



PORCUS

Backyard Pig Farming App

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Submitted To: Joseph Adrian Balmes & Niña P. Aguila

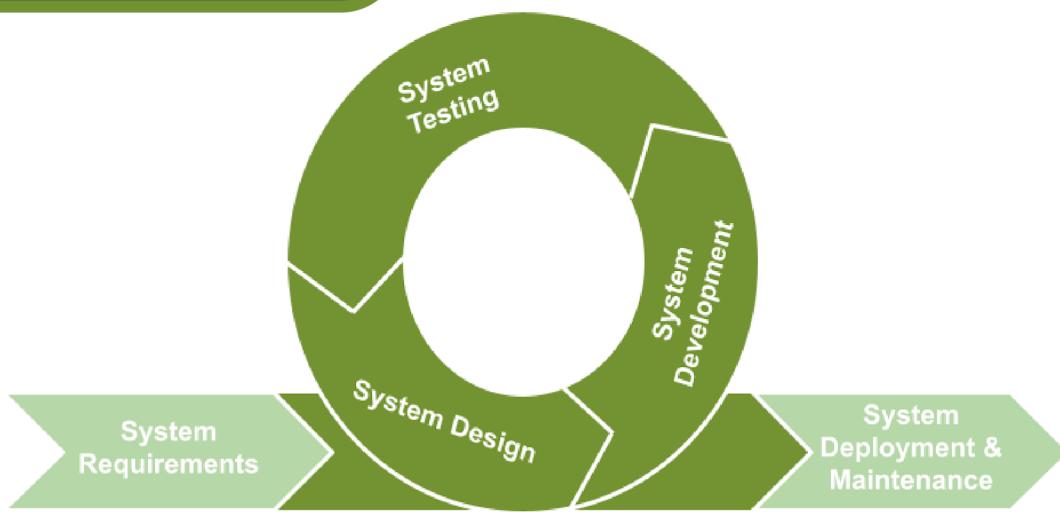
Project Description

Animal Domestication or animal husbandry is one among the top industries for profit in the Philippines. Despite being an exclusive industry that does not receive assistance from the government, the Philippines has a Php 200B hog industry ranking only second to rice industry in terms of attribution to Philippine industry. The increase of farming productivity is essential due to growing needs of the world for food. Livestock agriculture or livestock management specifically, must evolve in order to provide more products with greater efficiency while simultaneously addressing issues related to animal care, environmental sustainability, and public health.

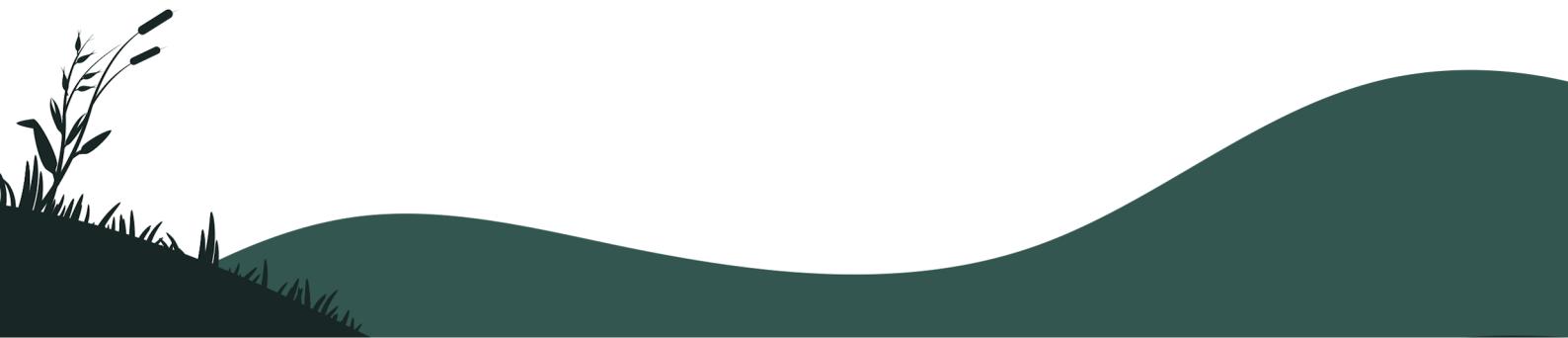
Manual record keeping, like the current practice that livestock industries employ as of today is prone to human error. Apart from that it imposes inefficiency as one would have to manually write their data. It also implies a lot of paper waste as one progresses to continue their piggery and the accumulation of such paper waste which is contradictory to some environmental goals.

To solve this problem, the proponents propose an idea of a mobile application entitled "PORCUS: Backyard Piggery Management" which revolves managing pigs and schedules in a typical pig farming business, to help farmers with their daily farm transactions. With the use of this application, it will help farmers eliminate manual record tracking or keeping, and thus, would help limit waste by eliminating use of pen and paper. Also, by using this mobile application, management of one's piggery can be done virtually everywhere you can bring your phone to.

Development Model



The proponents used agile methodology as the development model for the development of the project. This would help the proponents prioritize the needs of the potential users of the application while developing the project as quickly as possible. Agile methodology also helps the developers track and modify the project to the users' liking to ensure the satisfaction of the users when it comes to using the application.



Development Model

1 SYSTEM REQUIREMENTS

Since this project is based on the concept of the proponents' capstone project, the proponents used the findings they have gathered there and used the same user requirements to create this project. In this phase, the proponents used such requirements to be the basis for this project, such as the modules, or processes in business terminology, to be included in the application.

