



Kampus Merdeka



Bangkit Academy



RempaHustle

RempaHustle

BE A SPICE ADVENTURER FOR INDONESIA.

Our Team



CH2-PS139





RempaHustle



Bangkit Academy

Meet The Team

...



Rizky Aditya

M304BSY0050

Machine Learning



Dany Eka Saputra

M471BSY0122

Machine Learning



M. Nurul Taukid

M296BSY0825

Machine Learning



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Meet The Team

...



Carissa Renatasari

A296BSX2550

Mobile Development



Rakha Widiyatna L.

A193BSY2472

Mobile Development



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Meet The Team

...



Albert Oktamara

C270BSY3070

Cloud Computing



Cherillya Rahmita N.N.

C548BKX4446

Cloud Computing



1

Background Problem

2

Reason

3

Existing Result

4

Implementation

5

Result

6

Documentation

7

Local Deployment Plan and Go-to-market Proposal



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CONTENT 1

Background Problem

...

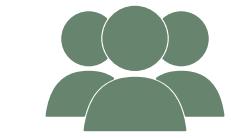




Low Awareness / Knowledge Regarding Indonesian's Spices

...

Especially among the younger generation, they are less familiar with the diversity of Indonesian spices, both in terms of their names and benefits.



37 Responden

HIGHEST
POINT
8/10

MALE/FEMALE

18/19

LOWEST
POINT
0/10

AGE
AVERAGE
21 years

Answer Average
4.89/10
Points

Based on the survey data above, it is evident that many young individuals have limited awareness of Indonesian spices.

<http://bit.ly/rempahustle-survey>





Difficult to differentiate.

• • •

Slight differences.

Many Indonesian spices share similarities with others. They only have slight differences such as size and color.



Examples of Similar Spices

Jahe and lengkuas appear almost the same from the outside but have differences in the color of their flesh.





2.848 +
Types

Of Spices found
in 38 provinces in
Indonesia

32.014 +
Concoction

for traditional medicine
made from Indonesian
Spices



RISTOJA

The following research
data indicates the
significant benefits of
spices in Indonesia.

±115 +
Disease

can be treated using
traditional medicine
made
from spices

The Importance of Indonesian' Spices



Indonesian spices have numerous
benefits in daily life and cultural events.
Therefore, spices deserve to be
considered as one of the cultural
heritages that should be preserved and
proudly celebrated

<https://bit.ly/ristoja-recap>

<https://bit.ly/ristoja-dashboard>



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CONTENT 2

Reason

...





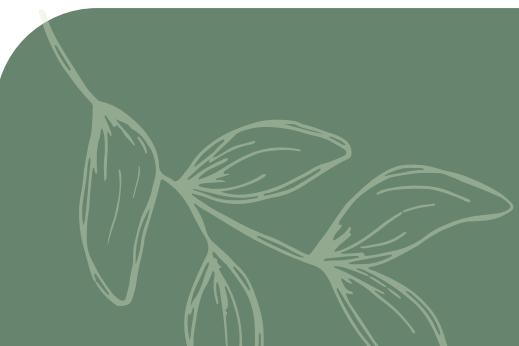
RempaHustle



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• • •

Reason



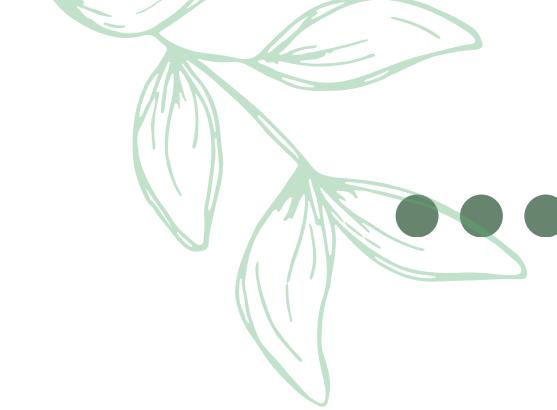
The lack of information and pride in Indonesian spices results in a **limited awareness** among the Indonesian population, especially the younger generation, about the distinctive spices of Indonesia

OUR FOCUS

• • •

We want to focus on addressing the issue of lack of information, which is the primary cause of the lack of pride and difficulty in recognizing Indonesian spices.





5 WHYS

Problem Statement

Lack of Information

Lack of pride

1

Why do people lack information and pride in Indonesian's spices?

2

Why don't people seek information to enhance their knowledge about spices?

3

Why aren't people motivated to delve deeper into learning about Indonesian spices?

4

Why do people perceive Indonesian spices as something less valuable?

5

Why isn't there a specific user-friendly platform with comprehensive information to enhance knowledge about Indonesian spices?



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• • •

Reason



After conducting an analysis, we conclude that the root cause of the previous issues is....

• • •

“There is not enough user-friendly platforms with comprehensive information to enhance knowledge about Indonesian spices.”



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• • •

Reason

Is that true? What is the evidence?

• • •

Before we delve into something serious, let's get to know Adel and listen to her story!



Next Content >



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CONTENT 3

Existing Result

...





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...

Existing Result

Adel Story

...

She is Adel, a freshman college student who recently moved to a new city and now lives alone. She always relies on instant food and **instant seasonings** for her daily meals.





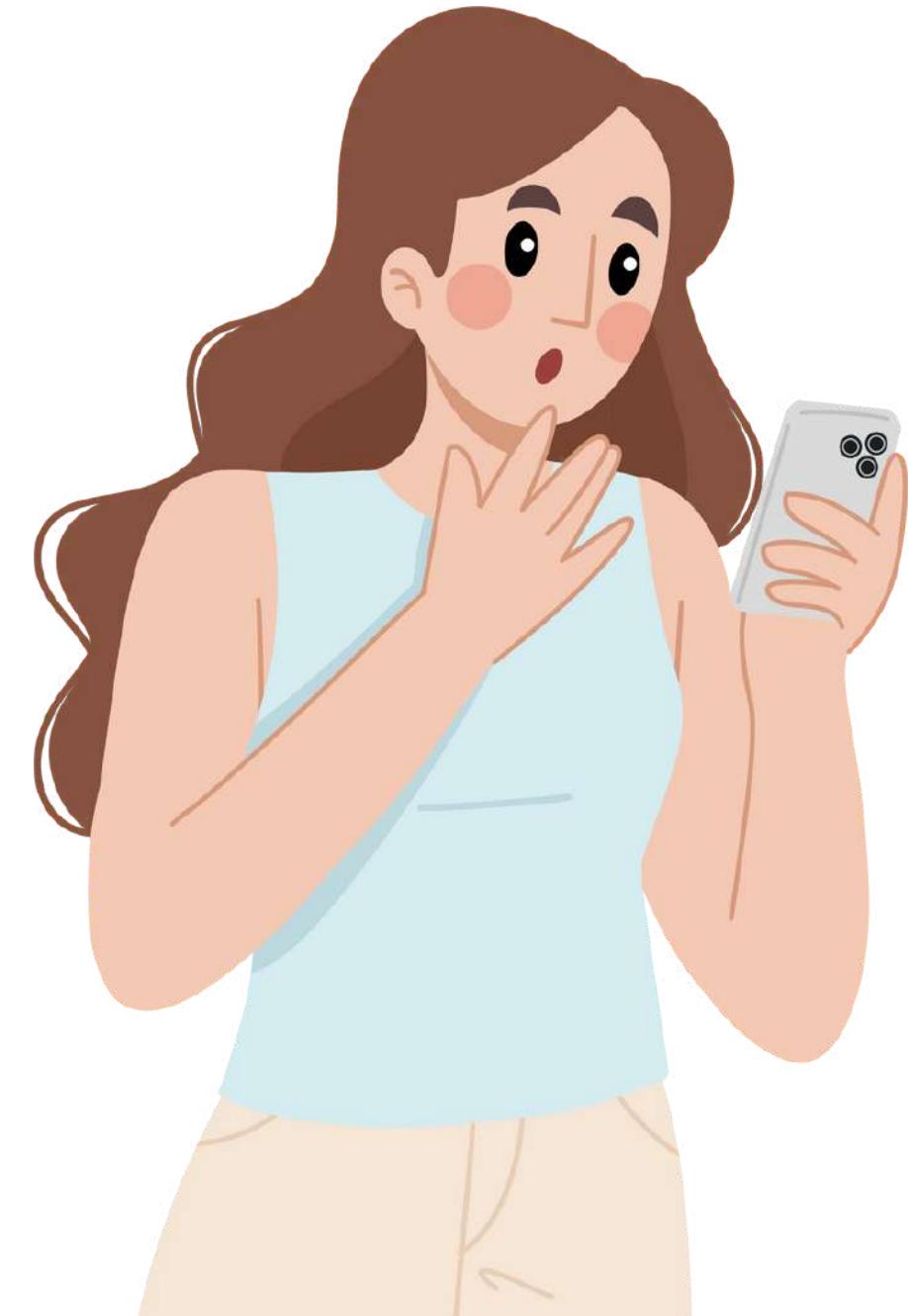
• • •

Adel Story

• • •

One day, she started to get bored of constantly eating instant food. She decided to cook **Indonesian traditional dishes** on her own, relying on limited recipes she found on the internet.





After she bought the cooking ingredients, she realized that she had purchased the wrong ones. By **comparing the images of Lengkuas** on the internet with the spice she bought, she just found out that what she bought was actually Jahe.

She eventually returned to the market armed with a picture of Lengkuas from the internet to purchase the correct ingredient.





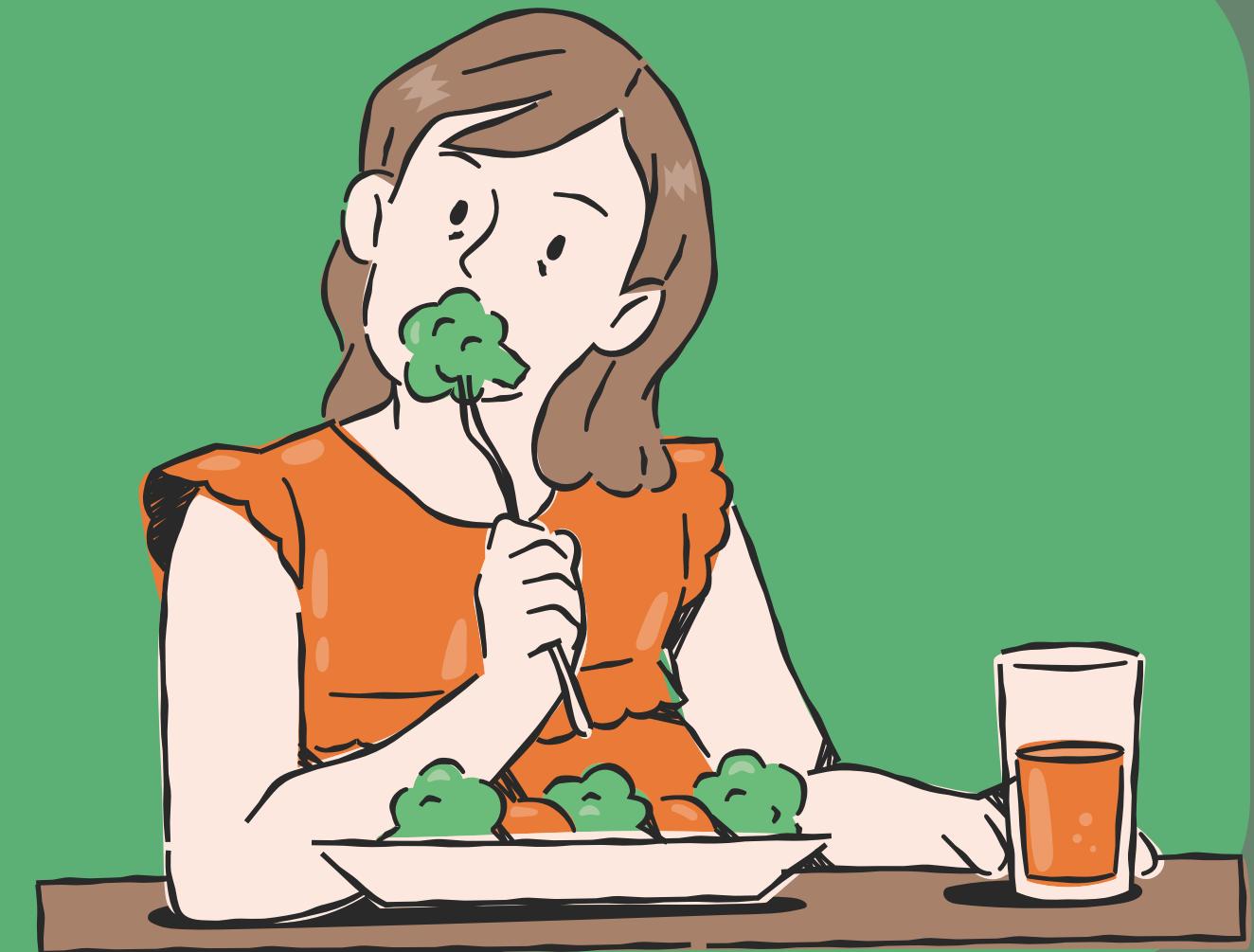
• • •

Existing Result

Adel Story

• • •

After she finished eating the dish made with **authentic spices**, she realized that using real spices made the food taste much better.





