



RICE
Procurement and Distribution
Management System



RICE PROCUREMENT AND DISTRIBUTION MANAGEMENT SYSTEM

USER'S MANUAL

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RICE PROCUREMENT AND DISTRIBUTION
MANAGEMENT SYSTEM

An Undergraduate Thesis

Presented to the Faculty of the
College of Information and Communications Technology
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In Partial Fulfillment
of the Requirements for the Degree
Bachelor of Science in Information System

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June 2022

DISCLAIMER

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June 2022

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GUIDE FOR DEPLOYING AND USING THE SYSTEM'S MAIN FUNCTIONS

Getting Started

Introduction

Rice Procurement and Distribution Management System is a web-based application system that is accessed via HTTP and runs in a web browser. This can help the farmers, traders and NFA when it comes to effective and efficient buy and sell transactions. This system has a different function and features one of these: a marketplace platform that connects the farmers, traders and NFA for selling and buying produce. This also gives the farmers the privilege to choose among the traders who bid for their produce based on the highest bidding or nearest location to them. This system also has a distribution scheduling model for NFA user to allocate and distribute the rice produce. This system also has an inventory management model to track the stocks levels in the warehouse. This document provides a software manual for the user on how to use the system and what software is needed to run the system.

System Requirements

In the hardware necessities, the researcher tested the system on a laptop with the processor of intel core i3-10056G1, 4GB DDR, 128GB SSD in a windows 10 Home.

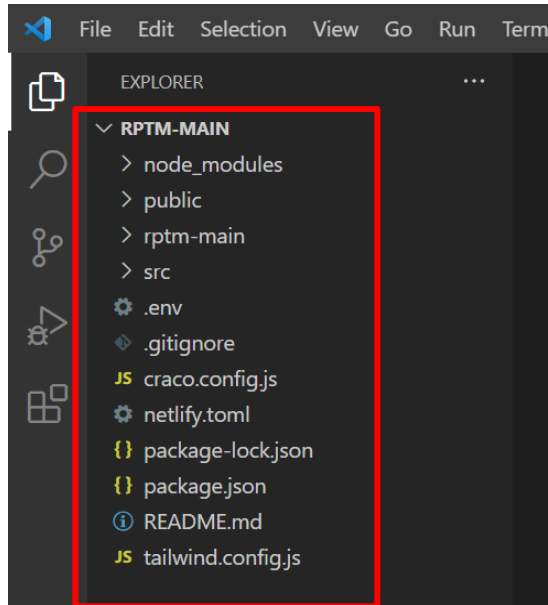
Installation

The needed software to run the system is via web browsers such as Google Chrome and Microsoft Edge and the NodeJS to run the system on various platforms. Visual Studio for the code and web browser for the users.

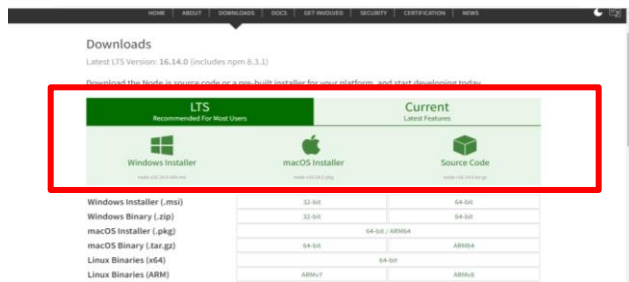
Using the System

Deploying the system to the localhost server

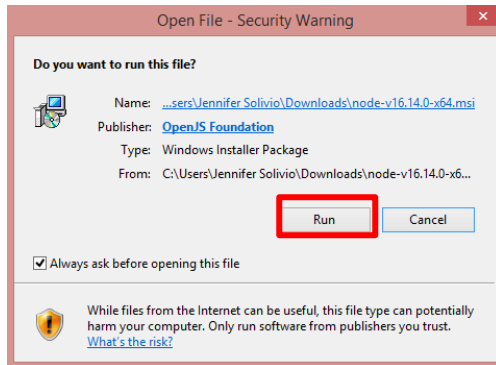
1. To run the system to the localhost, Open the file of vscode of the system.



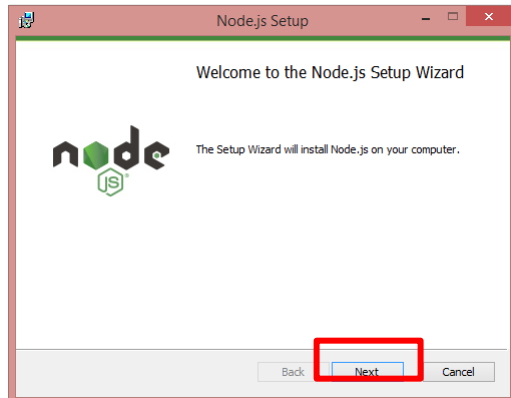
2. Download the **Nodejs** (<https://nodejs.org/en/download/>). Click the windows Installer if you're using windows and macOS Installer is Mac then it will automatically download.



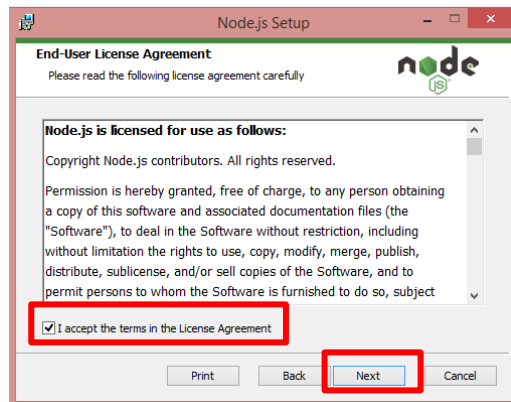
- Open the downloaded file of nodejs then setup.