2 SYSTEM DESIGN

With the requirements gathered from the first phase, the proponents will use this as a substantial data to decide what tools to be used. FIGMA was used as the application to build the wireframe of the project to demonstrate a mock-up design that shows what the application would look like. The application is geared towards making the application as user-friendly and as convenient as possible. This is the first part of the three iterative processes defined in our agile development model as new requirements will also require new design.

3 SYSTEM DEVELOPMENT

With the requirements gathered in the first phase and also the design made in phase two, the proponents will develop the system using their knowledge of creating progressive web applications. This will be done while adhering to the requirements gathered and the mock-up design for the user interface. System development will be the second part of the three iterative process as new requirement designed in phase two of the development model will be added in the development.

4 SYSTEM TESTING

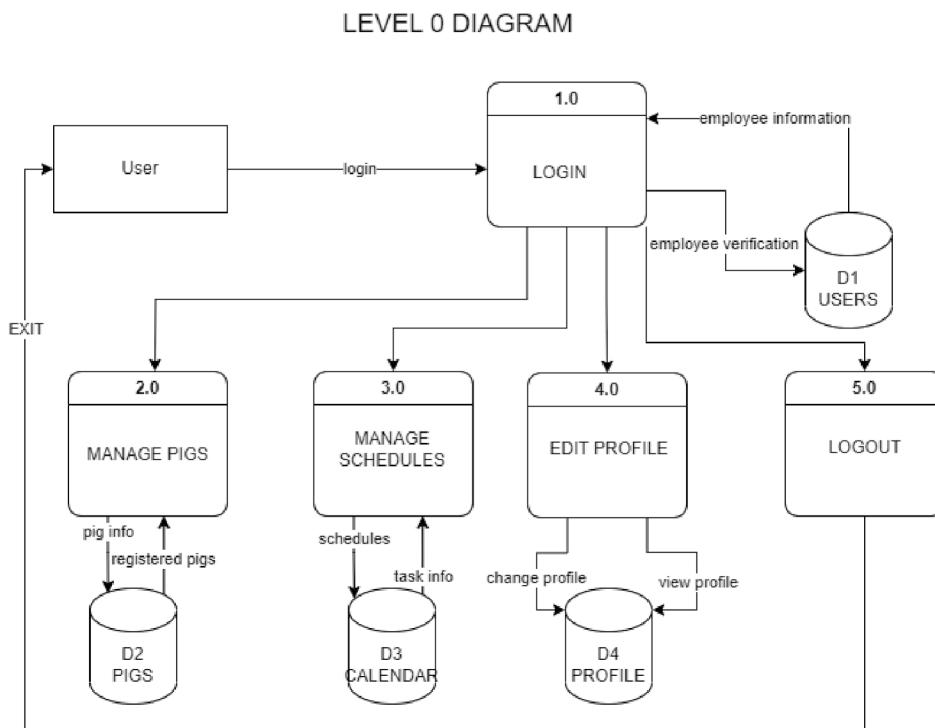
After the proponents have designed and built the system, several tests will be conducted such as the usability of the application and its convenience. New requirements that may be proposed shall be added back again in phase two to build its design, and phase three to develop it. This is the third step of the three iterative processes.

5 SYSTEM DEPLOYMENT & MAINTENANCE

Based on our development model, system deployment and maintenance will only be conducted after and only after all requirements, as well as additional requirements has been done and added to the system. For the maintenance part, this will be done by the proponents themselves to ensure the scalability of the application as well as to future-proof the application.

System Architecture

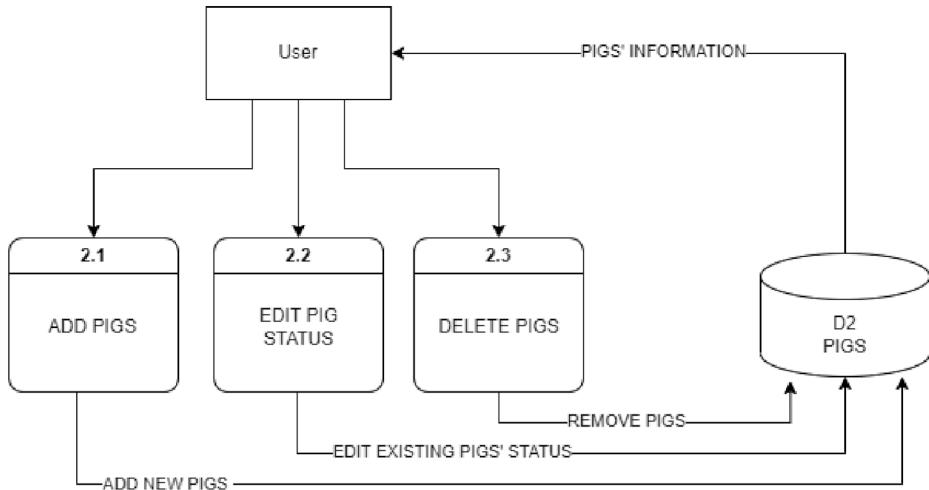
DATA FLOW DIAGRAM



Level 0 Diagram illustrates the more comprehensive flow of the system. This diagram indicates the required functionalities of the system that the proponent is going to develop. As shown in the diagram, login from the user and is validated first. Then, upon successful login users can navigate the tabs which includes specific features for the user. Users can navigate to pig management, manage schedules, and profile editing. The pig management allows the user to add and edit pigs registrations. The users can view, add, update and delete task information in the schedule management. In the the profile editing, user can update their personal information and farm details. In the logout features, this will serve as a gateway to exit the application. This application will serve as a tool for manual record keeping.