However, she was confused about what to do with the Jahe she had already purchased.

After searching on the internet, she felt surprised and proud to discover that Jahe, which is an **authentic Indonesian spice**, can be processed into various foods, beverages, and even traditional medicine.





• • •

Existing Result

Adel Story

• • •

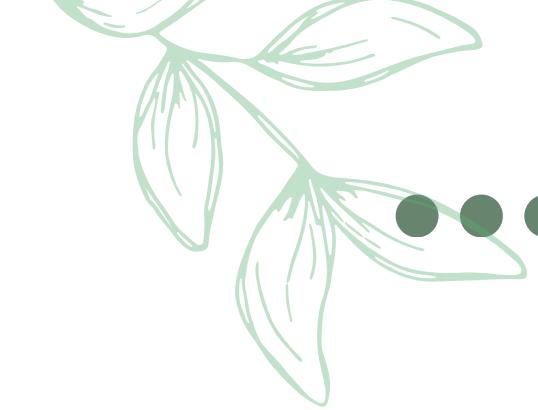
She wanted to keep that information so that she could use it when processing Jahe in the future. With extra effort, she saved the information in the note-taking app she had.





She finally imagined what it would be like if there were an app that combines **comprehensive information about Indonesian spices**, AI image recognition to identify spices, and the ability to save important content or data for the user. This would be very helpful and easy to use, especially for the younger generation.





How Might We...

- 1 Create a solution that focuses on enhancing information about Indonesian spices.
- 2 Develop an application for learning about the characteristics, benefits, and recipes of Indonesian spices.
- 3 Facilitate users in identifying Indonesian spices.
- 4 Give users control over the content or data they want to save for later reading.
- 5 Empower users to control the type of package and amount they need to pay to enjoy the app's features.
- 6 Create a solution that supports Indonesia in proposing the Spice Route as a UNESCO World Cultural Heritage in 2024.



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CONTENT 4

Implementation

...





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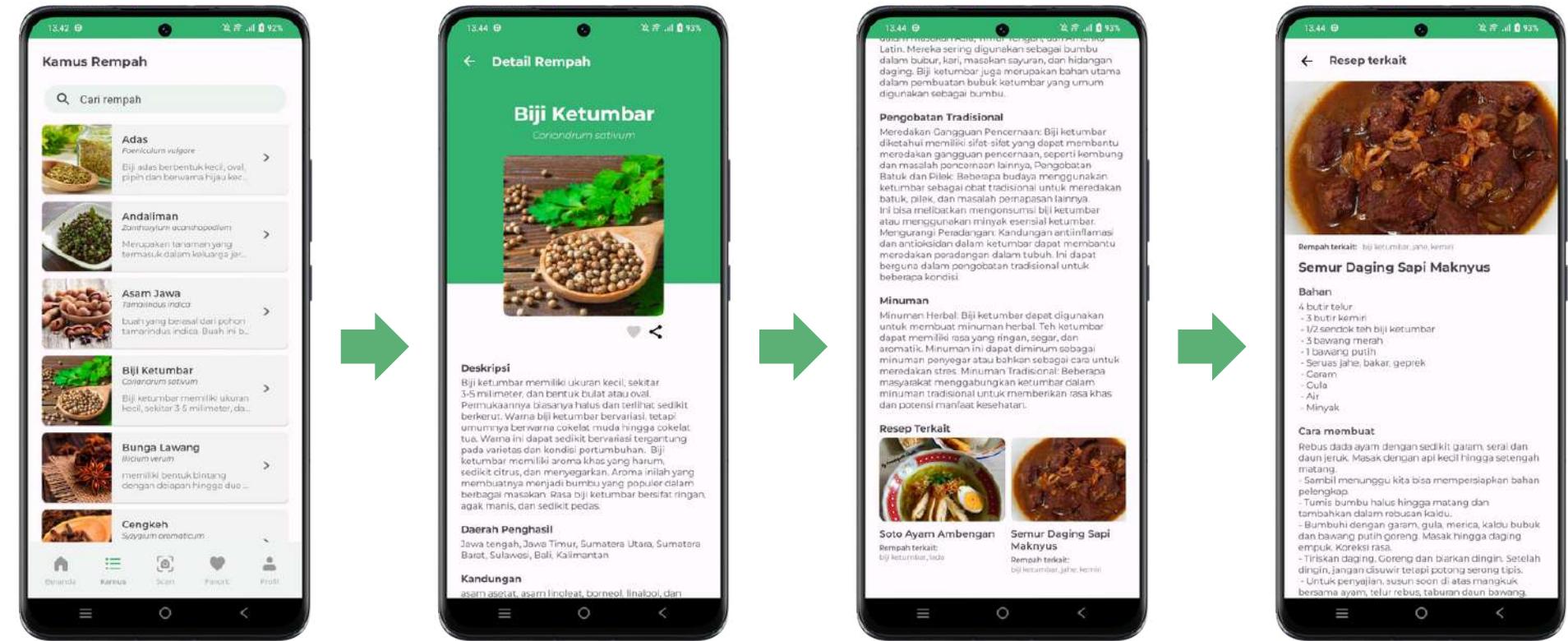


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Implementation

Our Solution

To enhance knowledge about the characteristics, benefits, and recipes of Indonesian spices, we aim to create a **spice dictionary** that can be used to study authentic Indonesian spices.





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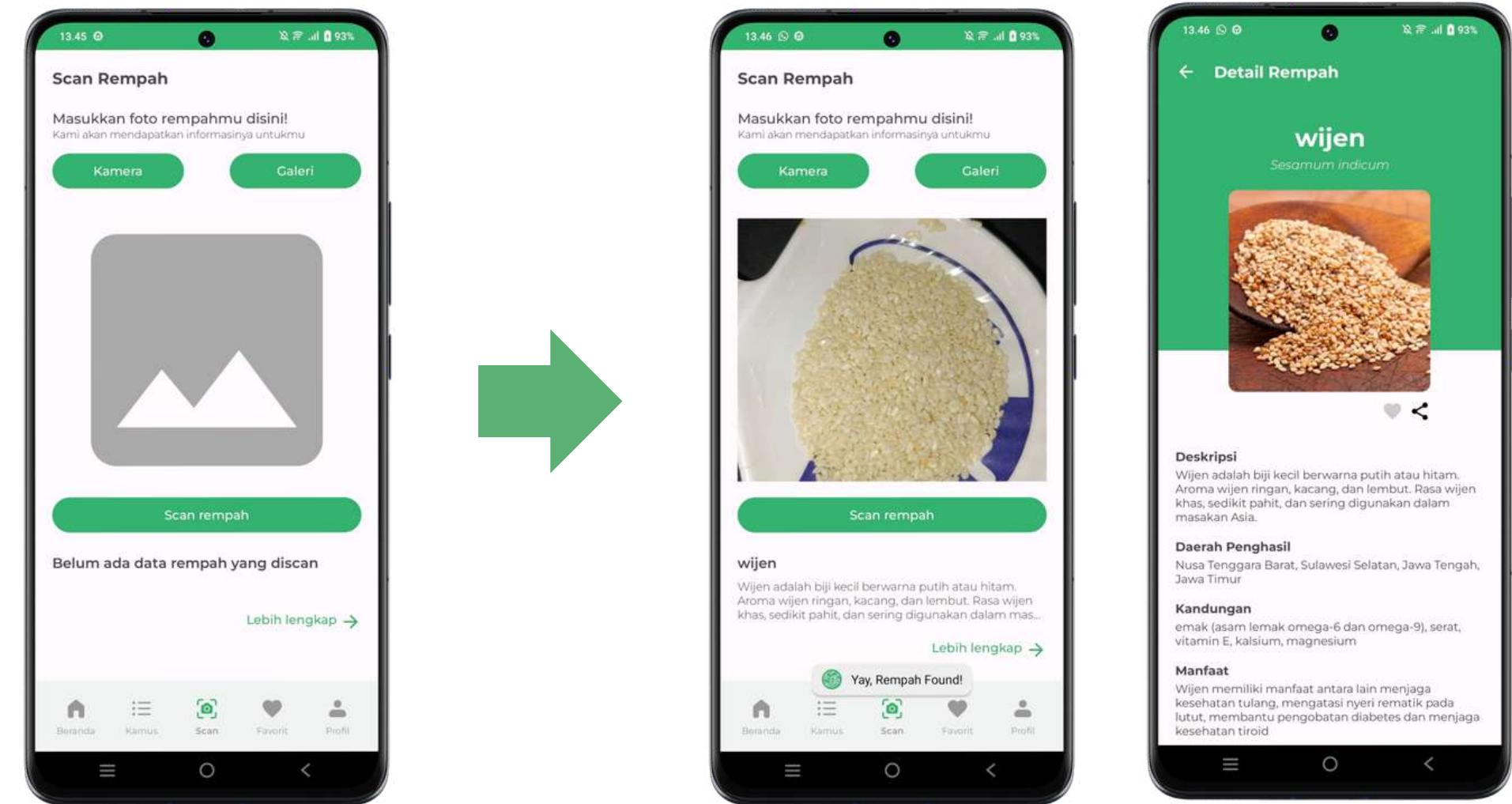


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Implementation

Our Solution

We also utilize **image classification technology**, To facilitate users in identifying Indonesian spices.





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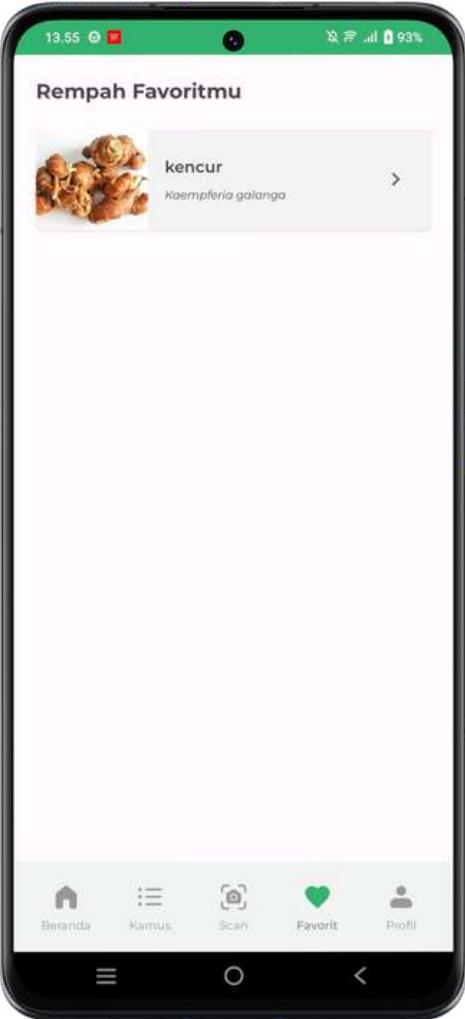
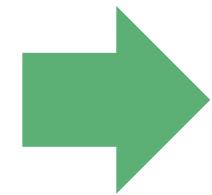
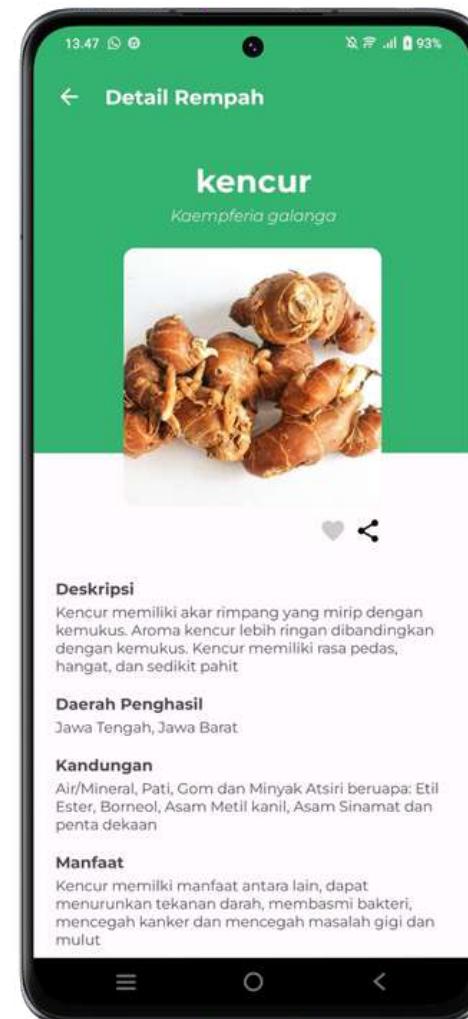