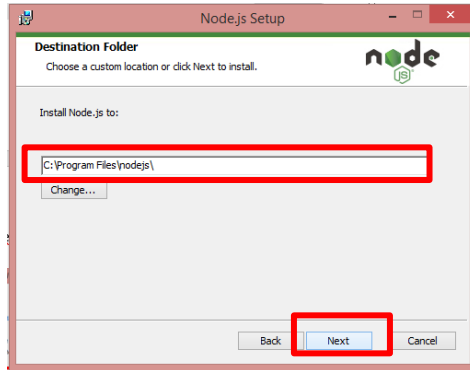
click **run**,



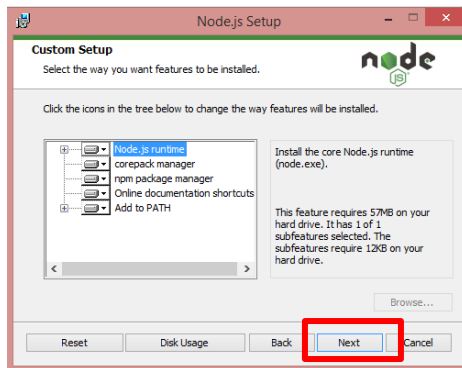
Click **I Agree**, then **Next**



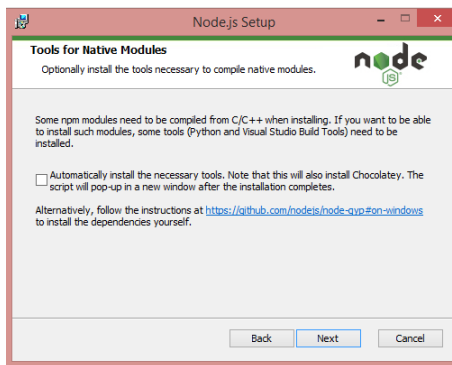
then, look for a location you want to install the Nodejs, then click, **Next**



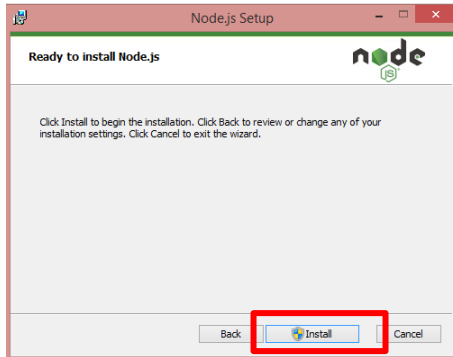
click **Next**,



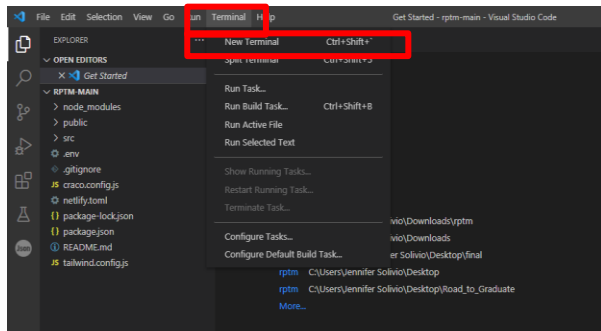
Click **Next**,



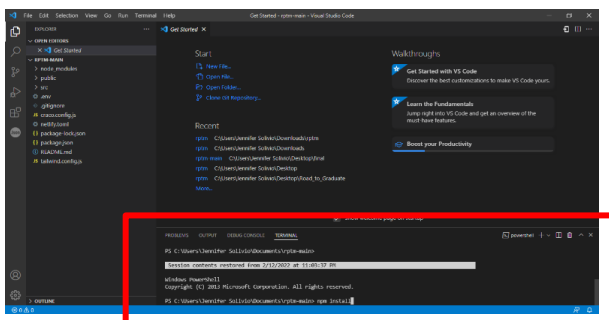
then, Click **Install**. Then **Finish**.



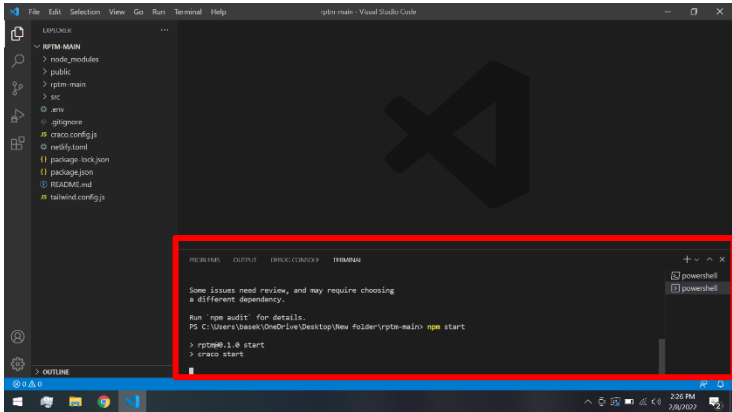
4. Back to the VSCode then click **Terminal**, then, **New Terminal**.



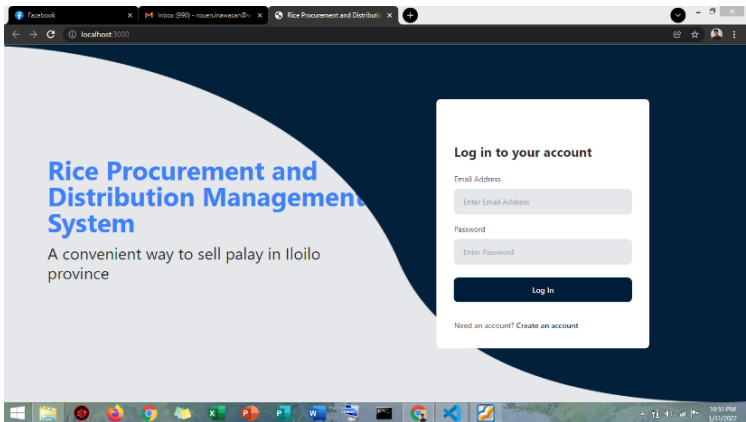
5. In the terminal, Input **NPM Install** to install the modules that are listed in package.json and their dependencies. then, **Enter**.



