mobile)

Figure 4.2.2.2 shows the Laboratory Request Form of the Mobile Application. User will input in Page 1 the following information: client name, their address, site of farm, gender, type of client (whether they are private group, government group or individual), phone number, fax number, e-mail. User will input in Page 2 the following information: source, type, description and test lab service requested.

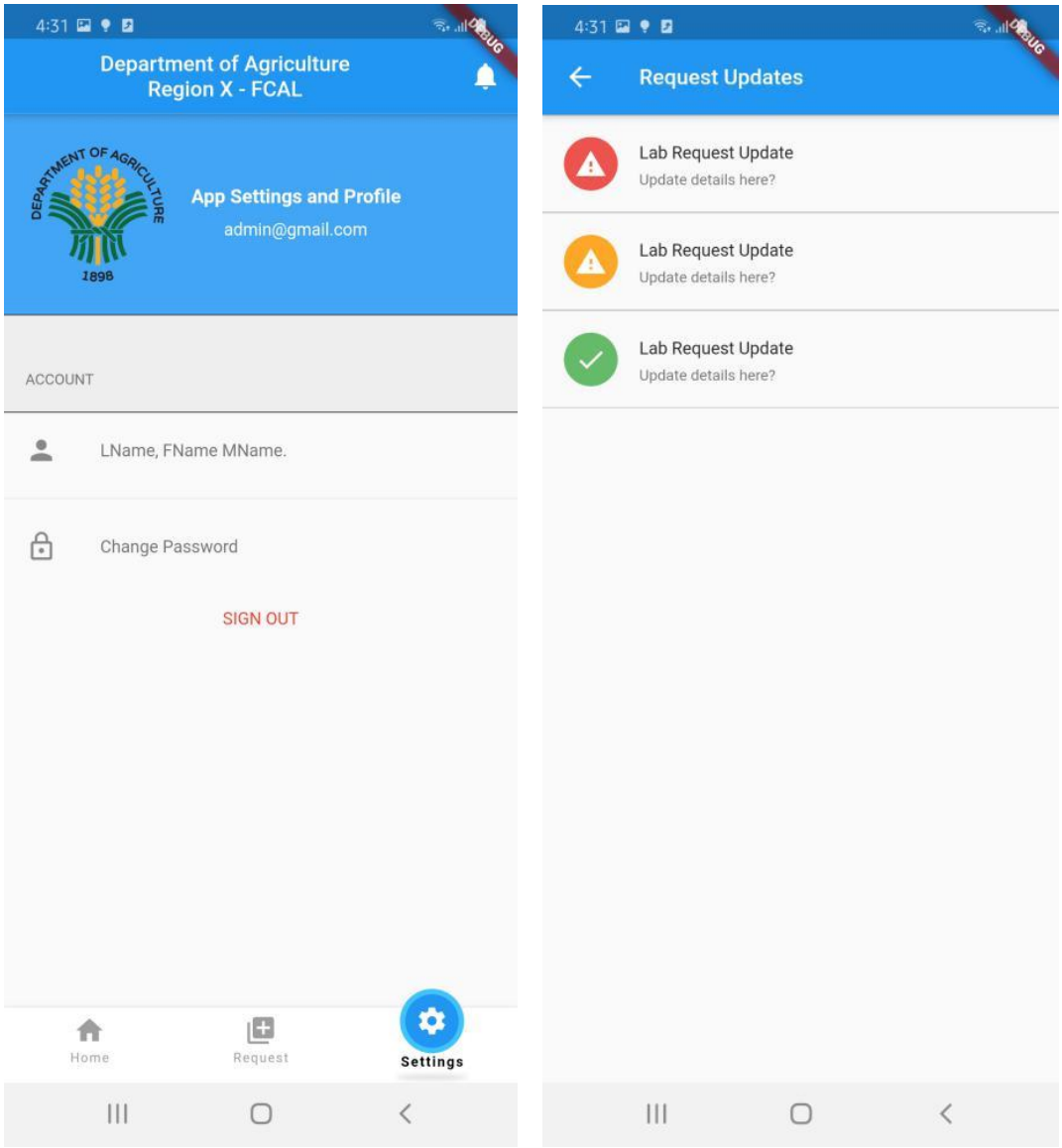

Figure 4.2.2.3 Settings and Notifications (Mobile)

Figure 4.2.2.3 shows the settings and notifications of the mobile application. For the Settings page, the following information are shown: Full name of the client, an option to change password and to sign out of the application. For the Notifications page, the following information are shown: Lab Request Updates whether cancelled (red), pending (orange), and received (green).