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Implementation

Our Solution

We also create a list favorit spices, giving users control over the content they wish to save for later reading





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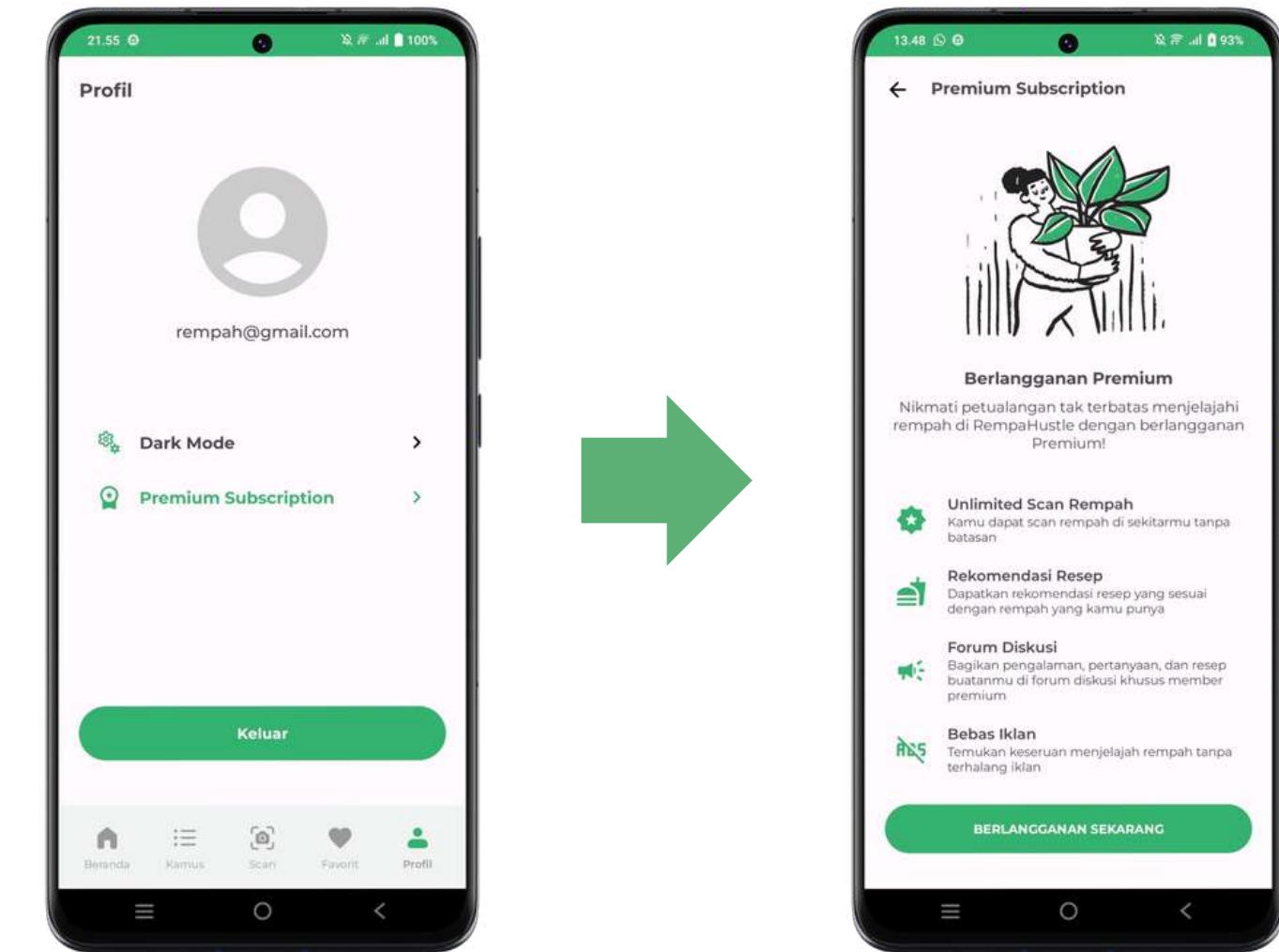
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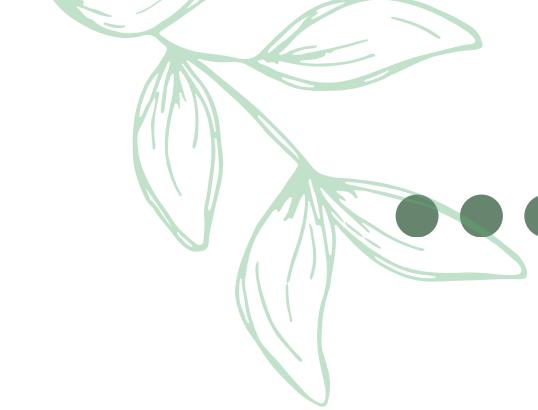
Implementation

Our Solution

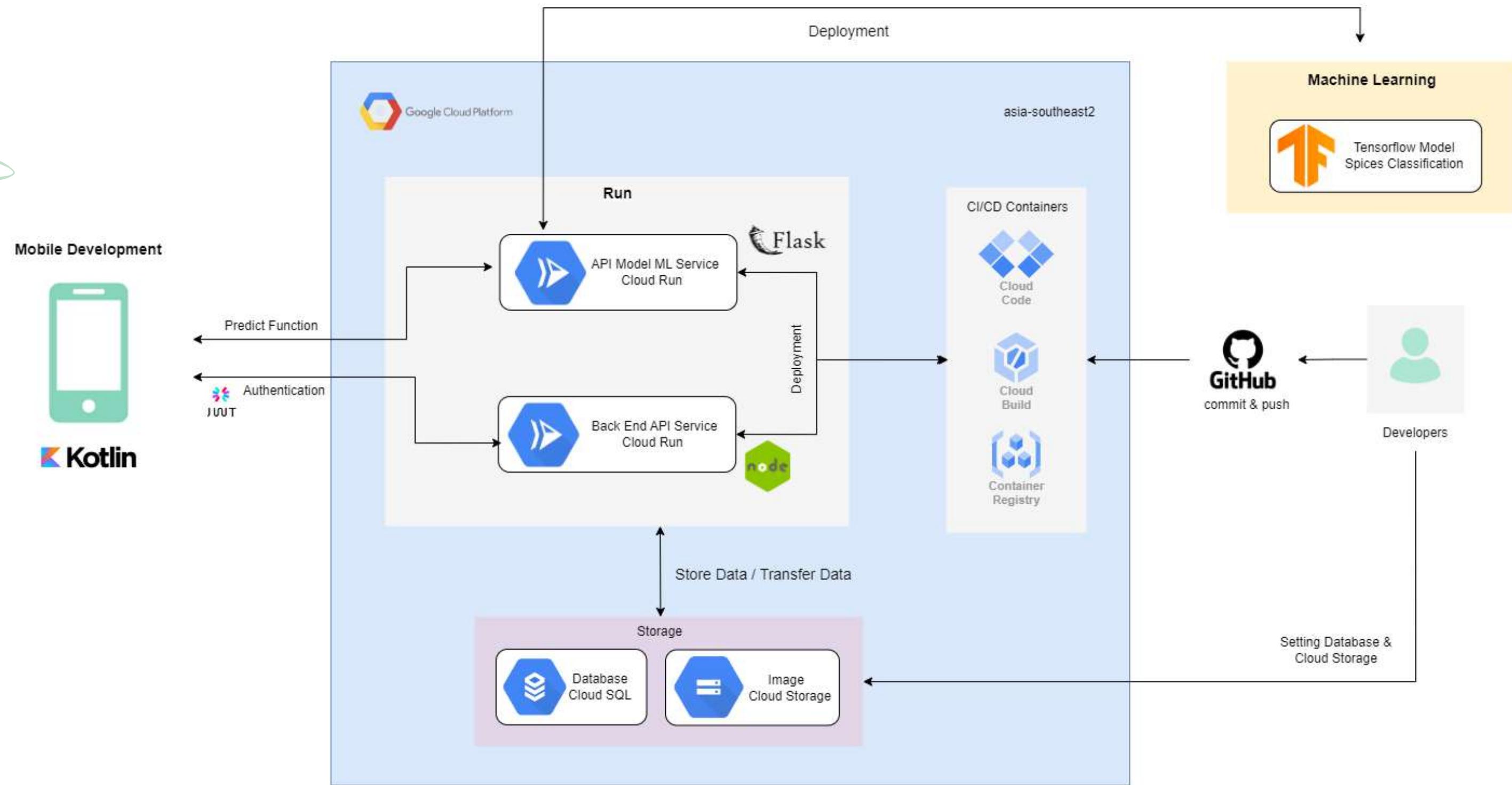
We also provide **free and premium accounts**, giving users control over the amount of money they need to pay to enjoy the app.