6. After the installation, Input **NPM START** to execute the defined file. then after that **Enter**.



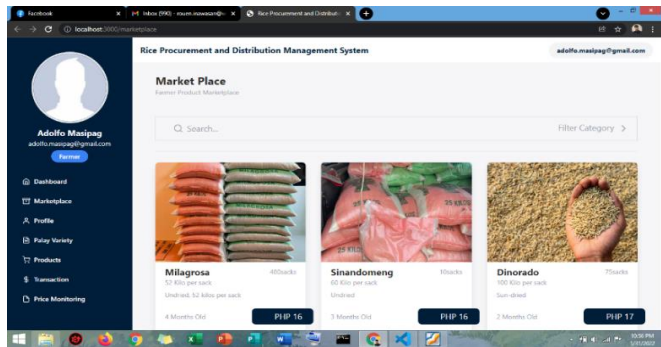
Then, the system will automatically open in the default web browser.



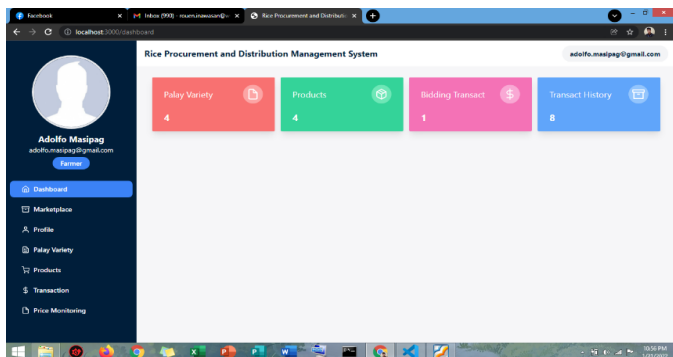
Using the system per main features.

Farmer Side

1. In the **farmer side**, the default page/ landing is the **marketplace**. where you can view different palay/rice that are sold by the different farmers. To bid, just click the **Price**. You can filter or sort the product by clicking the **Filter Category**



2. **Dashboard**, what they can view here are the **Total palay variety** they have, **Total product** they sell pr posted in marketplace, **Total Bidding Transaction** who bid their product and **Total Transaction History** who have successful transaction.



3. **Profile**, this page is a user's personal information, whereas they can update, edit, and delete. In updating/ editing, click **Edit**, after you finish editing or update your information click **Save**.

The screenshot shows the 'Edit Profile' page of the 'Rice Procurement and Distribution Management System'. The user is 'Adolfo Masipag' with email 'adolfo.masipag@gmail.com'. The page is divided into two main sections: 'User Information' and 'Personal Information'. The 'User Information' section includes fields for Gender (Male), Date of Birth (06/15/1985), Contact (09653423556), Email (adolfo.masipag@gmail.com), and Monthly Income (3500). The 'Personal Information' section includes fields for Barangay (Sanbag), Municipality (Leon), Province (Bolo), and a 'Save' button.

User Information	
Gender	Male
Date of Birth	06/15/1985
Contact	09653423556
Email	adolfo.masipag@gmail.com
Monthly Income	3500

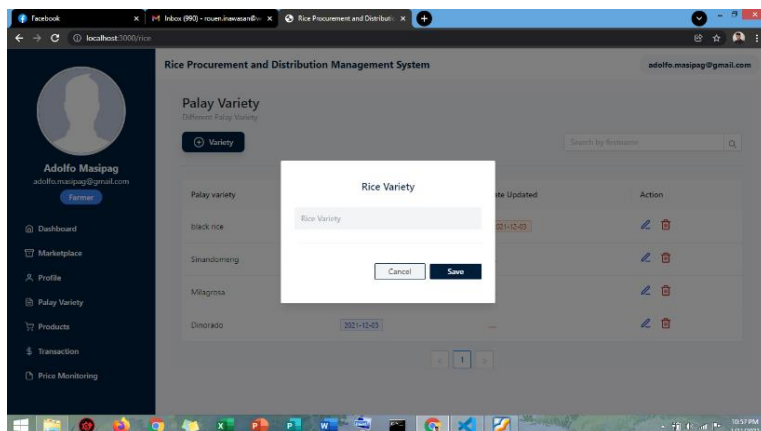
Personal Information		
Barangay	Municipality	Province
Sanbag	Leon	Bolo

4. In **Palay Variety**, what you can view are the different palay varieties, whereas they can also **Add**, **Edit** and **Delete** variety.

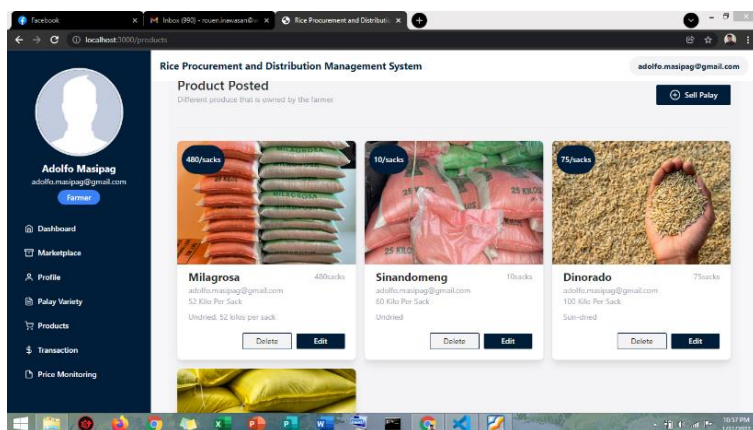
The screenshot shows the 'Palay Variety' page of the 'Rice Procurement and Distribution Management System'. The page displays a table of palay varieties. The table has four columns: 'Palay variety', 'Date Created', 'Date Updated', and 'Action'. The table contains four rows of data: 'black rice', 'Simandaniang', 'Milagrosa', and 'Dinoratio'. Each row has a 'Date Created' and 'Date Updated' field, and an 'Action' column with edit and delete icons.