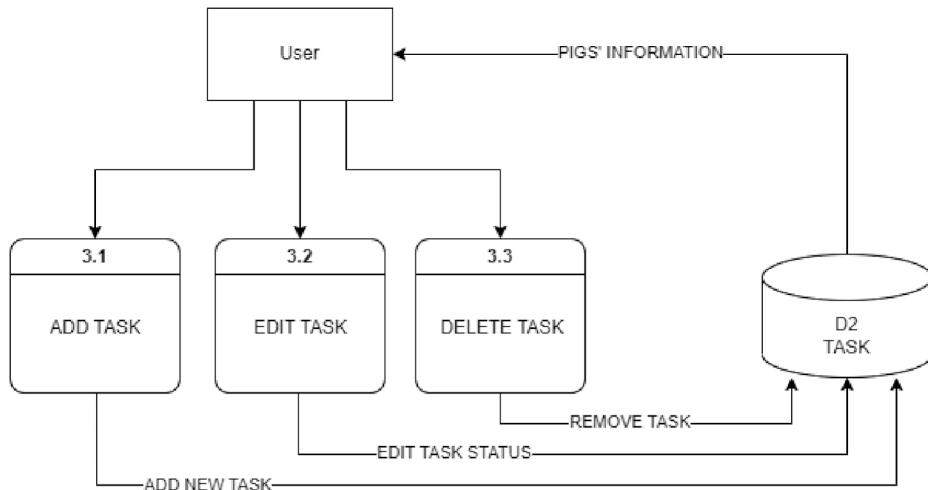
System Architecture

LEVEL 2 DIAGRAM



In Level 2 Diagram, User can add, update and delete pig information. By registering the pig to the application, this will be added to the database. User can edit and modify the pig status whether the pig is being sold, decease, or pregnant. In the delete pig process, the user can remove the registered pig information from the database. Pig information is being transferred to the database which the user can access by using the application.

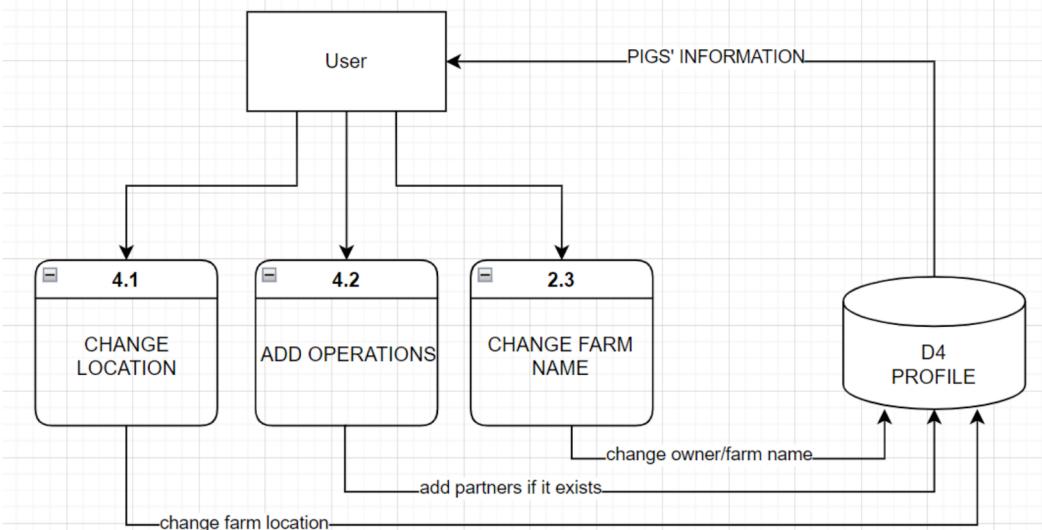
LEVEL 3 DIAGRAM



In Level 3 Diagram, User can add, update and delete task information. In the add task feature user can add new task to the applications database for the task to be registered. User can modify the task status to edit the task date schedule and task name misspellings. In the delete task features, the user can remove the registered task information from the database. By using the application, the task that are being transferred to the database can be access by the user.

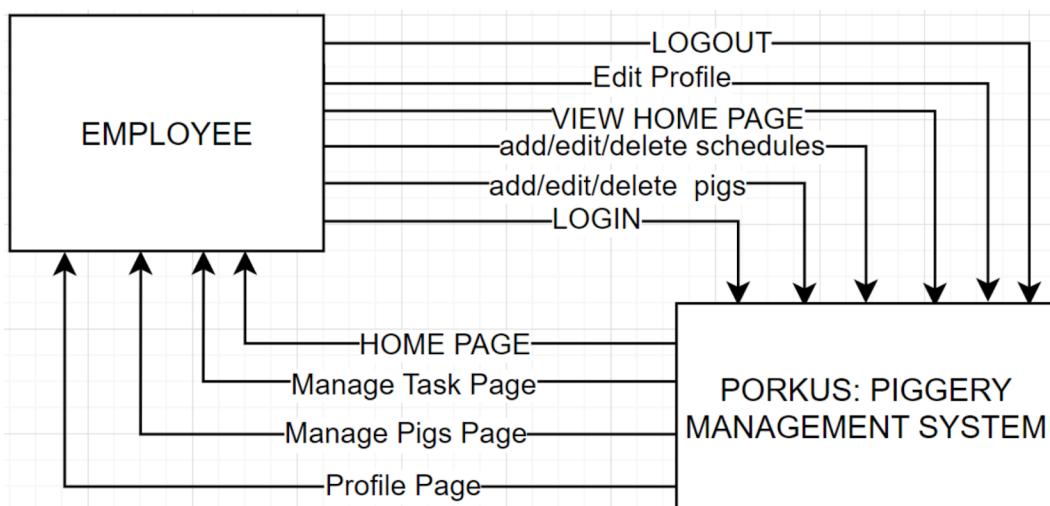
System Architecture

LEVEL 4 DIAGRAM



In Level 4 Diagram, User can add, and edit their personal information. The changing location features enable the user to specify the farm particular place or position. User can add different partners to know their current farm investors. In the change name feature, the user can update and edit their personal information. User information is being transferred to the database which contain all the details about the pig registration, task and user information that can be access by the registered user.