Future Development





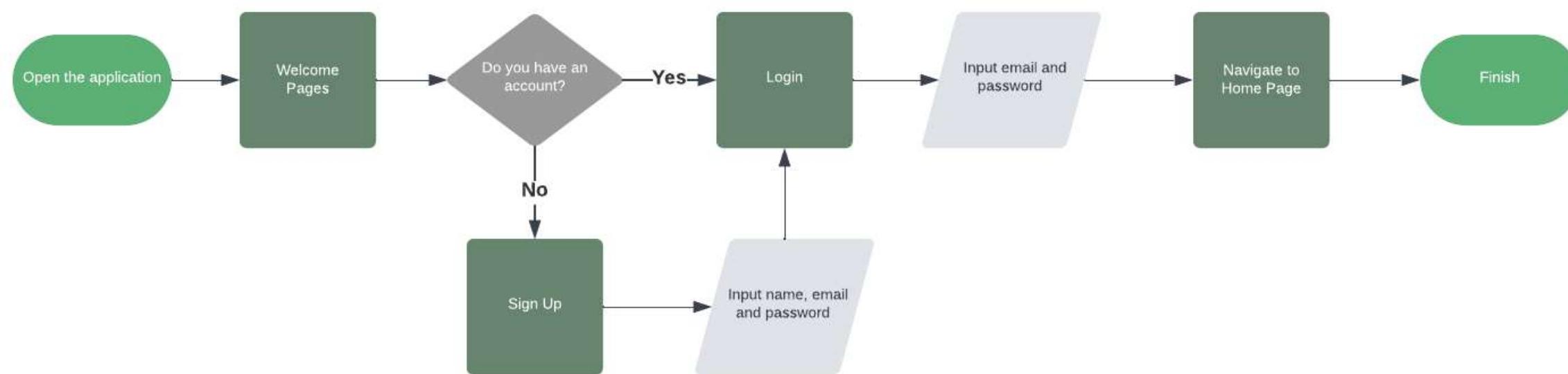
Architecture Design



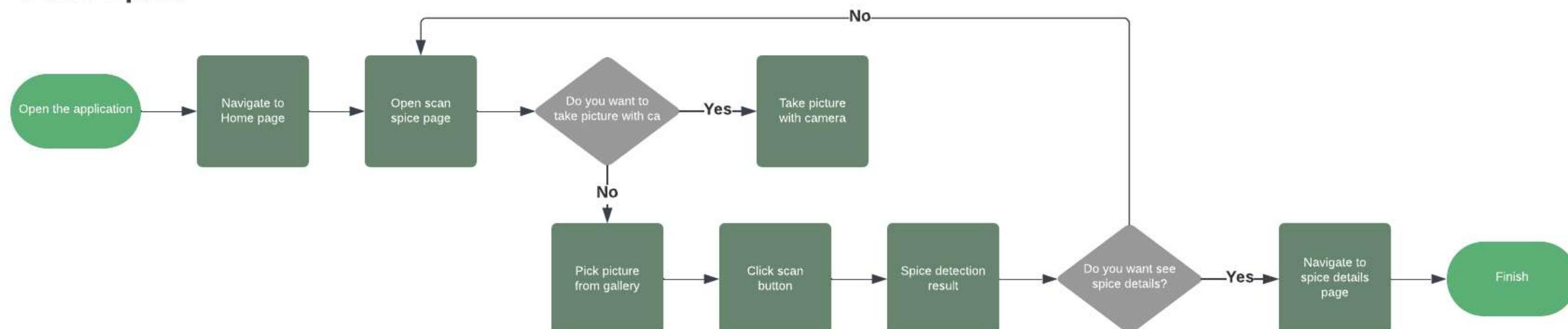


User Flow

Authentication



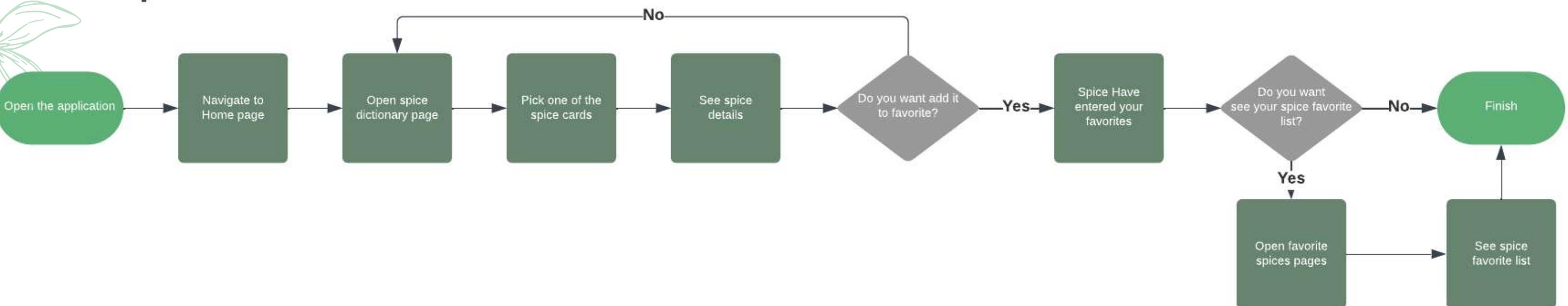
Scan Spice

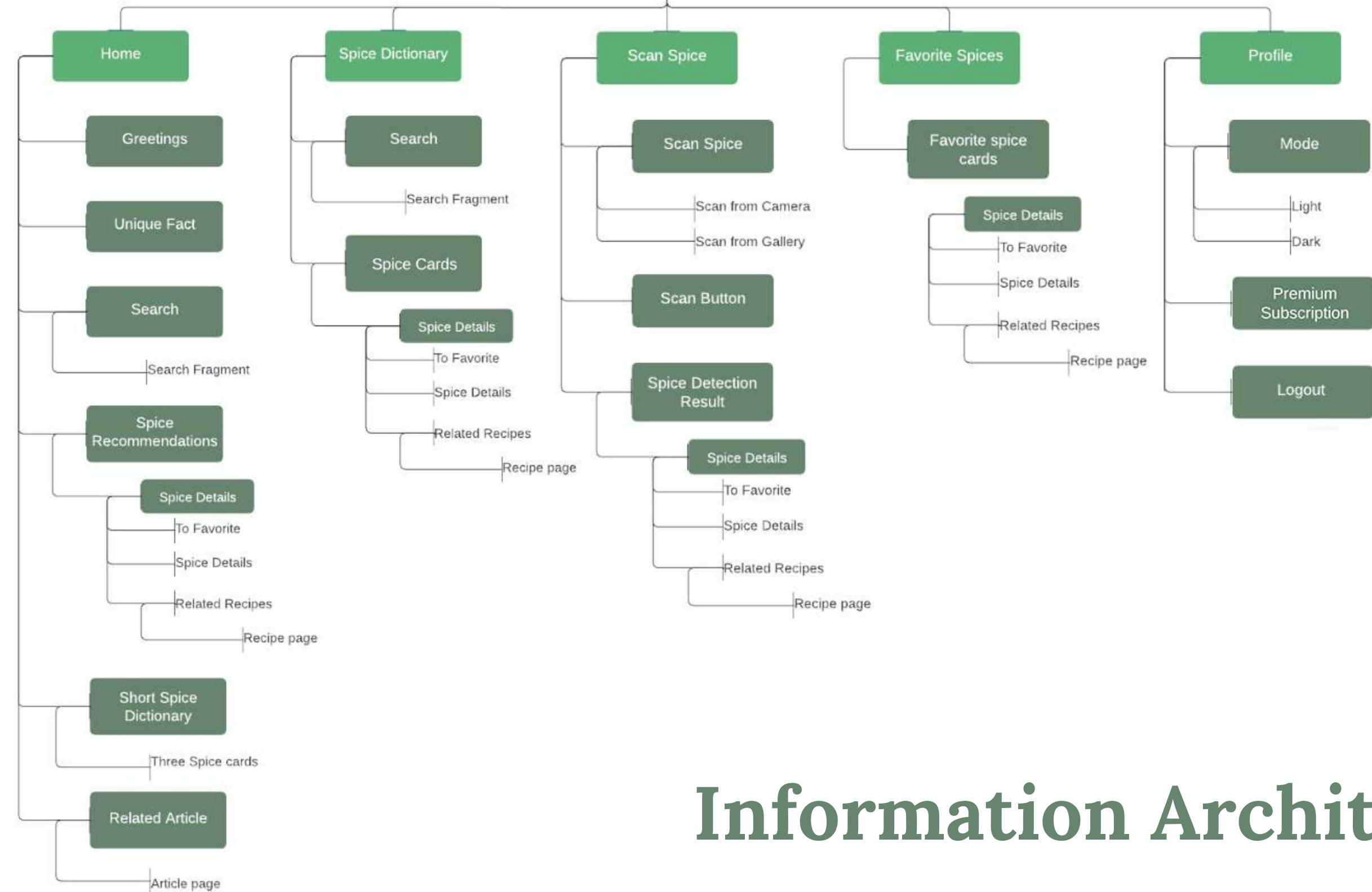




User Flow

Favorite Spices





Information Architecture



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CONTENT 5

Result

...



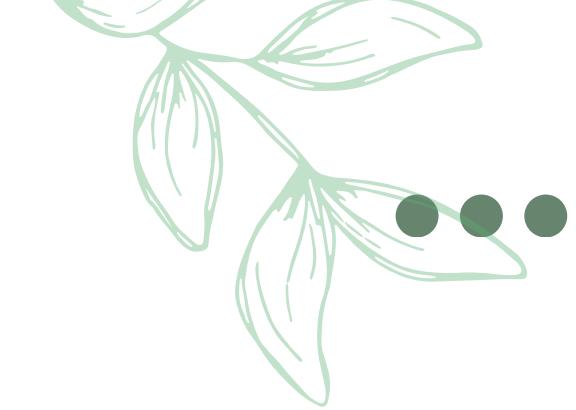


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Result



Onboarding Pages



Splash Screen



Welcome Pages



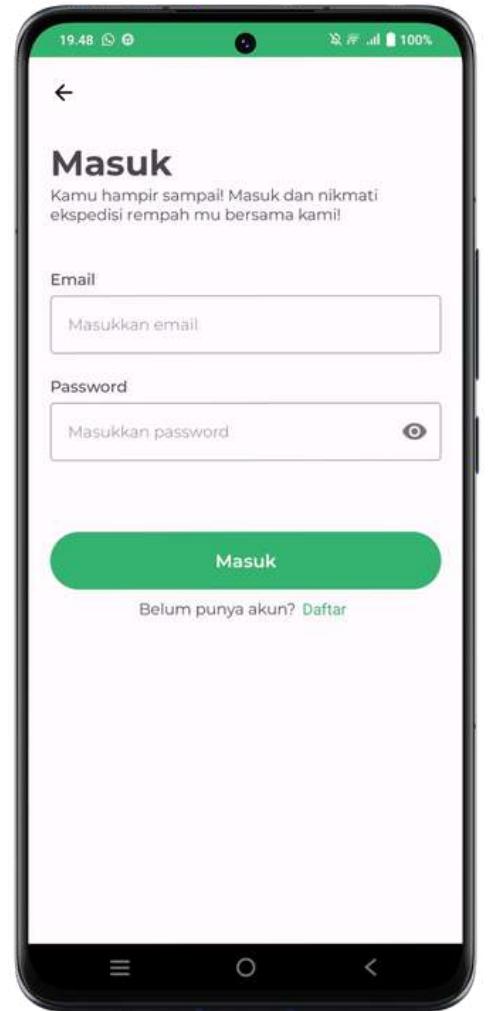
RempaHustle



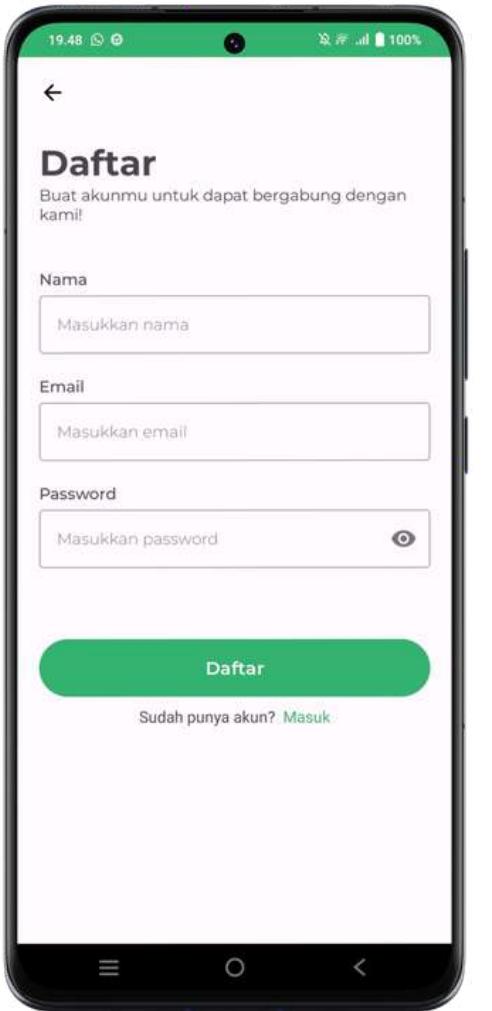
Bangkit Academy

Result

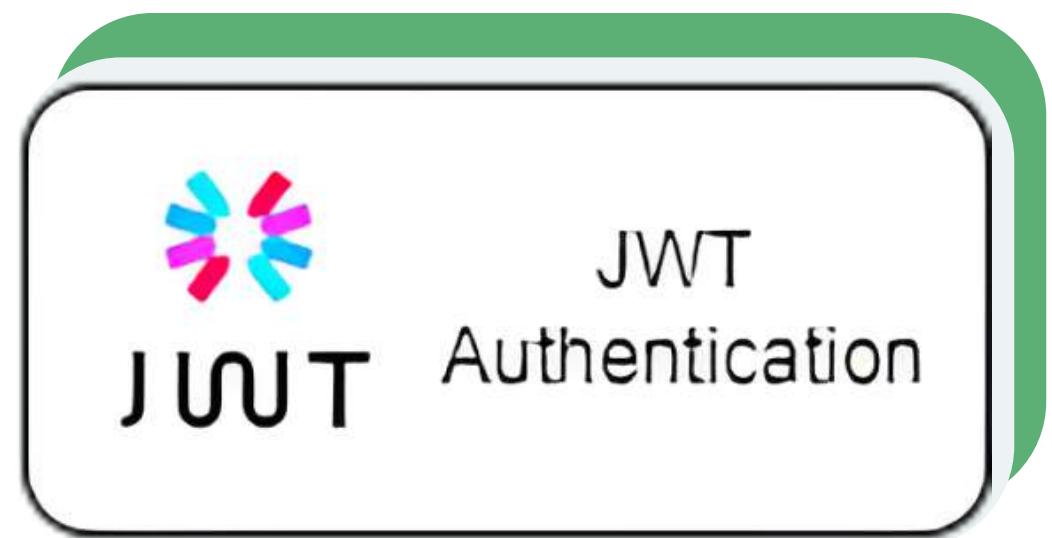
Authentication



Login



Register

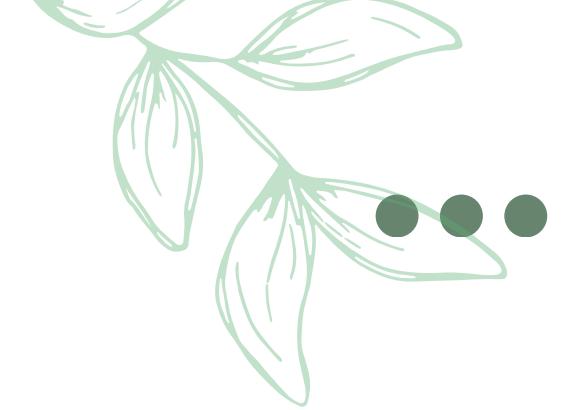




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Existing Result

Pages

- 1 **Home**
- 2 **Spice Dictionary**
- 3 **Scan Spice**
- 4 **Favorite Spices**
- 5 **Profile**