Palay variety	Date Created	Date Updated	Action
black rice	2021-12-08	2021-12-08	
Simandaniang	2021-12-08	—	
Milagrosa	2021-12-08	—	
Dinoratio	2021-12-08	—	

Click **Variety** to add then, the variety box will pop up, input your variety then click **Save** or **Cancel**.



5. In the **Product** page, what they can view are the products that are posted in marketplace, in that page, the farmer user can edit and delete their product. These are the following steps:



1. Click **Sell Palay**, then this page will pop up. Enter/ Select **palay variety**, then the **Owners email** is

default, then, enter **Date Harvested**, then **Number of sacks**, **Kilo per sacks**, then, **Bidding Price** and **Description** then Upload a picture of Product by Drag and Drop or Select from the folder. After filling out, Click **Save**.

The screenshot displays a web application titled "Rice Procurement and Distribution Management System" with a user profile for Adolfo Masipag. The left sidebar contains navigation links: Dashboard, Marketplace, Profile, Palay Variety, Products, Transaction, and Price Monitoring. The main content area is titled "Post Bidding" and contains the following form fields:

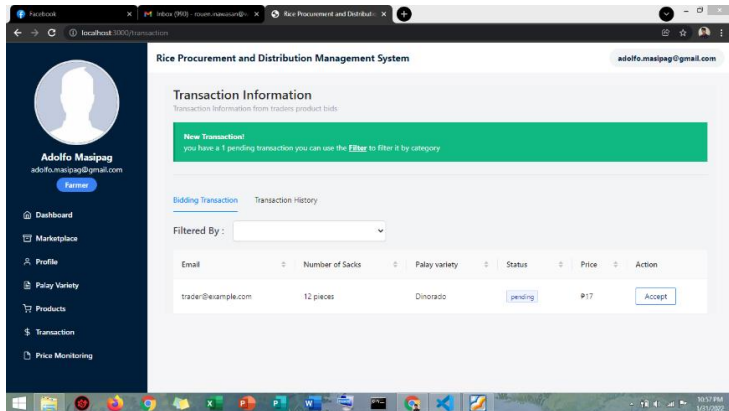
- Palay Variety:** A dropdown menu.
- Owner Email:** A text field containing "adolfo.masipag@gn".
- Date Harvested:** A date picker showing "mm/dd/yyyy".
- Number of Sacks:** A text field with "Sacks" as a label and "0" as the value.
- Kilo Per Sacks:** A text field with "Kilo Per Sacks" as a label and "Price" as the value.
- Price:** A text field with "Price" as a label.
- Description:** A text area with "Description..." as a placeholder.
- Image Upload:** A large dashed box with the text "Drag 'n' drop some image here, or click to select files". Below it is a "Files" label.

At the bottom right of the form are "Cancel" and "Save" buttons. The browser's taskbar at the bottom shows various application icons and the system clock indicating 1:57 PM on 1/10/2020.

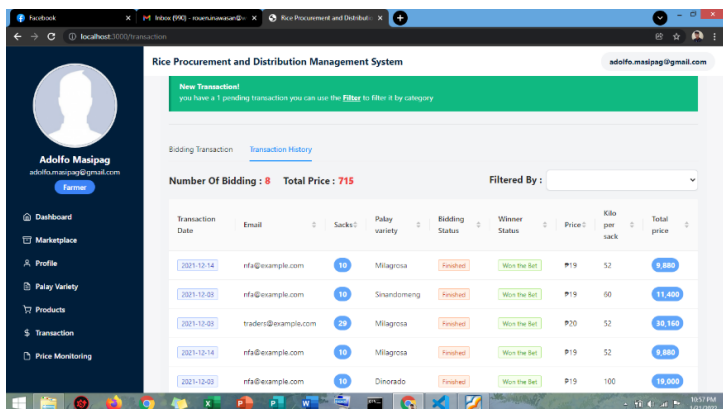
2. Click, **delete** if want to delete the product.
3. Click, **edit** if want to edit the product.

Note: All products that are posted on the product page can automatically be viewed or seen in the marketplace. If someone bids on the product, the number of palay that are bid is automatically deducted in the total number of sacks on the product page.

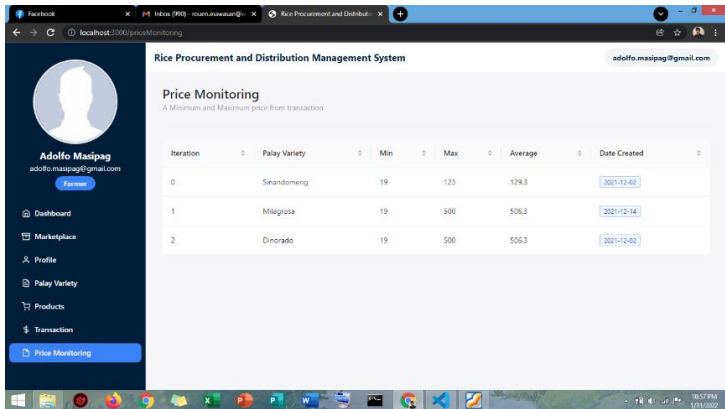
6. In **Transaction**, what they can view is the **bidding history** and the **transaction history**. The following are the usage:



In **Bidding History**, these are where you can view the traders/ NFA bidding, you can choose here you desire buyers by clicking the **Accept** button. In **transaction History**, you can view the successful transaction here, you can filter or sort transaction by clicking **Filtered by**.



7. In **Price Monitoring**, what they can view here is the minimum and maximum price of transaction per variety. The usage of these pages is to determine the average price of product per variety in successful transaction.