Chapter V

Summary and Conclusion

This chapter discusses the conclusion that has been drawn based on the results of the study. It also states the objectives that have been accomplished.

5.1 Summary

One of the support services a regional office of the Department of Agriculture offers is the Feed Chemical Analytical Laboratory (FCAL). FCAL provides laboratory services to all feed manufacturers, distributors, dealers, small livestock and poultry raisers, and other clients who mix their own feed. While visiting the site and interviews conducted, the researchers found out that the monitoring system the office has is of manually inputted and formatted via Microsoft Excel and Microsoft Word. With the manual monitoring, inaccuracies of information of client's information also of sample's and tests are happening. Also the time and money a client would have to spend because they would have to go to the office physically for the transaction to occur.

With the problems observed, the researchers created the FCAL Management System of a mobile-and-web system. Through the mobile application, clients of FCAL with an Android Operating System can access laboratory request and get test results online. Through the web application, personnel of FCAL can entertain clients even though they are yet to go to the office physically. Also, through the web application, the FCAL personnel will have one place to see necessary info that they need: such as laboratory requests, test results, client's lists, employee's list and others.

Due to a pandemic of COVID-19 that besieged the Philippines last January, a necessary lockdown was nationally implemented in March. This caused the researchers not able to finish its development.

However, the study started is workable to be used by the personnel and clients of FCAL DA Region 10.

5.2 Recommendation

The researcher could not fully develop the system due to the pandemic. Also, it will be really a great practice if the study conducted will be tested by the personnel and clients of FCAL DA Region 10.