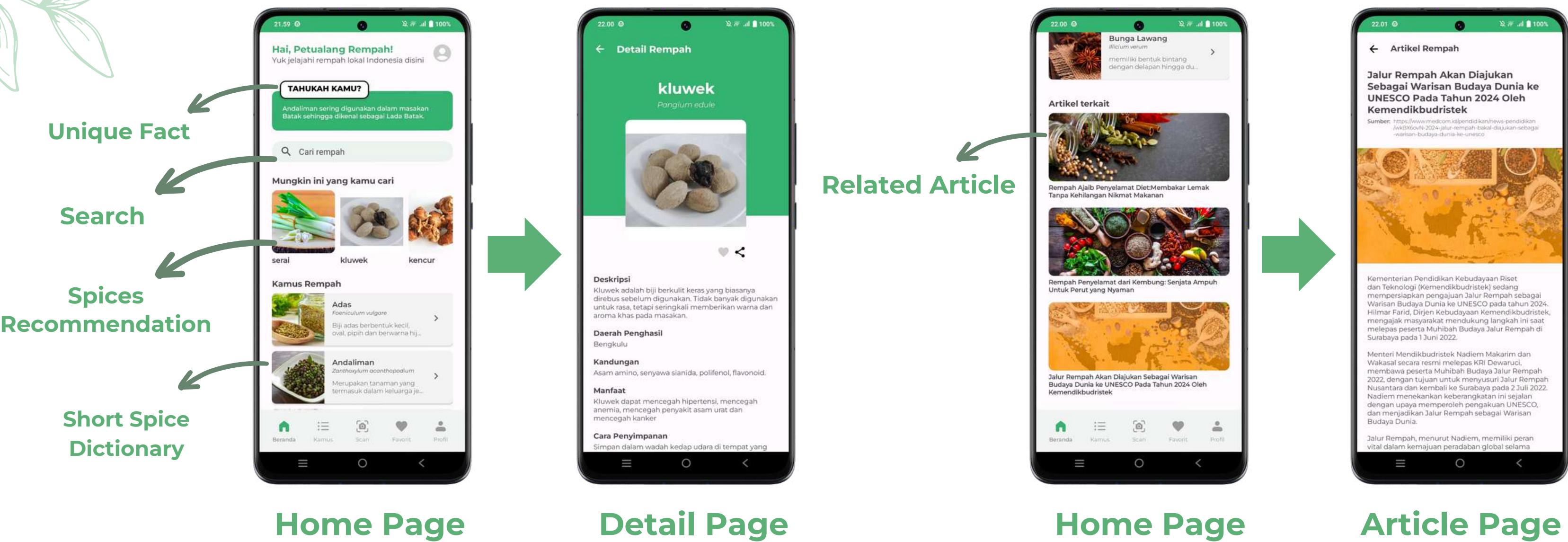
RempaHustle



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Result

Home Page





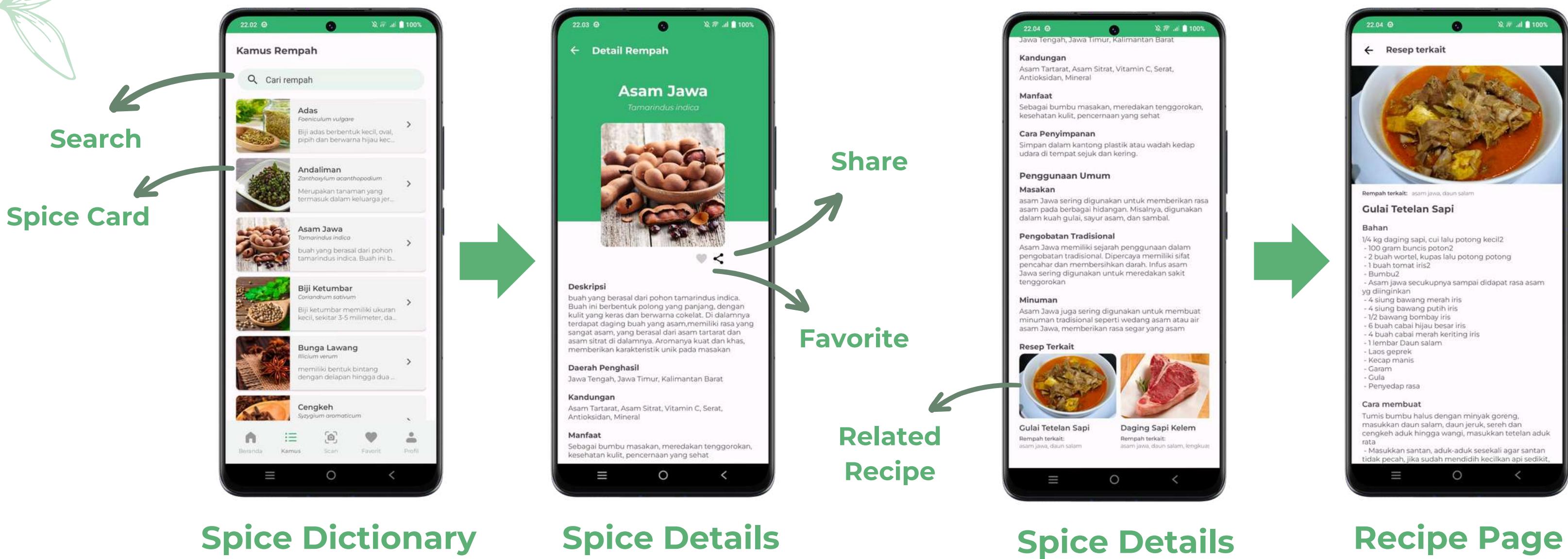
RempaHustle



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Result

Spice Dictionary





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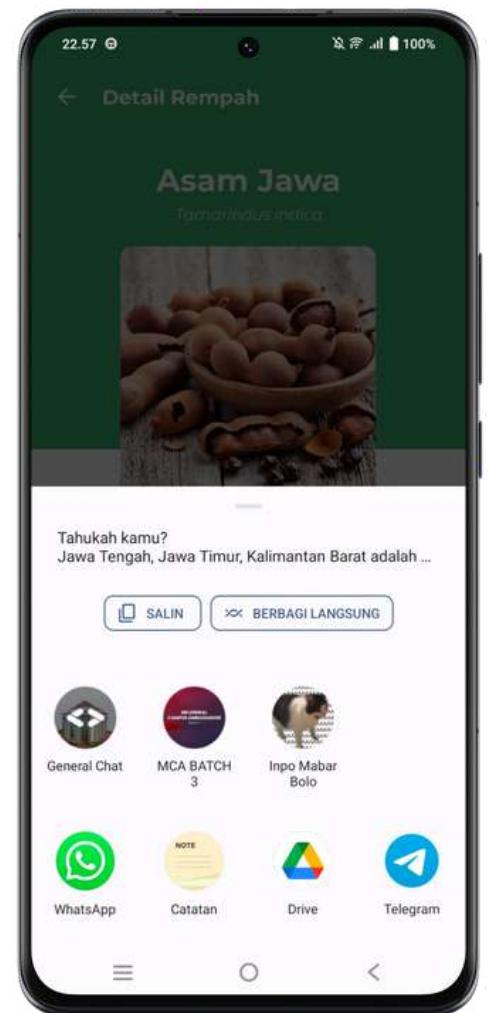
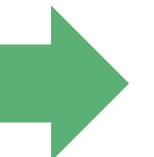


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Result

Spice Dictionary



Spice Details



Share Message



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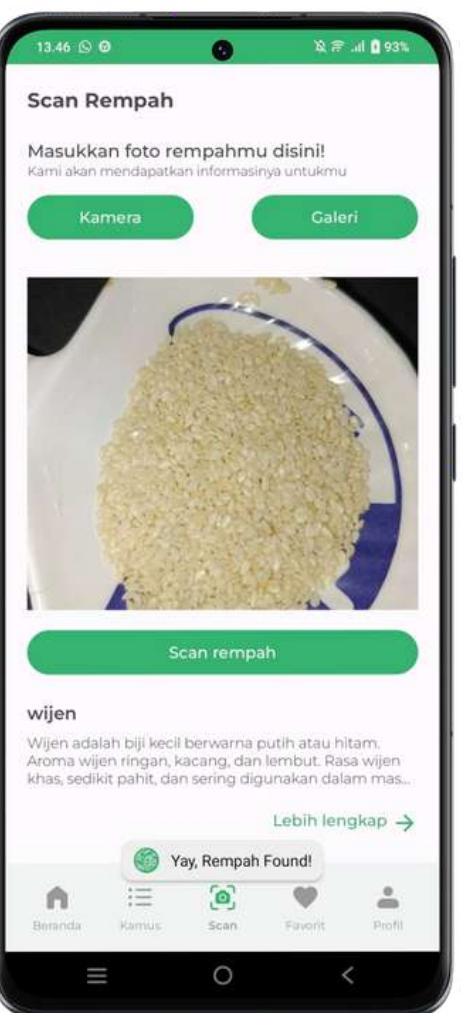
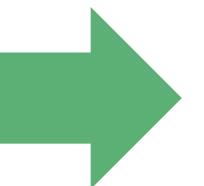