Rice Procurement and Distribution Management System

adolfo.masipag@gmail.com

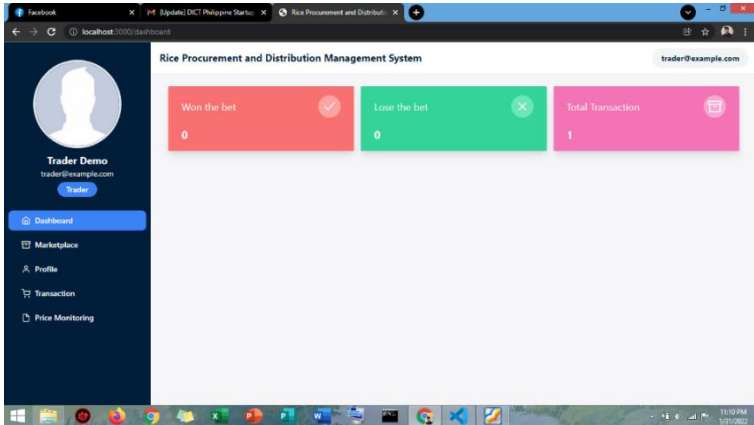
Price Monitoring

A Minimum and Maximum price from transaction

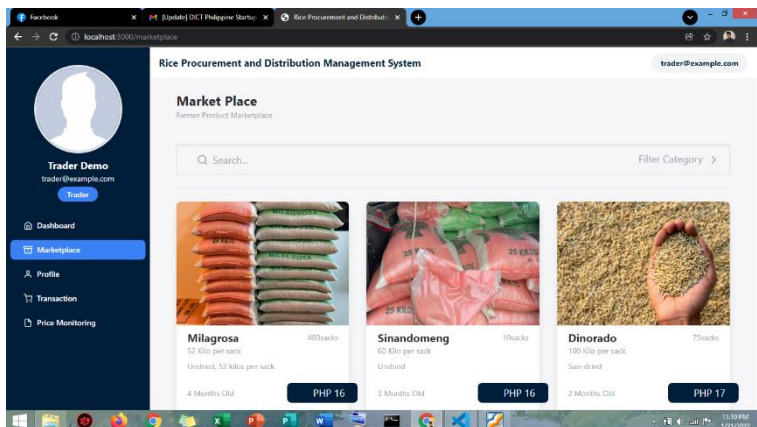
Iteration	Palay Variety	Min	Max	Average	Date Created
0	Sirandomeng	19	123	129.3	2021-12-02
1	Milagrosa	19	500	506.3	2021-12-14
2	Dinorado	19	500	506.3	2021-12-02

Traders Side

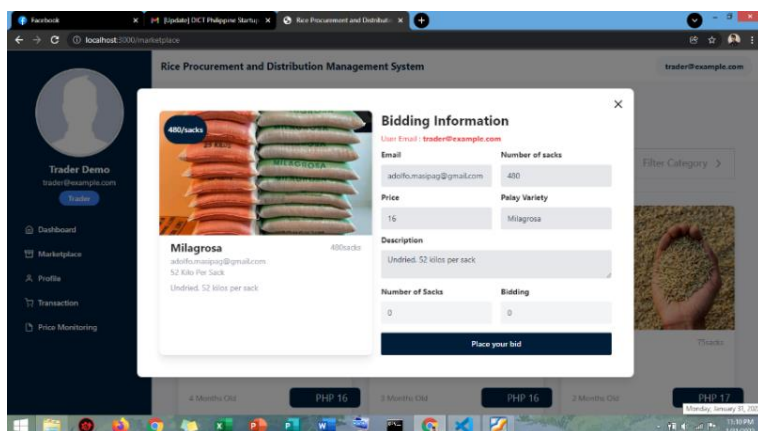
1. **Dashboard**, the usage of these dashboards in traders is to visualize the **total number of Won the bet**, **total number of lose the bet** and **total transaction** they have.



2. **Marketplace**, the usage of marketplace is where you can view and see the product of all farmers where you can select palay to bid.

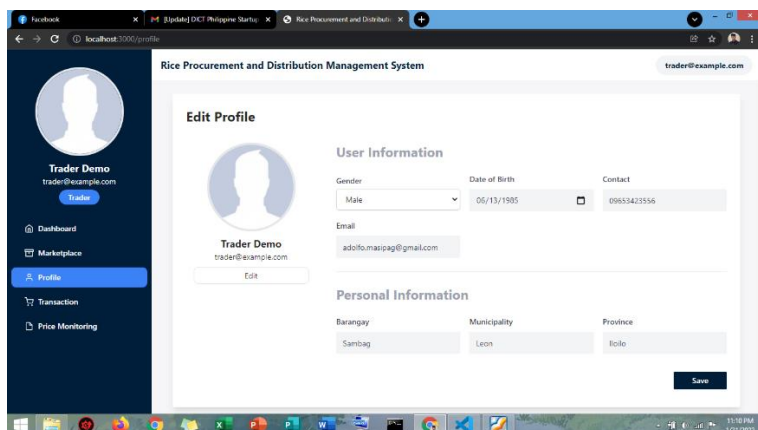


To bid palay, click the **Price**, then **email of the farmer**, in this case the email is already default, then **number of sacks** and **bidding price** then click **Place you bid**.

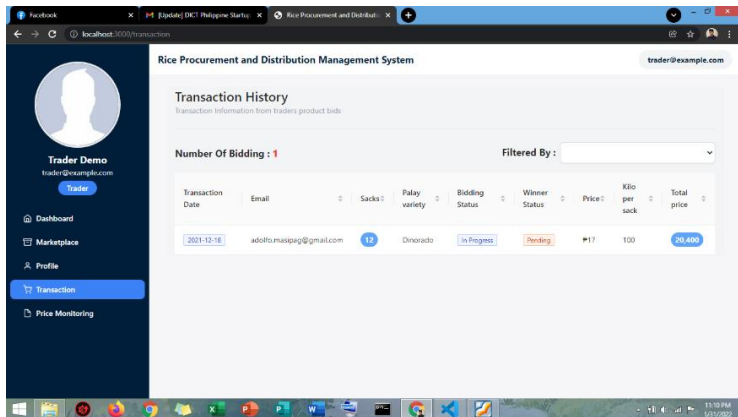


3. Profile, these are the user's profile where they can update, edit, and delete information. Click **edit**, then after **Save**.