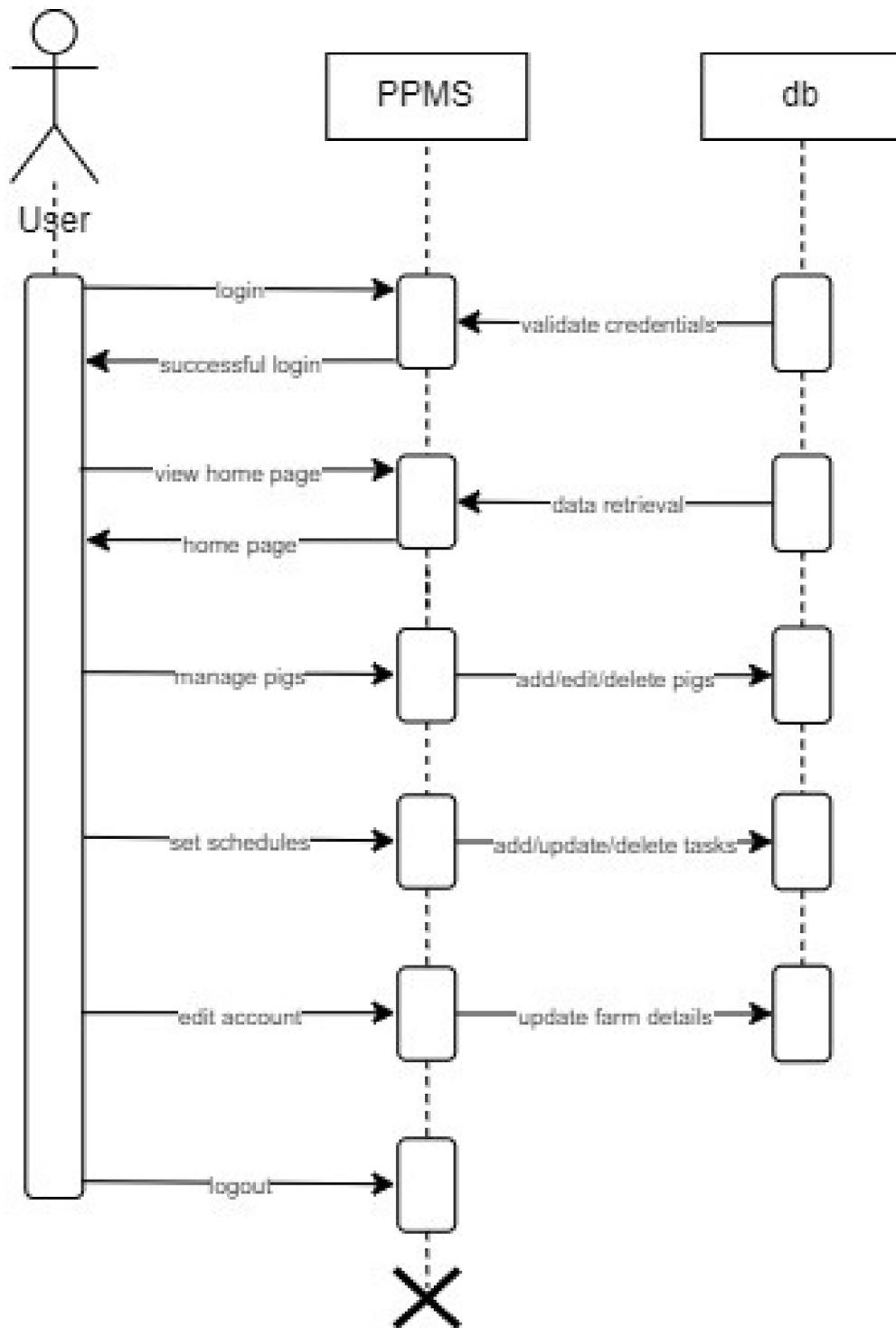
CONTEXT DIAGRAM



Context Diagram illustrates the general functionality of the application. This shows all the operations a user can do within the application. The typical log in and logout is always present as well as the common actions performed within a piggery farm, but on a smaller scale.

System Architecture

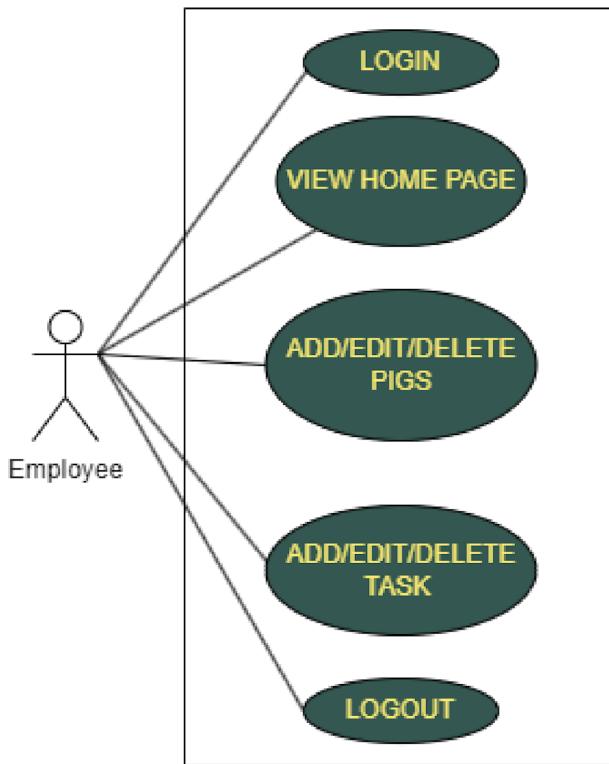
SEQUENCE DIAGRAM



Sequence Diagram illustrates the sequence in which the user can navigate within the application. Arrangements of the steps were made based on the positioning of each tabs within the application.