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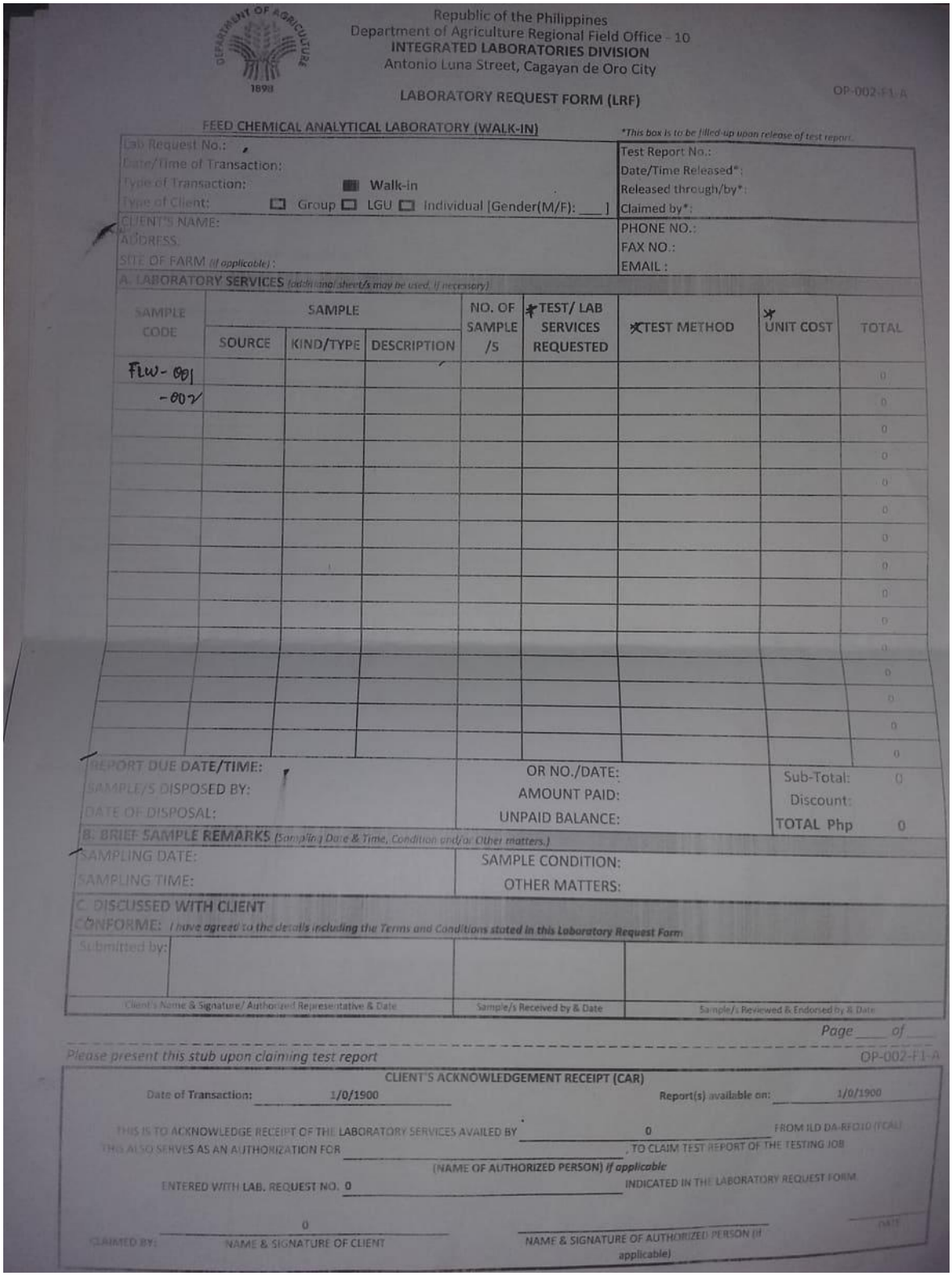
APPENDIX A
FCAL OFFICE

APPENDIX A
FCAL OFFICE

APPENDIX B
BLANK LABORATORY REQUEST FORM



Republic of the Philippines
Department of Agriculture Regional Field Office - 10
INTEGRATED LABORATORIES DIVISION
Antonio Luna Street, Cagayan de Oro City

LABORATORY REQUEST FORM (LRF)

OP-002-F1-A

FEED CHEMICAL ANALYTICAL LABORATORY (WALK-IN)

*This box is to be filled-up upon release of test report.

Lab Request No.:
Date/Time of Transaction:
Type of Transaction: ■ Walk-in
Type of Client: ☐ Group ☐ LGU ☐ Individual [Gender(M/F): ___]

Test Report No.:
Date/Time Released*:
Released through/by*:
Claimed by*:

CLIENT'S NAME:
ADDRESS:
SITE OF FARM *(if applicable)* :

PHONE NO.:
FAX NO.:
EMAIL :

A. LABORATORY SERVICES *(additional sheet/s may be used, if necessary)*

SAMPLE CODE	SAMPLE			NO. OF SAMPLE /S	*TEST/ LAB SERVICES REQUESTED	*TEST METHOD	* UNIT COST	TOTAL
	SOURCE	KIND/TYPE	DESCRIPTION					
FLW-001								0
-002								0
								0
								0
								0
								0
								0
								0
								0
								0
								0
								0
								0
								0
								0

REPORT DUE DATE/TIME:
SAMPLE/S DISPOSED BY:
DATE OF DISPOSAL:

OR NO./DATE:
AMOUNT PAID:
UNPAID BALANCE:

Sub-Total: 0
Discount:
TOTAL Php 0

B. BRIEF SAMPLE REMARKS *(Sampling Date & Time, Condition and/or Other matters.)*

SAMPLING DATE:
SAMPLING TIME:

SAMPLE CONDITION:
OTHER MATTERS:

C. DISCUSSED WITH CLIENT

CONFORME: *I have agreed to the details including the Terms and Conditions stated in this Laboratory Request Form*

Submitted by:			
	Client's Name & Signature/ Authorized Representative & Date	Sample/s Received by & Date	Sample/s Reviewed & Endorsed by & Date

Page ____ of ____

Please present this stub upon claiming test report OP-002-F1-A

CLIENT'S ACKNOWLEDGEMENT RECEIPT (CAR)

Date of Transaction: 1/0/1900 Report(s) available on: 1/0/1900

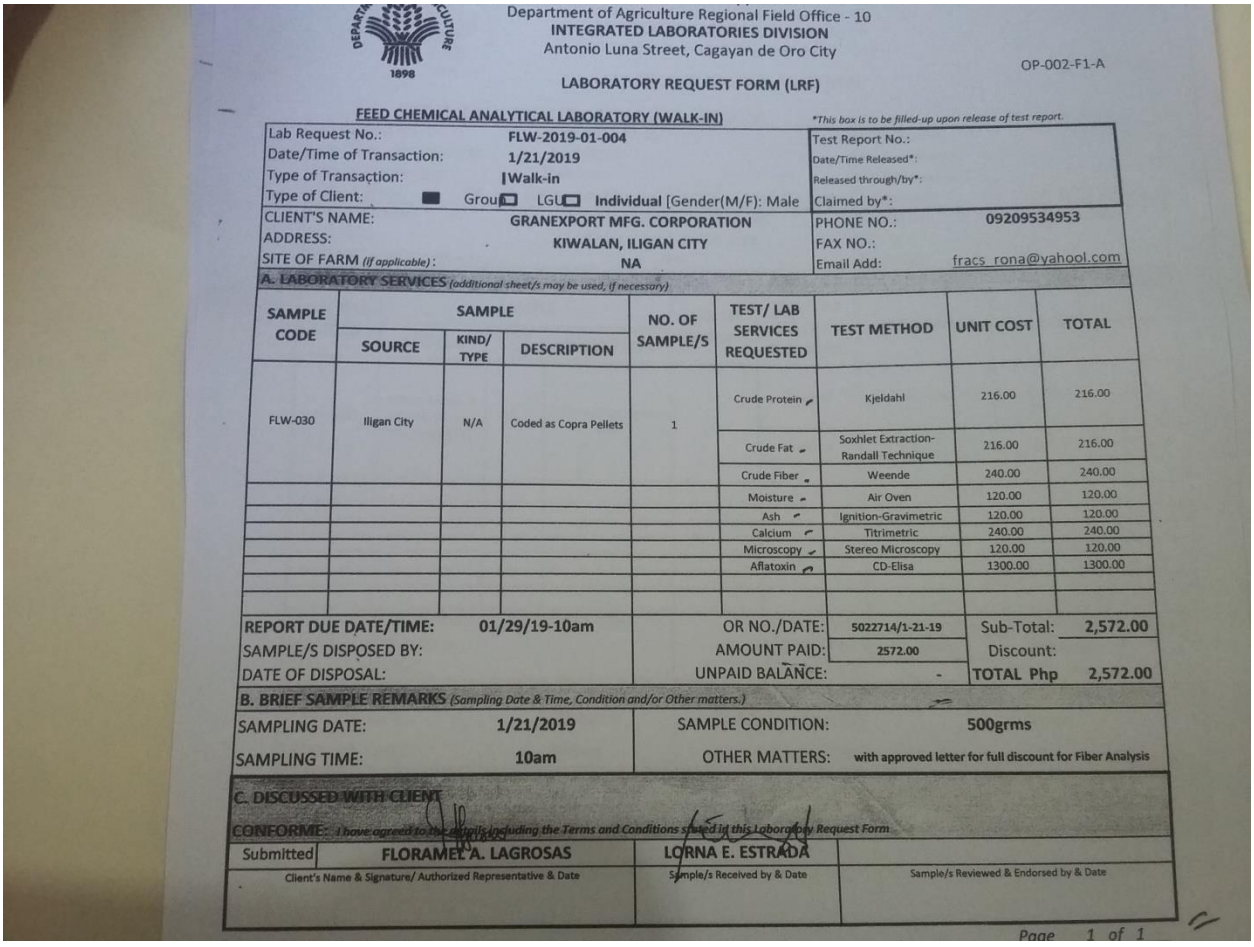
THIS IS TO ACKNOWLEDGE RECEIPT OF THE LABORATORY SERVICES AVAILED BY 0 FROM ILD DA-RFO10 (FCAL)
THIS ALSO SERVES AS AN AUTHORIZATION FOR _____, TO CLAIM TEST REPORT OF THE TESTING JOB
(NAME OF AUTHORIZED PERSON) *if applicable*
ENTERED WITH LAB. REQUEST NO. 0 INDICATED IN THE LABORATORY REQUEST FORM