4.



5. In **Transaction**, all products that you bid on in the marketplace can be seen or viewed here in a transaction whether it was accepted or still pending. You can filter transaction by clicking **Filter by**.



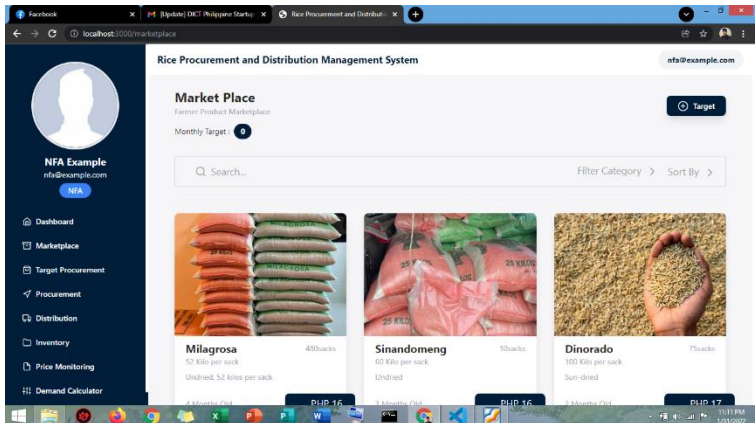
6. In **Price Monitoring**, what they can view here is the minimum and maximum price of transaction per variety. The usage of these pages is to determine the average price product per variety in successful transaction.

The screenshot shows the 'Price Monitoring' page of the Rice Procurement and Distribution Management System. The left sidebar is identical to the previous screenshot, with 'Price Monitoring' selected in the navigation menu. The main content area displays a table showing the minimum and maximum prices for different paddy varieties. The table has columns for Iteration, Paddy Variety, Min, Max, Average, and Date Created. Three iterations are listed, each with a different paddy variety: Sinandomeng, Milagrosa, and Dinorado.

Iteration	Paddy Variety	Min	Max	Average	Date Created
0	Sinandomeng	19	123	129.3	2021-12-02
1	Milagrosa	19	500	506.3	2021-12-14
2	Dinorado	19	500	506.3	2021-12-02

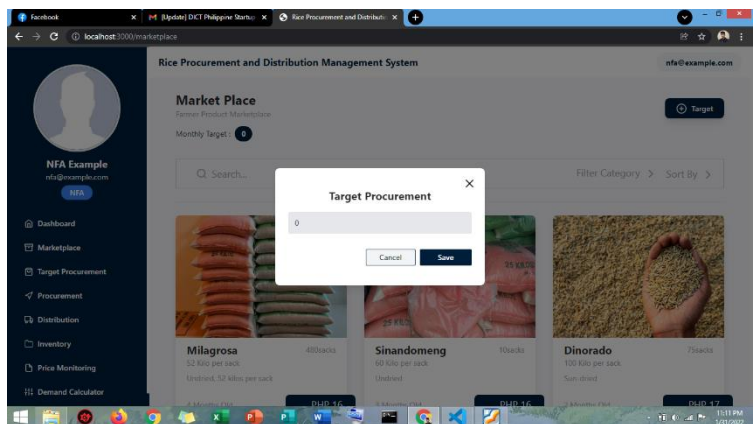
NFA Side

1. **Marketplace**, every time they sign in, they will be redirected to **marketplace**, where they can select farmers product.

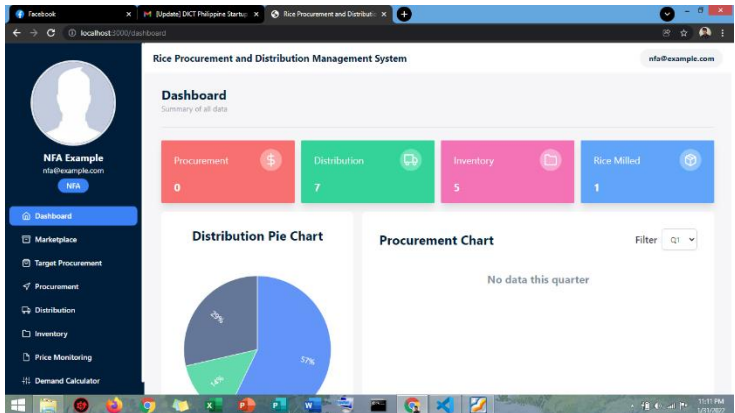


In **NFA**, they have a monthly target that needs to be procured. To add **monthly target**, click **Target**, then, the **target procurement** box will pop up, then **input the number** that need to procure then click **save** or **cancel**.

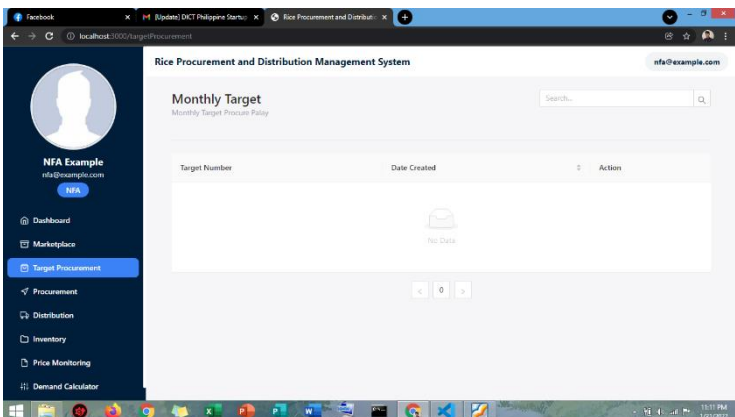
Note: The default bidding price of NFA 19 php.