System Architecture

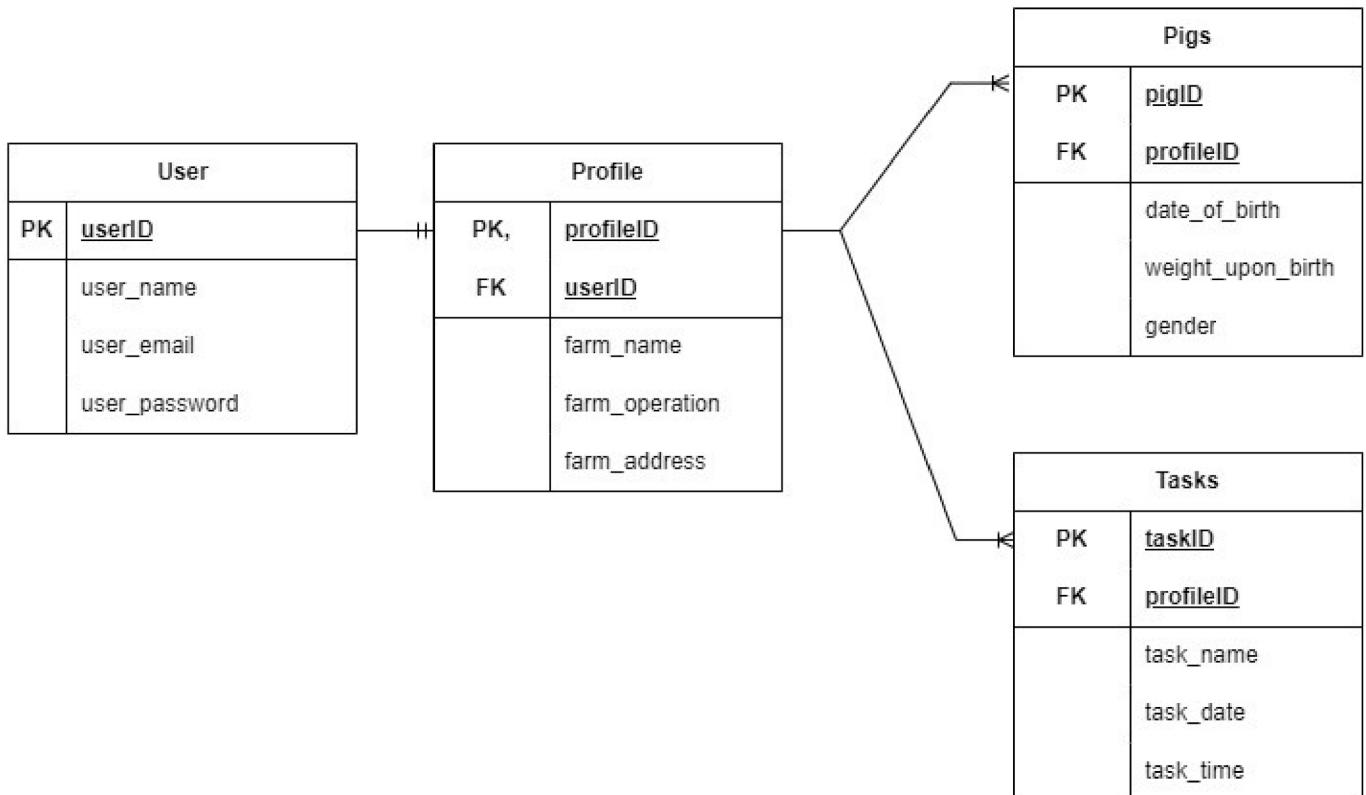
USE CASE DIAGRAM



Use case diagram showcases the functionality with which the user can interact with the system. This highlights the actions a user can perform while using the application. First and foremost is the typical login and log out function wherein the user needs to login if they ever wish to access their account and logout whenever they are done. Next would be the home page viewing that which allows the user to see the number of pigs (and piglets) in their farm as well as their tasks/farm operations. Lastly, the management of pigs and tasks such that users can add, edit, and delete pigs and tasks if they ever wish to.

System Architecture

DATABASE DESIGN



Presented is the database design of the application. Each user is required to have a username, email, and password which serves as their credentials. Users will then have one account each and this will serve as their profile for their farm. Profile will require a farm name, farm operations, as well as its address. The farm would then have their respective pigs and tasks. Pigs require you to provide its date of birth, weight upon birth, and its gender. For tasks, you need to provide details such as the name of the task, and its date and time when it needs to be accomplished.