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Result

Scan Spice



Scan Spice

Spice Details



TensorFlow

An easy-to-use spice
detection tool using image
classification with 96%
accuracy



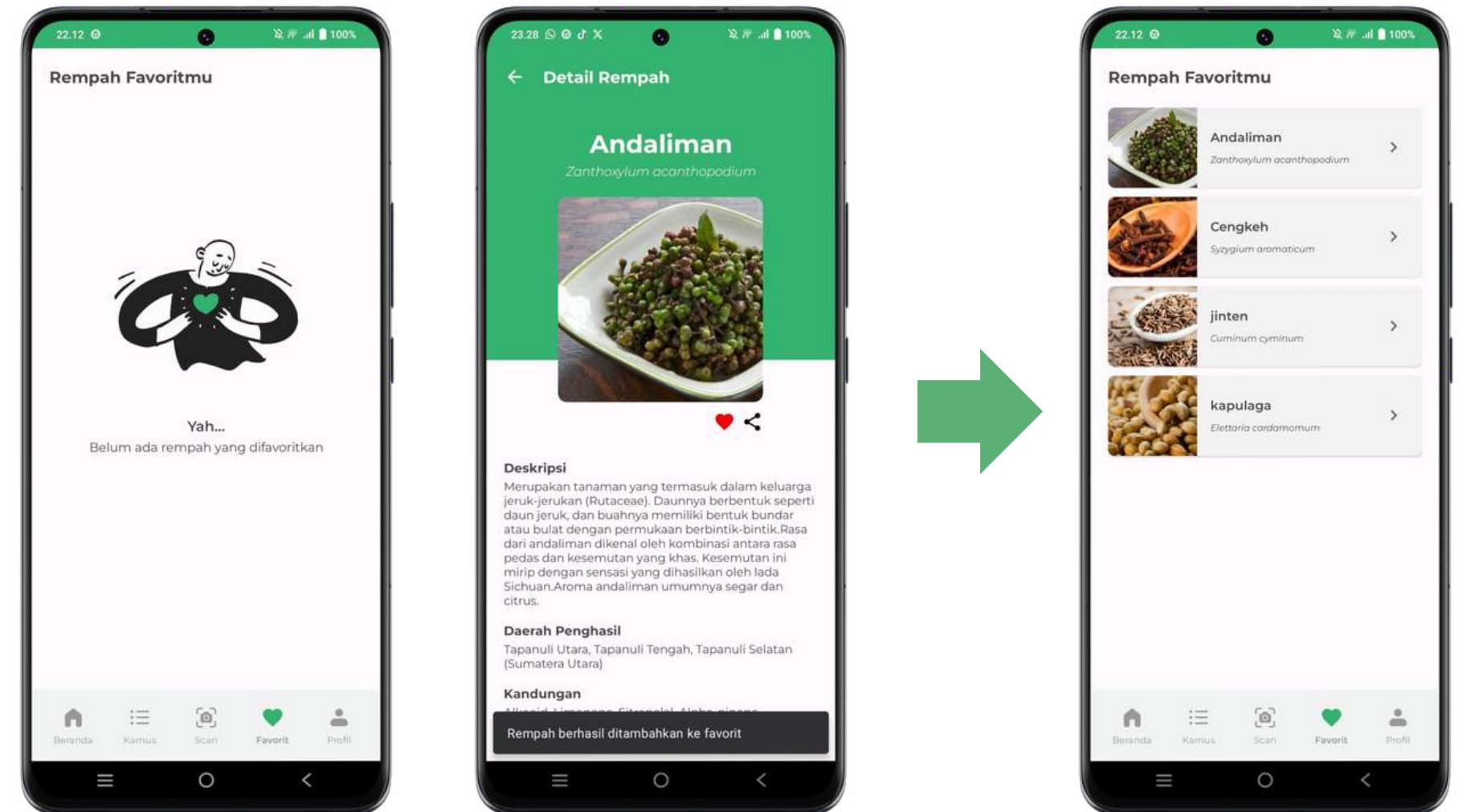
RempaHustle



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Result

Favorite Spices



**Favorite Spices
(empty data)**

**Favorite Spices
Page**





RempaHustle



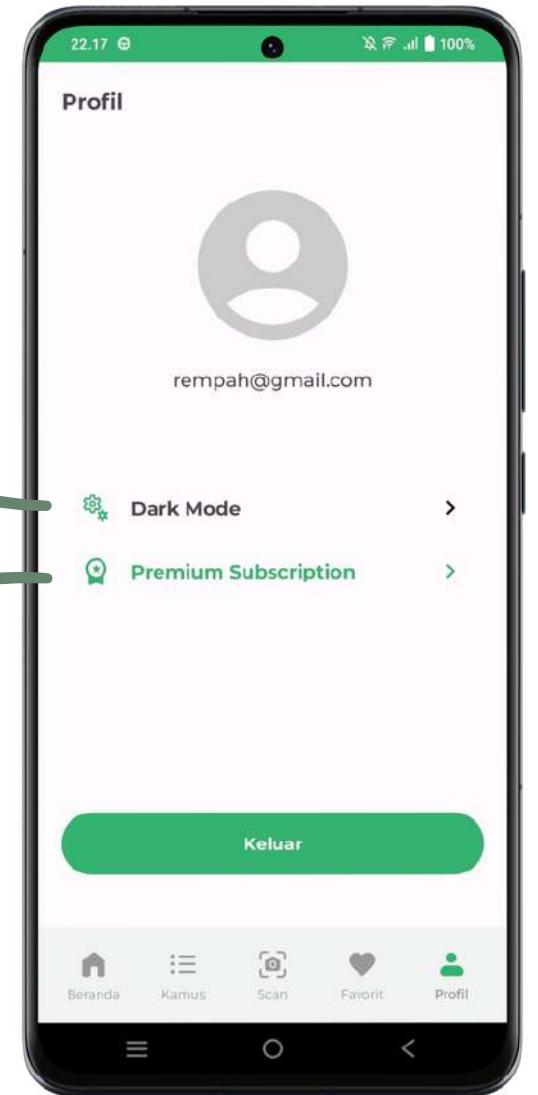
Bangkit Academy

Result

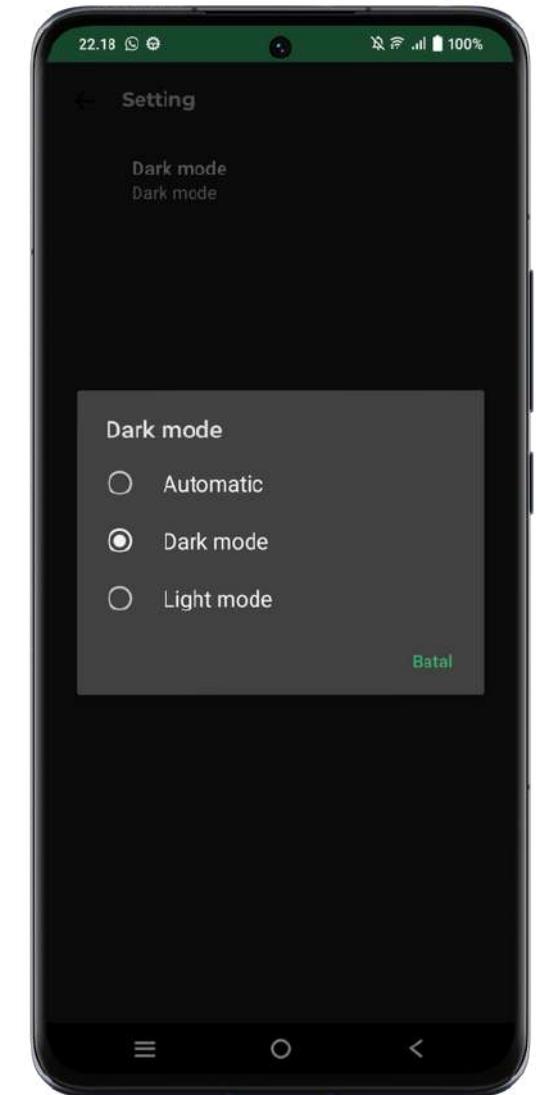
Profile

Setting
Darkmode

Premium
Subscription



Profile Page



Setting Pages



Subscription Pages

Future Development



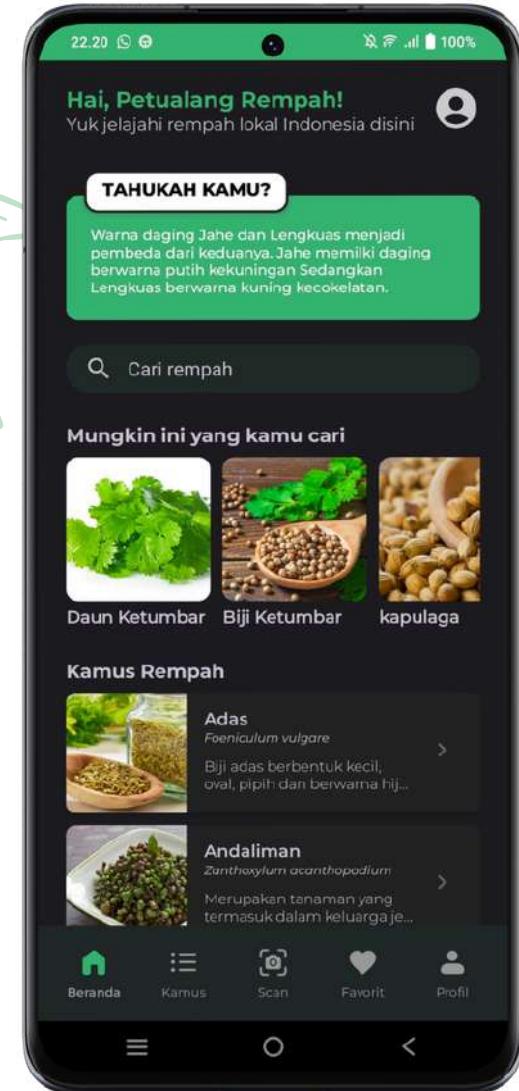
RempaHustle



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Result

Darkmode



Home page



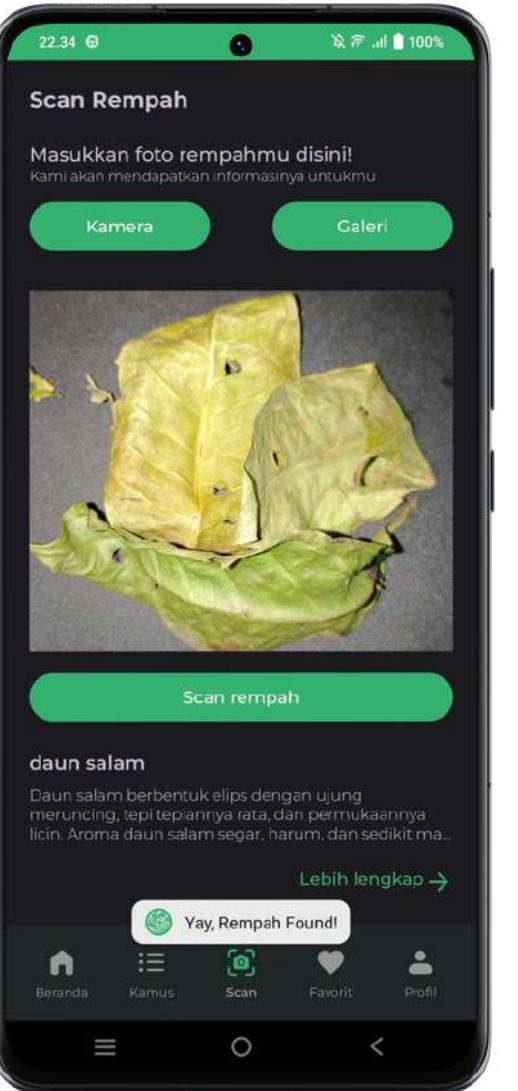
Dictionary page



Spice Details



Recipe page



Scan page



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CONTENT 6

Documentation

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Documentation



Github Repository

We Documentation
Our Code in Github
Repository.

RempaHustle - Spice Classification App

Team ID: CH2-PS139

Team Member :

Name	Bangkit-ID	Path	University
Rizky Aditya	M304BSY0050	Machine Learning	Universitas Potensi Utama
Dany Eka Saputra	M471BSY0122	Machine Learning	Universitas Teknokrat Indonesia
Mochamad Nurul Taukid	M296BSY0825	Machine Learning	Universitas Pembangunan Nasional Veteran Jawa Timur
Carissa Renatasari	A296BSX2550	Mobile Development	Universitas Pembangunan Nasional Veteran Jawa Timur
Rakha Widiyatna Labib	A193BSY2472	Mobile Development	Universitas Bina Sarana Informatika
Albert Oktamara	C270BSY3070	Cloud Computing	Universitas Mulia
Cherillya Rahmita Nurul Nucha	C548BKX4446	Cloud Computing	UIN Sunan Kalijaga Yogyakarta

Project Overview

RempaHustle is a mobile application designed to educate and engage users in the world of spices. The app features a spice scanner, dictionary, and personalized recipe recommendations. It aims to bridge the knowledge gap about Indonesian spices, especially among the younger generation.

Project Scope

Mobile App Development :

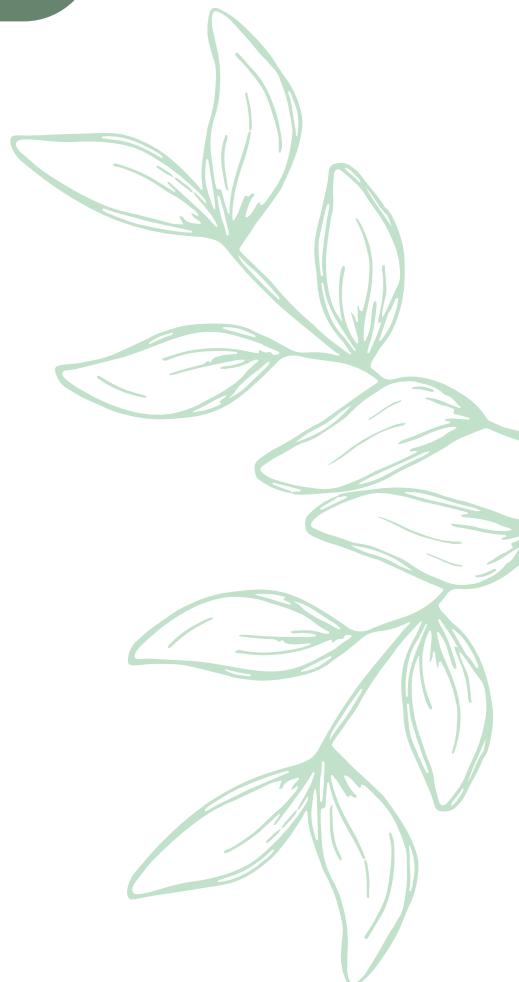
- Spice Scan, Spice Dictionary
- User Account Management, User F...

CC/backend-API	fix(i...
MD/Nav_Capstone	MD
ML	ML:
Media/Logo	ML:
Spices_Clasification_update	mer...
README.md	Upd...