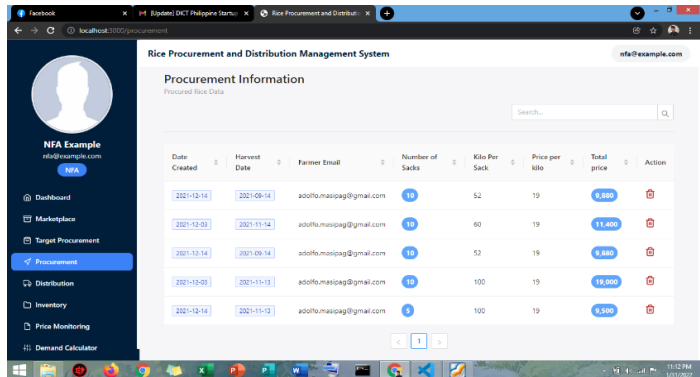
2. **Dashboard**, what they can view here are the **total procurement, distribution, total inventory, and total rice milled**. The usage of this page is to visualize the data that has been procured, distribute and inventory to monitor the buffer stocks.



3. **Target Procurement**, the usage of this page is to identify and differentiate monthly targets they have in a year.
- 4.

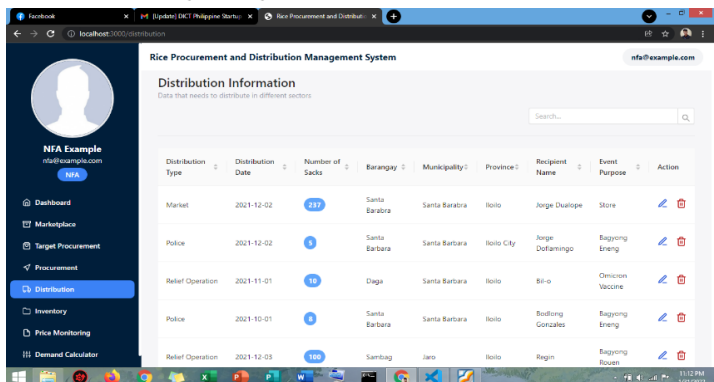


5. **Procurement**, these are procurement data of NFA. What you can view here is the **procured palay** from the farmer. The usage of this page is to easily **record and generate reports** of the procurement transaction of NFA. This record is automatically added to the number of inventory and visualized in the dashboard.



Date Created	Harvest Date	Farmer Email	Number of Sacks	Kilo Per Sack	Price per kilo	Total price	Action
2021-12-14	2021-09-14	adofo.masapag@gmail.com	10	52	19	9,880	
2021-12-09	2021-11-14	adofo.masapag@gmail.com	10	60	19	11,400	
2021-12-14	2021-09-14	adofo.masapag@gmail.com	10	52	19	9,880	
2021-12-09	2021-11-13	adofo.masapag@gmail.com	10	100	19	19,000	
2021-12-14	2021-11-13	adofo.masapag@gmail.com	1	100	19	1,900	

6. **Distribution**, these are the distribution data of NFA. There are 3 categories of distribution: the **Police supply, relief operation** and **market**. The usage of this page is to easily **identify the distribution**. The data in distribution are visualized in dashboard to easily analyze the data.



Distribution Type	Distribution Date	Number of Sacks	Barangay	Municipality	Province	Recipient Name	Event Purpose	Action
Market	2021-12-02	247	Santa Barbara	Santa Barbara	Iloilo	Jorge Duaslope	Store	
Police	2021-12-02	4	Santa Barbara	Santa Barbara	Iloilo City	Jorge Dufaningo	Bagging Binang	
Relief Operation	2021-11-01	10	Daga	Santa Barbara	Iloilo	Rio-o	Onion Vaccine	
Police	2021-10-01	6	Santa Barbara	Santa Barbara	Iloilo	Budlong Gonzales	Bagging Binang	
Relief Operation	2021-12-03	100	Santang	Jaro	Iloilo	Regin	Bagging Binang	

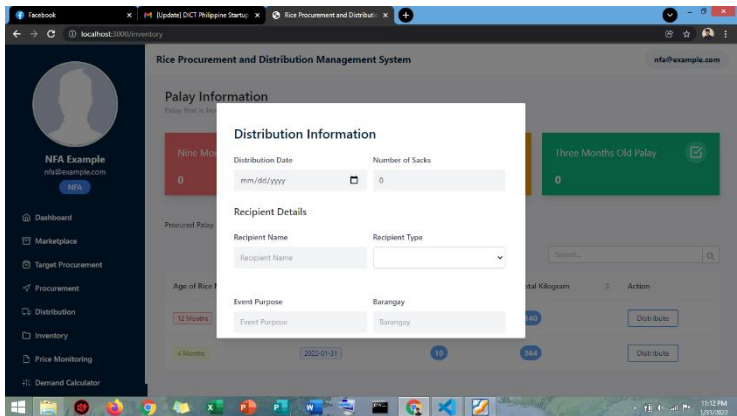
7. **Inventory**, the usage of these pages is to easily identify the **3,6,9 rules of the NFA. Three (3) months**, the palay should not be more than 3 months old from the date harvested in buying in the marketplace. **Six (6) Months**, the palay should be milled on or before 6-month-old from the date harvest. **Nine (9) Months**, the rice milled should be distributed on or before 9-months-old from the date of milled. Whenever the NFA procures a palay to the farmer the data is automatically added to the inventory under **procured palay table** and every distribution the inventory is also deducted.

Age of Palay	Sacks Purchased	Kilo Per Sack	Date Created	Total Kilogram	Action
4 Months	10	52	2021-12-14	520	Milled
2 Months	10	60	2021-12-05	600	Milled
4 Months	10	52	2021-12-14	520	Milled

Then the palay that is already milled will added to the **rice milled table**.