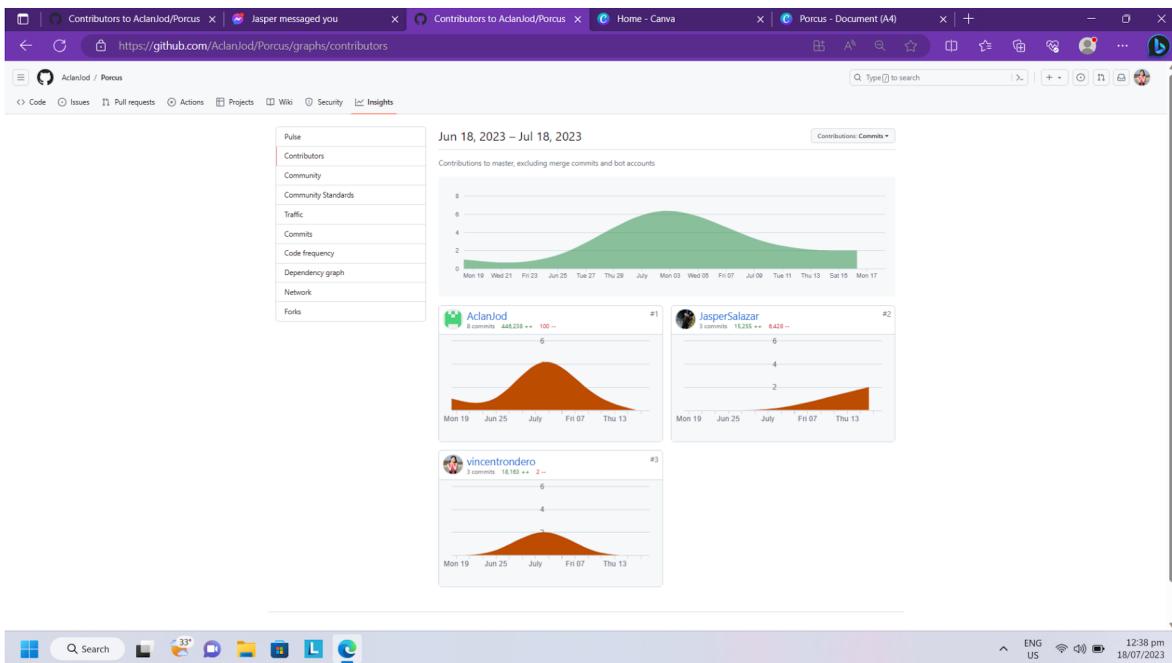
GitHub Repository

gitHub Repository Link: <https://github.com/AclanJod/Porcus>

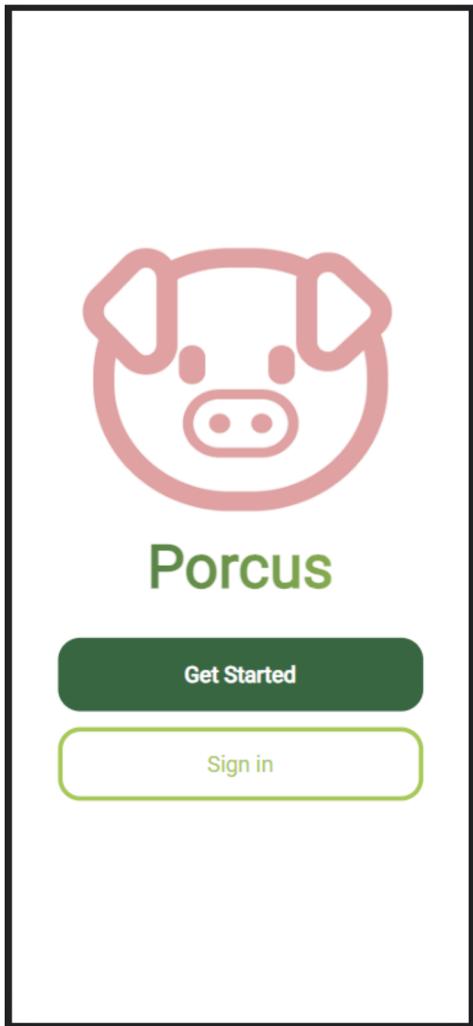
The screenshot shows the GitHub repository page for 'Porcus'. The repository is public and has 3 branches and 0 tags. The master branch is selected. A message indicates that the master branch isn't protected. There is a list of commits from 'AclanJod' and 'Merge pull request #4 from AclanJod/aclan_modif'. The commits include changes to 'mobile_app', 'server', and files like 'before1990.html', 'below10dollars.html', 'cd_catalog.xml', and 'readme.md'. The 'About' section notes 'No description, website, or topics provided.' The 'Code' tab is active. The GitHub interface includes a search bar, navigation links for issues, pull requests, actions, projects, wiki, security, insights, and settings. On the right, there are sections for 'About', 'Readme', 'Activity', 'Releases', 'Packages', and 'Contributors'. The Windows taskbar at the bottom shows various pinned icons.

The screenshot shows the GitHub README page for 'Porcus'. The page starts with a brief description of the project: 'Animal Domestication or animal husbandry is one among the top industries for profit in the Philippines. Despite being an exclusive industry that does not receive assistance from the government, the Philippines has a Php 200B hog industry ranking only second to rice industry in terms of attribution to Philippine industry. The increase of farming productivity is essential due to growing needs of the world for food. Livestock agriculture or livestock management specifically, must evolve in order to provide more products with greater efficiency while simultaneously addressing issues related to animal care, environmental sustainability, and public health.' It then discusses the challenges faced by the industry, such as market conditions and financial risk, and the need for technological solutions like the proposed mobile application. The page also highlights the benefits of the app, including reduced paper waste and improved record-keeping. The GitHub interface includes sections for 'Languages' (TypeScript 38.9%, SCSS 28.2%, HTML 21.9%, JavaScript 11.0%) and 'Suggested Workflows' (Actions Importer, Gulp, Webpack). The Windows taskbar at the bottom is visible.