0
CLAIMED BY: NAME & SIGNATURE OF CLIENT

NAME & SIGNATURE OF AUTHORIZED PERSON (if applicable)

DATE

APPENDIX C
PRINTED LABORATORY REQUEST FORM



Department of Agriculture Regional Field Office - 10
INTEGRATED LABORATORIES DIVISION
Antonio Luna Street, Cagayan de Oro City

OP-002-F1-A

LABORATORY REQUEST FORM (LRF)

FEED CHEMICAL ANALYTICAL LABORATORY (WALK-IN)

**This box is to be filled-up upon release of test report.*

Lab Request No.:	FLW-2019-01-004	Test Report No.:	
Date/Time of Transaction:	1/21/2019	Date/Time Released*:	
Type of Transaction:	Walk-in	Released through/by*:	
Type of Client:	■ Group ☐ LGU ☐ **Individual** [Gender(M/F): Male	Claimed by*:	
CLIENT'S NAME:	**GRANEXPORT MFG. CORPORATION**	PHONE NO.:	09209534953
ADDRESS:	**KIWALAN, ILIGAN CITY**	FAX NO.:	
SITE OF FARM *(if applicable)*:	**NA**	Email Add:	fracs_rona@yahool.com

A. LABORATORY SERVICES *(additional sheet/s may be used, if necessary)*

SAMPLE CODE	SAMPLE			NO. OF SAMPLE/S	TEST/ LAB SERVICES REQUESTED	TEST METHOD	UNIT COST	TOTAL
	SOURCE	KIND/ TYPE	DESCRIPTION					
FLW-030	Iligan City	N/A	Coded as Copra Pellets	1	Crude Protein	Kjeldahl	216.00	216.00
					Crude Fat	Soxhlet Extraction-Randall Technique	216.00	216.00
					Crude Fiber	Weende	240.00	240.00
					Moisture	Air Oven	120.00	120.00
					Ash	Ignition-Gravimetric	120.00	120.00
					Calcium	Titrimetric	240.00	240.00
					Microscopy	Stereo Microscopy	120.00	120.00
					Aflatoxin	CD-Elisa	1300.00	1300.00

REPORT DUE DATE/TIME:	**01/29/19-10am**	OR NO./DATE:	**5022714/1-21-19**	Sub-Total:	**2,572.00**
SAMPLE/S DISPOSED BY:		AMOUNT PAID:	**2572.00**	Discount:	
DATE OF DISPOSAL:		UNPAID BALANCE:	-	**TOTAL Php**	**2,572.00**

B. BRIEF SAMPLE REMARKS *(Sampling Date & Time, Condition and/or Other matters.)*

SAMPLING DATE:	**1/21/2019**	SAMPLE CONDITION:	**500grms**
SAMPLING TIME:	**10am**	OTHER MATTERS:	**with approved letter for full discount for Fiber Analysis**

C. DISCUSSED WITH CLIENT

CONFORME: *I have agreed to the details including the Terms and Conditions stated in this Laboratory Request Form*