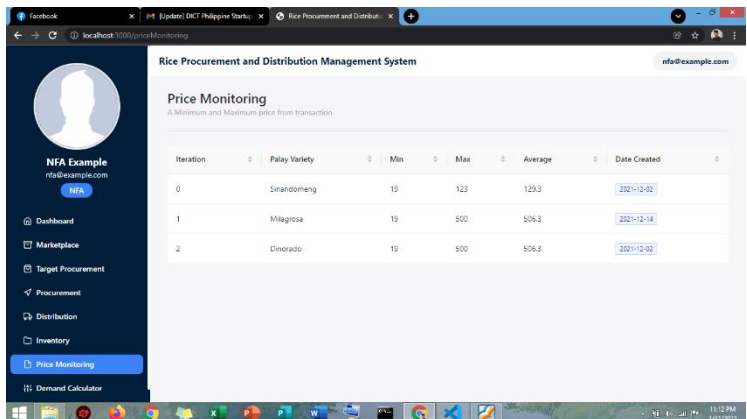
Age of Rice Milled	Date of Rice Milled	Total Sacks	Total Kilogram	Action
12 Months	2021-12-06	5	100	Distribute

To record distribution: Click **Distribute**, then, **distribution information** will pop up then, input **Distribution date**, **Number of sacks**, **Receipt's Name**, **Receipt's type**, **event purpose** and **Barangay** then **Save**.

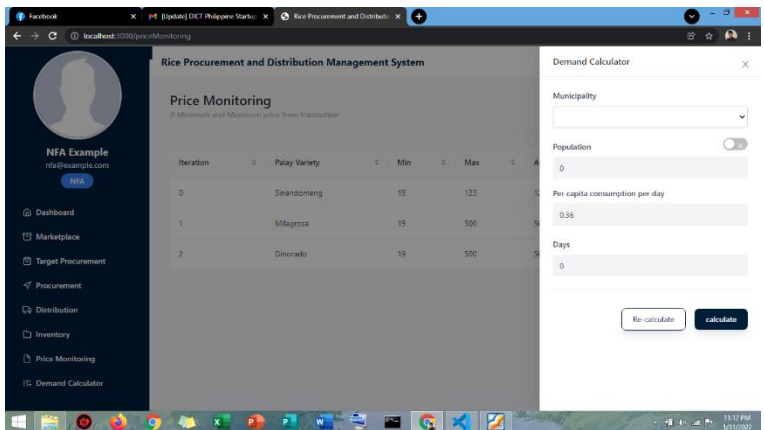


8. **Price Monitoring**, what they can view here is the minimum and maximum price of transaction per variety. The usage of these pages is to determine the average price product per variety in successful transaction.

9.



10. **Demand Calculator**, this is the additional feature we made to the NFA. The purpose of this demand calculator is to determine the **total amount of rice** that needs to be distributed in the municipality, for example if there are calamities that needs relief operation.



Troubleshooting for Possible Issues/ Problems

In case of problem/issues occurrences, try the following.

1. Check the network cables, modem, and routers for connection problem.
2. Restart the web browser and run the system again.
3. Open the **VSCode of the system**, in **terminal**, click **new terminal**, then Enter NPM install, after, **NPM start**, then lastly, NPM start and wait to load the system by the generated local host.
4. If above mention is still not working. restart the PC.
5. Contact the development team for assistance.

FAQs (Frequently Asked Questions)

Q1. What is a rice procurement and distribution management system?

RPDMS or rice procurement and distribution management system is a web-based system that connect the farmer, traders and NFA for buying and selling rice and palay produce through bidding, whereas this system empower the farmer choose buyers of their produce.

Q2. RPDMS possible to deployed online?

Yes, RPDMS will be deployed online. However, the resources of the development team are limited, this management system is deployed in local host for the meantime. If the system is utilized, it can be deployed online so that it can be accessed by the user anywhere if they have the knowledge in using internet connection.

Q3. Who is the user of the system?

The users of the system are farmers, traders and NFA.

Q4. How can we access the system or website?

The website or the system can be accessed through link provided or generated by running the system in VSCode.

Q5. How do I know if I have bidding from the traders or NFA? and how do I know if I win the bidding?

In the transaction page, there's a bidding history and transaction history. If someone bids for palay, the record will be redirected to the bidding history. You can view the people who bid on the palay, after, you can choose buyer. In farmers user interface, it will appear as a selection whether you accept or reject. In traders and NFA, it will appear won if you are selected

or lose if rejected. Then, if you have a successful transaction the record will be redirected to the transaction history.

Q6. How does RPDMS use my personal details or information for analysis?

RPDMS uses your personal information details and data especially farmer to make it easier, efficient, reliable for you to find, retrieve, organize, and prioritized your stuffs, clients and collaborate to those who have low income and frequently bid your produce. Also, to avoid duplication of records and scams.

Q7. How can we benefit from this system?

This system can benefit all users. For **farmers**, the features that have been implemented are very beneficial to them, especially by empowering them to choose their buyers and sell their produce without losing their capital. Also, we added price monitoring to easily monitor the price in all transactions. For the **trader**, same with the farmer, they can easily identify and find sellers that are legit, and they can negotiate with the farmers. We also added price monitoring for them to be aware of the prices in every transaction they have. **In NFA**, there are a lot of features we added to the NFA user interface that can surely benefit and help them. One of these is procurement page and distribution page, whereas they can easily add, edit, and delete records and the data that been summarized and gathered will automatically visualize in dashboard which NFA staffs can easily analyze the data. We also added inventory for them to easily track and identify their buffer stock to distribute.

Q8. Are there any charges if we use this system?

No, since this system was designed to benefit our primary user (farmer, trader and NFA). The payment or charges depend on the transaction between the buyer and seller.

Q9. Will any of my personal details or information be recorded and used for other purposes?

No information will be disseminated or disclosed to the public for any other purposes.

Q10. How will I know if I'm using farmer or trader or NFA interface?

Before you sign up you will be asked what username you are creating. After you successfully create your account, every time you log in you will be redirected to what user you create. The other method is on the profile page, it will be indicated of what user you are.

Contact Details of the Development Team

Name	Email	Contact Number
Karlene Joyce Baes	karlenejoyce.baes@wvsu.edu.ph	09634643333
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Jay Czhelle Soberano	jayczhelle.soberano@wvsu.edu.ph	09303235919