GitHub Repository



App User Interfaces



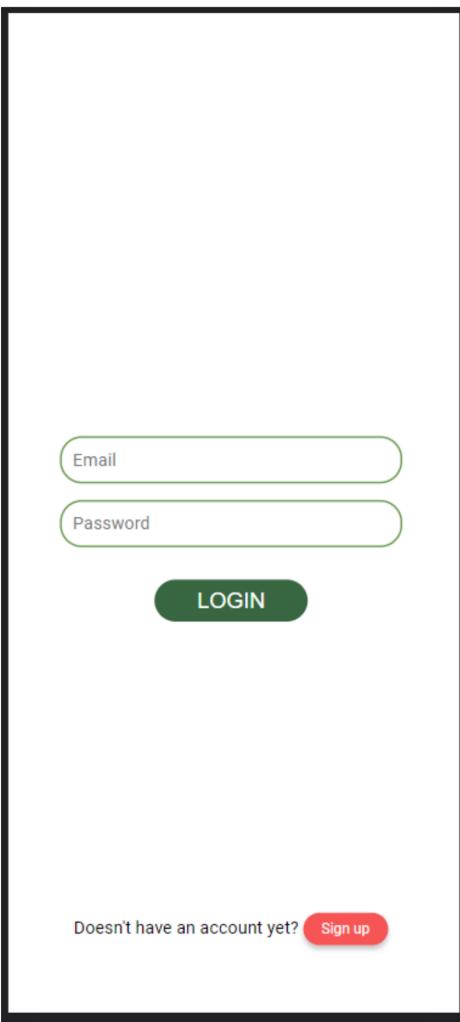
*Landing / welcome
page*

The sign up page contains three input fields with rounded corners: "Username", "Email", and "Password", each accompanied by a small placeholder text. Below these is a dark green "Sign Up" button. At the bottom left, there is a link "Already have an account? [Login](#)".