Our Github Repository



<https://github.com/danyeka/CH2-PS139.git>





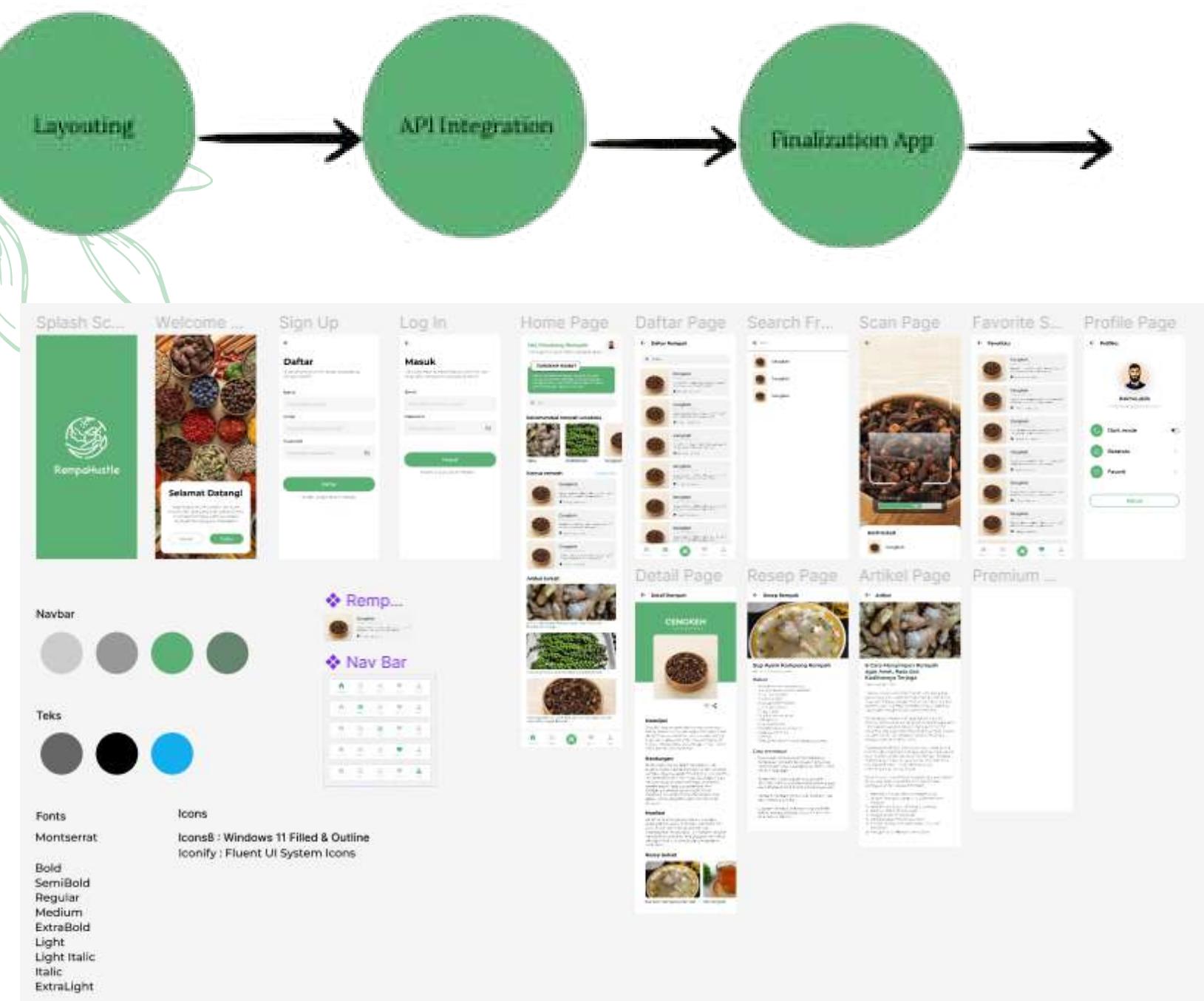
RempaHustle



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Documentation

Mobile Development



The screenshot shows the Android Studio interface with the following details:

- Code Editor:** The `DetailActivity.kt` file is open, displaying Kotlin code for the Detail Activity. The code handles navigation, data binding, and API interactions.
- Project Structure:** The project structure is visible, showing modules like `app`, `database`, `model`, `remote`, and `ui`.
- Device Manager:** A Vivo V2201 API 33 device is selected.
- Preview:** The app's UI is displayed on the device, showing a detailed page for "Asam Jawa" (Tamarindus indica) with a bowl of tamarind seeds.
- Bottom Bar:** Shows system status like battery level (100%), signal strength, and date/time (12/12/2023).

Android Studio
Kotlin



RempaHustle

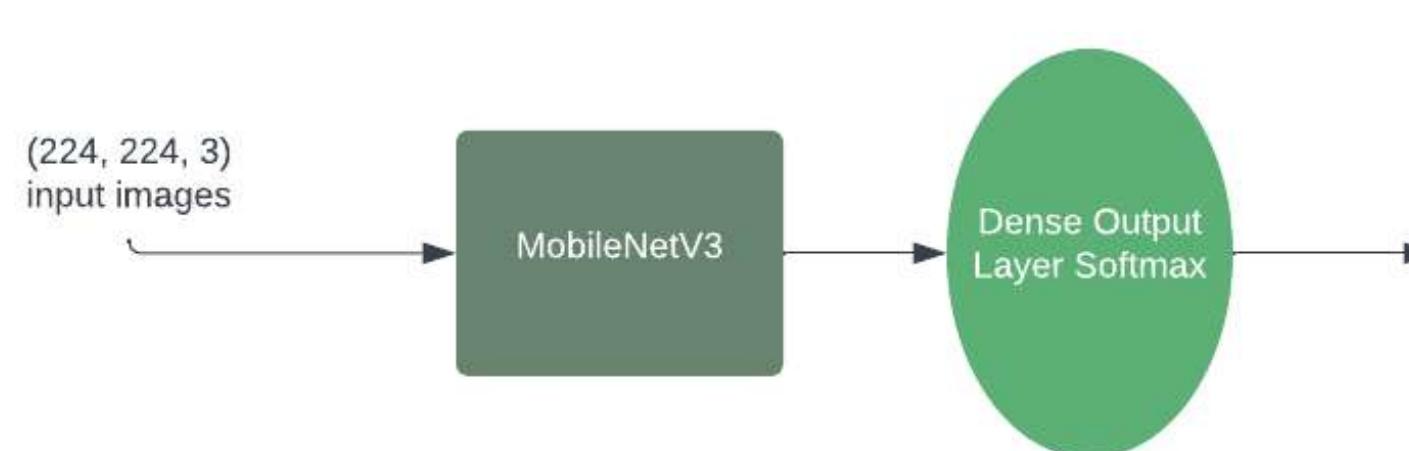


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Documentation

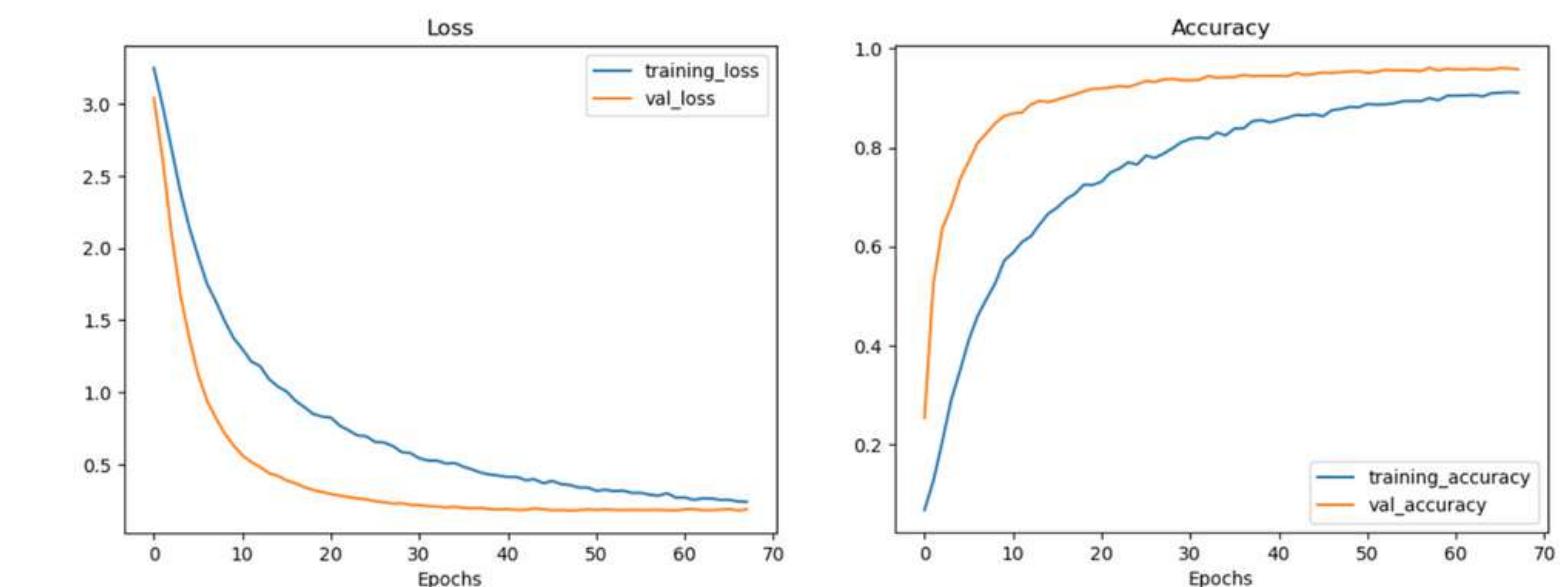
25 spices label

Transfer Learning Using MobileNetV3



Machine Learning

Validation Accuracy > 95%

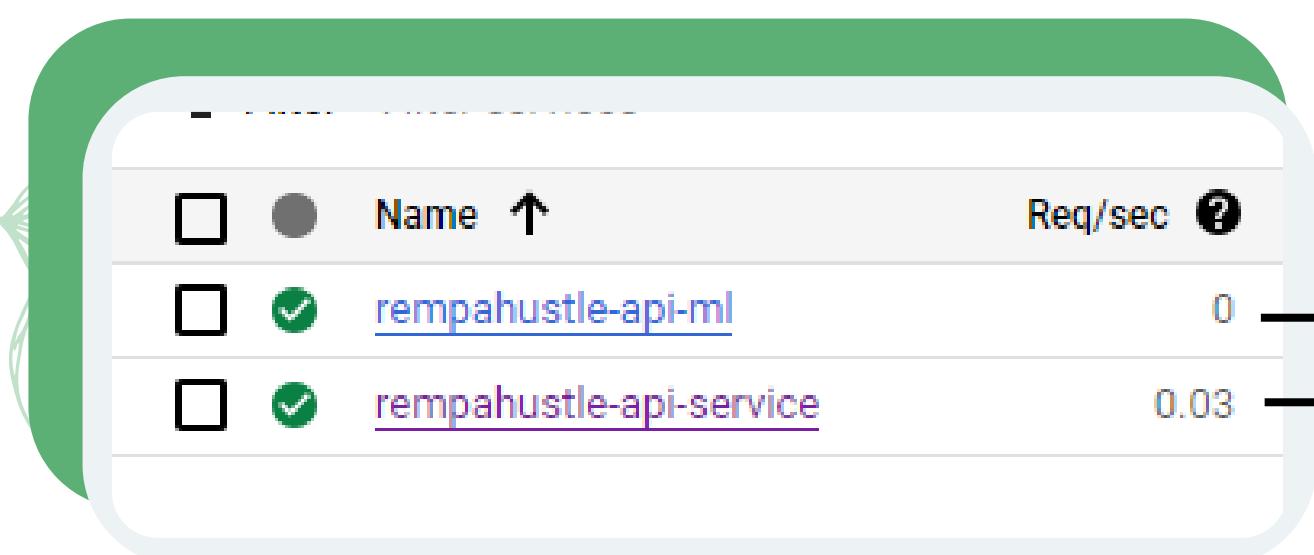


Documentation Link :

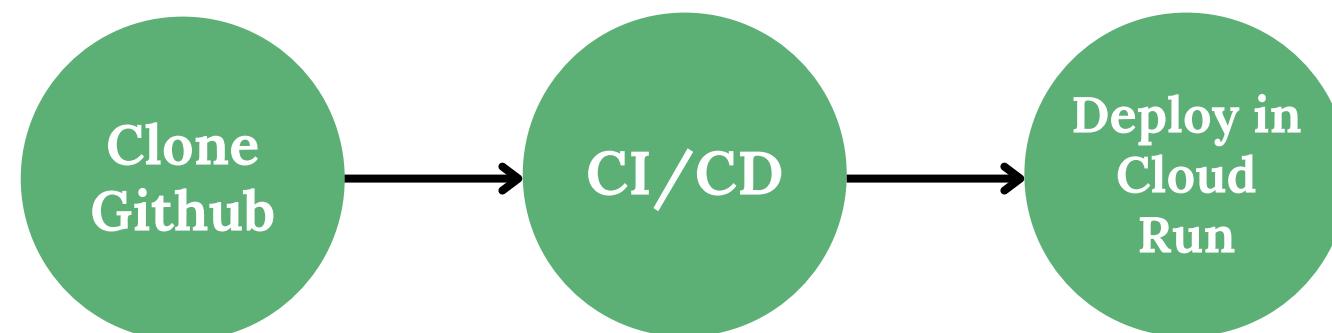
<https://github.com/danyeka/CH2-PS139/tree/master/ML>



2 Services



→ ML Model API using Flask
→ Backend API using NodeJS



Provides 10 endpoints

/login
/register
/rempah
/rempah/:id
/resep
...
etc

Instances Cloud SQL

All instances > **rempahustle**
rempahustle
MySQL 5.7

Cloud Storage Bucket

rempahustle-bucket
Location: asia-southeast2 (Jakarta) Storage class: Standard

Documentation Link:

<https://github.com/danyeka/CH2-PS139/tree/master/CC/>



RempaHustle



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CONTENT 7

Local Deployment Plan & Go-to-market Proposal

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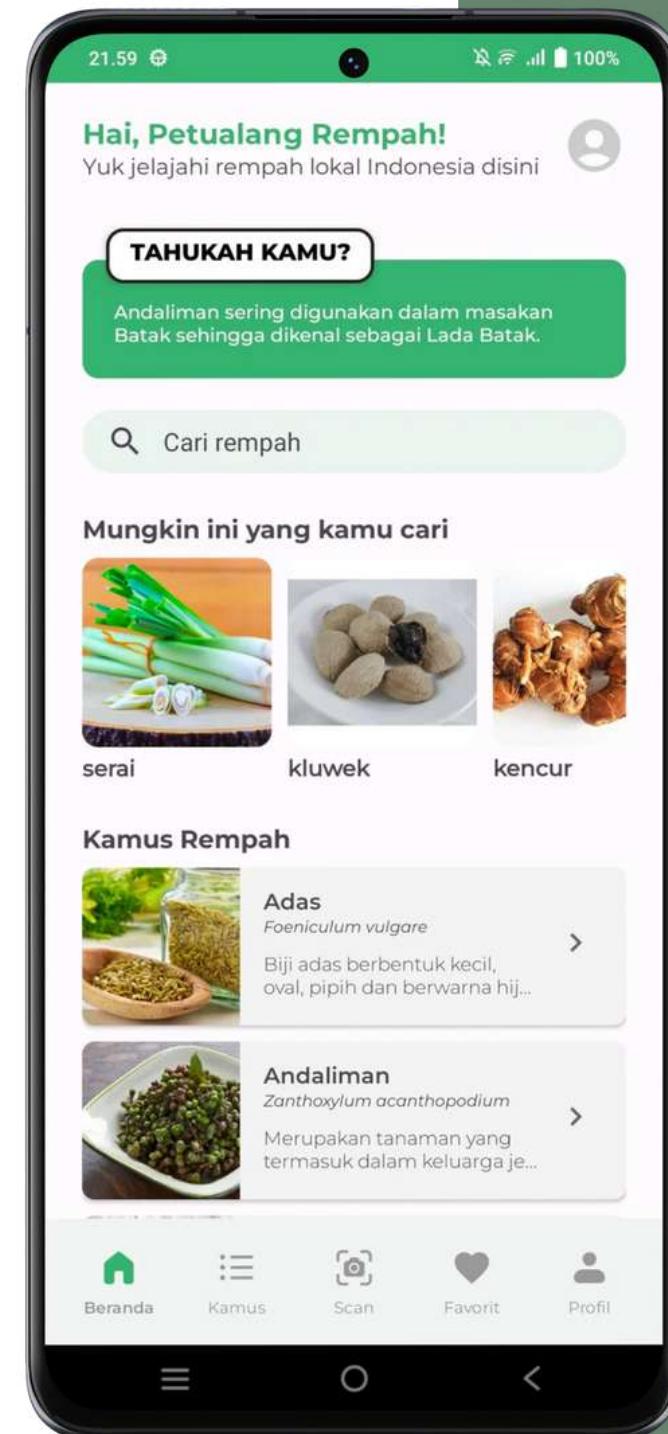




What is RempaHustle?



RempaHustle is a **user-friendly app** designed for learning about Indonesian spices. It provides a comprehensive spice dictionary that includes recipes and their benefits. Additionally, it utilizes **image classification technology** to automatically identify spices from their pictures. This makes it easier for the people to enhance their knowledge of spices and contribute to their conservation efforts.





RempaHustle



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• • •

Local Deployment Plan &
Go-to-market Proposal

What's Our Purpose?

• • •

1

Providing support to the people, especially the younger generation, to enhance their knowledge of Indonesian spices.

2

Assisting Indonesia in preserving its diminishing popularity of Indonesian spices.

3

Supporting Indonesia in proposing the Spice Route as a world cultural heritage to UNESCO in 2024.





RempaHustle



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Local Deployment Plan &
Go-to-market Proposal

Who RempaHustle is For?



Indonesian Younger
Generation, Age 18 to 30



**People who enjoy cooking
and learning about spices, as
well as diverse Indonesian
cuisines.**



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Local Deployment Plan &
Go-to-market Proposal

Our Business Model



Free Account

For user who want to use RempaHustle with limited features

Premium Account

For user who want to use RempaHustle with unrestricted features and without ads

Feature	Free Account	Premium Account
Spice Dictionary	✓	✓
No Limit Scan Spice	✗	✓
Recipe Recommendation	✗	✓
No Advertisement	✗	✓
Spice Forum Discussion	✗	✓

Future Development



User Persona

Adel

19 Years Old



Student



Surabaya



"I am someone who appreciates the convenience of finding information. I feel lazy when I have to search for information from multiple sources and spend a lot of time."

Bio • • •

Having a new life in a new city, Adel has the enthusiasm to live independently, including cooking and shopping. She also finds joy in acquiring new and interesting knowledge.

Goals • • •

- Enriching knowledge about cooking and its ingredients
- Easily selecting spice ingredients
- Saving time in searching for information about spice ingredients

Motivation • • •

- Cooking delicious meals while living alone
- Shopping for ingredients with ease
- Learning more about Indonesian spices and their benefits

Frustations • • •

- Difficulty distinguishing similar spices
- Lack of knowledge about the benefits of spices
- Reluctance to search for information from multiple sources.



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Local Deployment Plan & Go-to-market Proposal

**Spices
Dictionary**

**Support
Indonesian
Language**

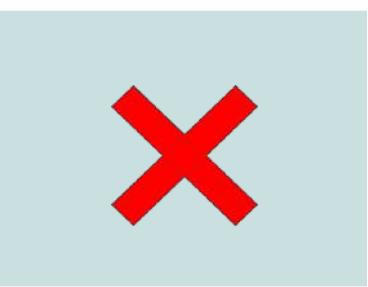
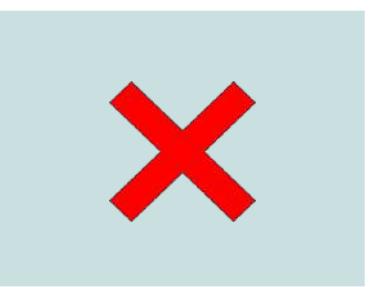
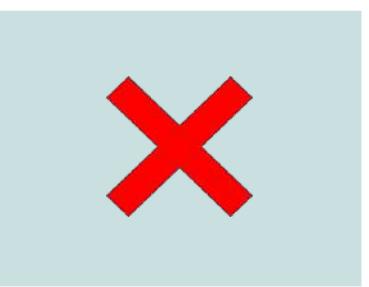
Scan Spice

**Favorite
Spices**

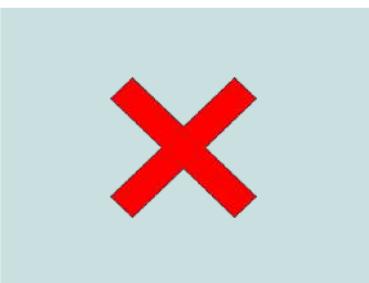
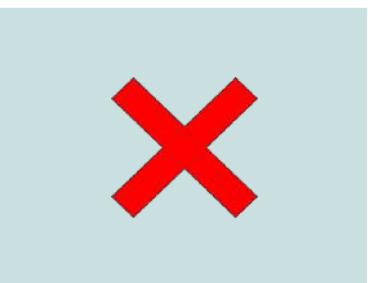
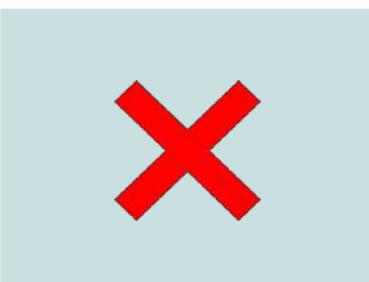
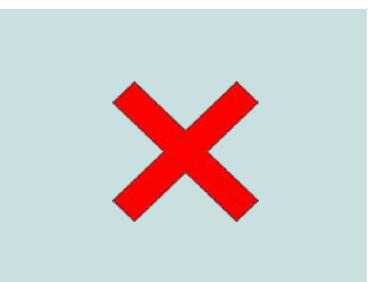
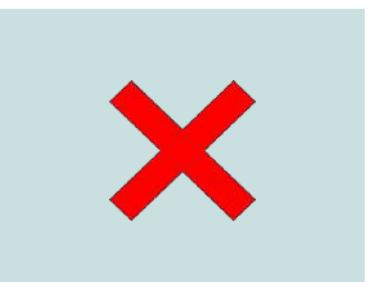
**Recipe
Related**



Spices: Culinary Uses



Tips Rempah Obat Alami



RempaHustle





Future Roadmap



January

- Create Business Plan for Enhance User and Refine user persona Needs
- Refine Current ML Model and Research Models for Premium Features
- Spices Label Expansion
- UI/UX Upgrade Research

February - March

- Premium Feature Development : Recommender Recipe, Scanner using object detection, Premium Cooking challenges
- App Development and Integration

April

- Rigorous testing of new app features and Latency testing
- User experience testing to enhance usability.
- Identification and resolution of any bugs or issues.
- Evaluate and Refine any result from testing

May

- Implementing improvements to address any issues.
- Conducting for a closed beta test with specific users.
- Gathering feedback on the upgraded application.
- Iterative refinement based on beta test insights.

June

- Pilot Launch, Release pilot version to selected group of users
- Launch targeted Marketing Campaign by using various Platform
- Release The App in Play Store
- User Feedback Monitoring and Future Improvement



Project Milestones



Milestone 1 (End Of January)

- Completed Business Plan for Enhancing user needs
- ML Model refined and research for premium features
- New Spices data and label Finished
- UI/UX Upgrade Documented

Milestone 2 (End Of March)

- Finish Developed Premium Features : Recommender Recipe, Scanner using object detection, cooking challenges and forum
- Complete app Development and Integrated New Features

Milestone 3 (End Of April)

- Rigorous testing of new app features and latency testing conducted.
- User experience tested, and bugs or issues identified and resolved.
- Evaluation of testing results completed, and refinements made.

Milestone 4 (End Of May)

- Implemented improvements based on testing feedback.
- Conducted a closed beta test with specific users.
- Gathered feedback on the upgraded application.

Milestone 5 (End Of June)

- Successfully launched the pilot version to a selected group of users (10 Users).
- Executed a targeted marketing campaign
- Released the app on the Play Store.
- Began monitoring user feedback for future improvements.



Needed Resource



Tools

- Colab PRO
- GCP Cloud Storage
- GCP Cloud Run

Marketing

- Social media
- Engaging content
- Online advertising

Human Resource

- Product Manager
- Developer
- Marketing Team
- Administration





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Bangkit Academy

Local Deployment Plan &
Go-to-market Proposal

Budget Plan (5k)

Category	Proportion	Budget
Team Salary	35%	\$1650
Operational	15%	\$800
Marketing & Research	35%	\$1750
Legalities	5%	\$300
Emergency Fund	10%	\$500



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Bangkit Academy

Local Deployment Plan &
Go-to-market Proposal

Budget Plan (10k)

Category	Proportion	Budget
Team Salary	30%	\$3000
Operational	12%	\$1200
Marketing & Research	25%	\$2500
Future Development	18%	\$1800
Legalities	3%	\$300
Other Cost	12%	\$1200



Market Size & Market Share

Indonesia has a population of

277,534,122

([worldometer](#)).

people that has accessed the internet

212,900,000

([wearesocial](#)).

76.7%

Market Share

50.290.799

People

people use Android Mobile OS

187,841,670

([gs.statcounter.com](#)).

88.2%

54%

of people are not well-informed about the spices they use.

(result of the survey).

people use spices for health and household purpose

93,037,979

([badan litbang kesehatan 2010](#)).

49.5%





Revenue Stream Target

Assumed that RempaHustle app get 0.1% of market share for user in 4 month post-release at PlayStore (Start from June) and 15% of the user subscribe to premium account

Advertising Fee

Value

$$\text{costPerThousandImpression} * \text{numOfMonth} = \$5 * 4 = \$20$$

Subscription Fee

$$0.1\% * 15\% * \text{marketShare} * \text{numOfMonth} * \text{monthlySubscriptionFee}$$
$$= 0.1\% * 15\% * 50,290,799 * 4 * \$6 = \$1,086.87$$

Grants (\$5k)

\$5,000



RempaHustle



Bangkit Academy

Local Deployment Plan &
Go-to-market Proposal

Considering user needs and market size, **RempaHustle** has significant potential in helping the people enhance their **knowledge of spices** and supporting Indonesia in preserving its **rich spice heritage**. We are confident that our solution will enable RempaHustle to thrive in the digital market in Indonesia.



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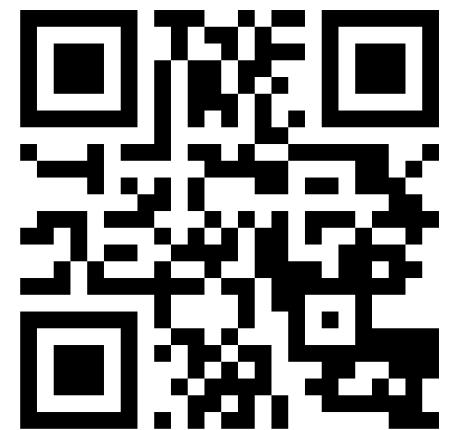
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Be A Spice Adventurer For Indonesia



bit.ly/48ssDMR

Try Out Our
Application



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Thank You

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