Submitted	**FLORAMEL A. LAGROSAS**	**LORNA E. ESTRADA**	
	Client's Name & Signature/ Authorized Representative & Date	Sample/s Received by & Date	Sample/s Reviewed & Endorsed by & Date

Page 1 of 1

APPENDIX D

CURRICULUM VITAE

ALI HAYDAR B. HALBUTOGULLARI

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164, Cabaraban Subdivision, Puntod
Cagayan de Oro City, Misamis Oriental, Philippines, 9000

EDUCATIONAL BACKGROUND

Primary	Al Noor International School Sitra, Bahrain	2004–2009
Secondary	Al Noor International School Sitra, Bahrain	2009-2014
Tertiary	University of Science and Technology of Southern Philippines	2016-2020
	Lapasan, Cagayan de Oro City, Philippines	
	BS Information Technology	

WORKING EXPERINCE

LAND TRANSPORTATION FRANCHISING AND REGULATORY BOARD (LTFRB)

Cagayan de Oro City, Misamis Oriental

Intern, April – June 2019

BUSINESS MACHINES CORPORATION (BISMAC)

Cagayan de Oro City, Misamis Oriental

Intern, January - March 2020

APPENDIX D

CURRICULUM VITAE

KATHLEEN KAYE B. LOZADA

09159484070

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Blk. 5 Lt. 8, Montierra Homes, Upper Balulang,
Cagayan de Oro City, Misamis Oriental, Philippines, 900

EDUCATIONAL BACKGROUND

Primary	Sacred Heart of Jesus Montessori School	1996–2002
Secondary	Philippine Science High School Southern Mindanao Campus	2002-2006
Tertiary	University of the Philippines Diliman Campus	2006-2013
	University of Science and Technology of Southern Philippines	2016-2020
	Lapasan, Cagayan de Oro City, Philippines	
	BS Information Technology	

WORKING EXPERINCE

CAGAYAN ELECTRIC POWER & LIGHT CO., INC. (CEPALCO)

Cagayan de Oro City, Misamis Oriental

Intern, April – June 2019

APOLLO TECHNOLOGIES INC

Cagayan de Oro City, Misamis Oriental

Intern, January - March 2020

APPENDIX D

CURRICULUM VITAE

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P-4 Poblacion, Alubijid Misamis Oriental

EDUCATIONAL BACKGROUND

Primary	Barra Grace Christian School	2002-2004
	College of St. Benilde - De La Salle	2004-2005
	Alubijid Central School	2005-2008
Secondary	Alubijid National Comprehensive High School	2008-2012
Tertiary	University of Science and Technology of Southern Philippines	2012-2020
	Lapasan, Cagayan de Oro City, Philippines	
	BS Information Technology	

WORKING EXPERINCE

YAHSHUA OUTSOURCING WORLDWIDE, Inc.

Cagayan de Oro City, Misamis Oriental

Intern, April - May 2019

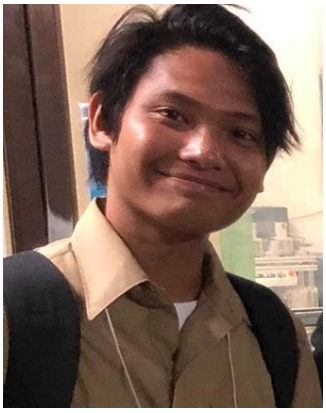
BUSINESS MACHINES CORPORATION (BISMAC)

Cagayan de Oro City, Misamis Oriental

Intern January - March 2020

APPENDIX D

CURRICULUM VITAE



NEST JASFER P. ROBLES

nestjasfer@gmail.com

EDUCATIONAL BACKGROUND

Secondary	*Misamis Oriental General Comprehensive High School*	
Tertiary	University of Science and Technology of Southern Philippines	2014-2020
	Lapasan, Cagayan de Oro City, Philippines	
	BS Information Technology	

WORKING EXPERINCE

BUSINESS MACHINES CORPORATION (BISMAC)

Cagayan de Oro City, Misamis Oriental

Intern January - March 2020