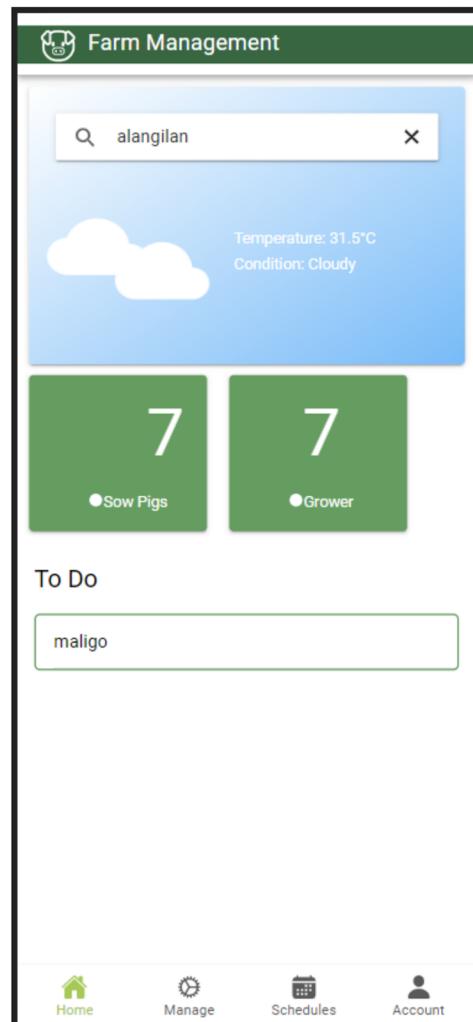
Sign Up page



App User Interfaces



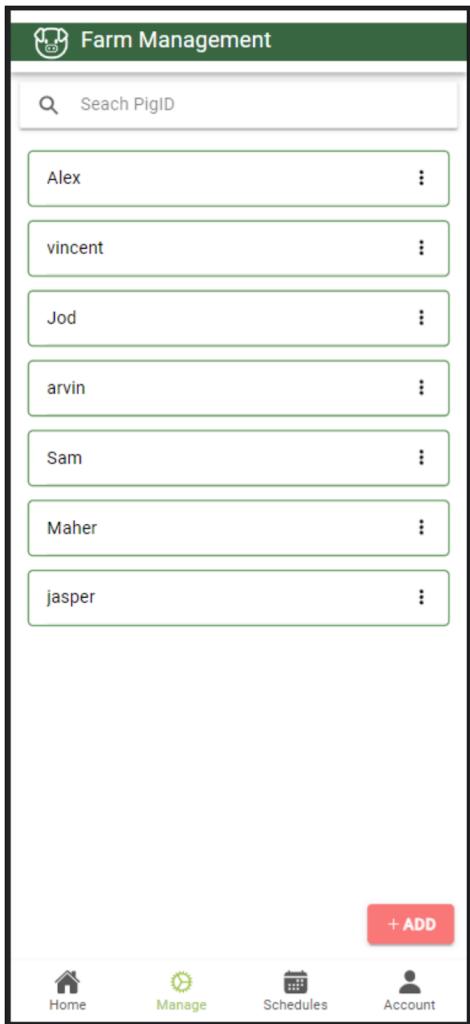
Login page



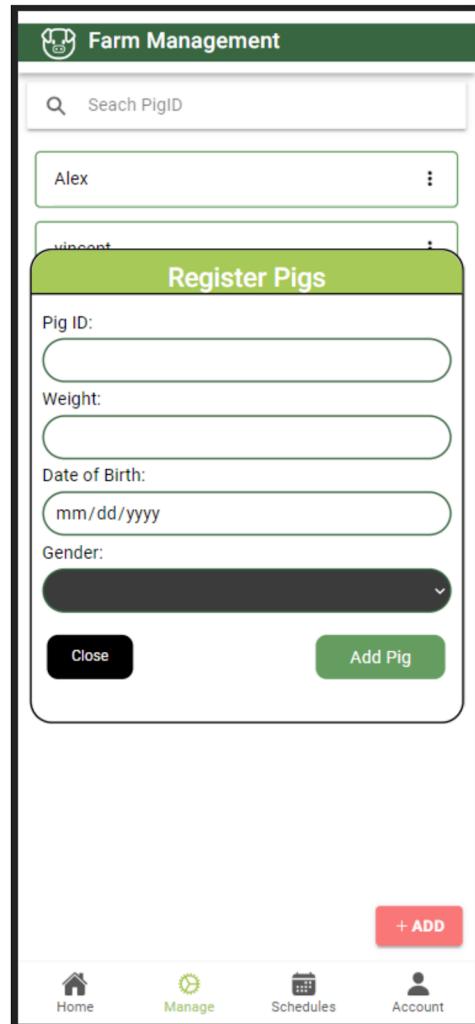
Home page



App User Interfaces



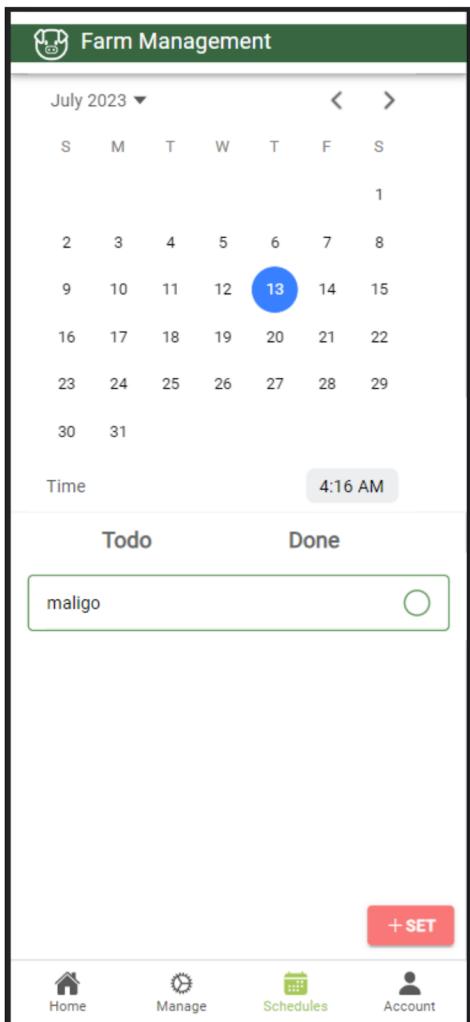
Manage pigs page



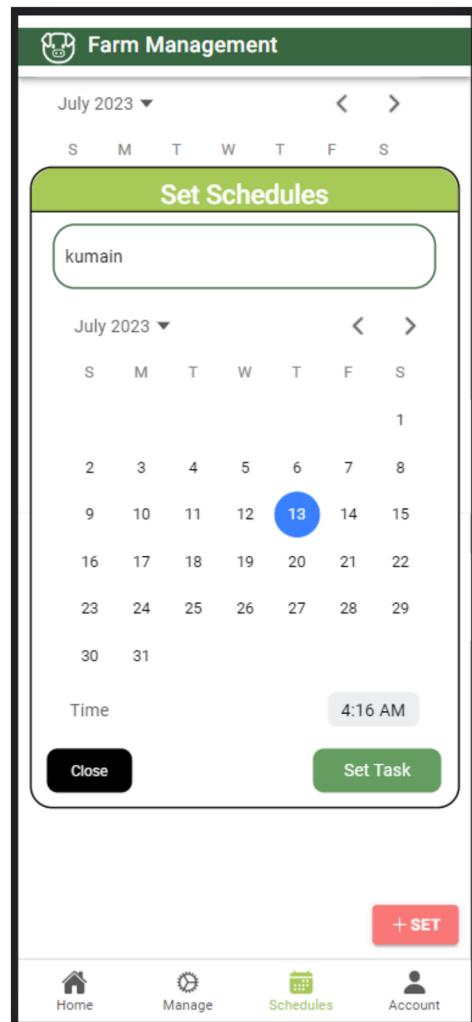
Add pigs page



App User Interfaces



Manage tasks page



Add tasks page



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EDUCATION

Bachelor of Science in Information Technology
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2020 - Present

EXPERTISE

Web Design

Frontend Design

Graphic Design

Wireframe editor

LANGUAGE

English

Filipino

Vietnamese

ABOUT ME

Mr. Aclan is a freelance frontend developer and has been working since he was in Senior High School. He is a creative and passionate frontend developer that maximizes his skills in every project, big or small, to satisfy his customers when it comes to his designs.

SEMINARS AND TRAINING

- June 24, 2023
Batangas State University Lipa Campus
Igniting Collaboration and Innovation
Topic VI of the Webinar Series on Data Science "Unleashing the Power of Data: A Webinar Series on the Art and Science of Data" via Zoom.
- March 25, 2023
Via Zoom
Asean Data Science Explorer
ASEAN Data Science Explorers Enablement Session Training.
- March 10, 2023
Batangas State University Lipa Campus Via Zoom
Fundamentals of Data Science
Topic I of the Webinar Series on Data Science "Unleashing the Power of Data: A Webinar Series on the Art and Science of Data" held on March 10, 2023 via Zoom.

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- UI/UX Design
- Low and High Fidelity Prototype
- Front-end Development
- Data Analytics
- Data Science

LANGUAGE

- English
- Tagalog

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EDUCATION

**Bachelor of Science in
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2020 - Present

EXPERTISE

- Web Design
- Project Management
- Graphic Design
- Documentation
- Project Consultant

LANGUAGE

- English
- Filipino

ABOUT ME

I am currently a third-year BSIT student at Batangas State University Alangilan Campus. As part of my academic journey, I am actively engaged in a school project that allows me to harness my creativity and apply my experience in designing user interfaces to enhance the overall user experience. I am dedicated to delivering high-quality results and exceeding expectations.

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