ECO GUIDE

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Group.	B	
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3.	Student1483761	ABDUL HANNAN
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DESIGN GUIDE

ACKNOWLEDGEMENT

We would like to express our sincere gratitude to our respected teacher, **Sir Osama**, for their invaluable guidance, encouragement, and support throughout the development of this project. Their insightful suggestions and constructive feedback played a crucial role in helping us complete the **Sustainable Living Guide** mobile application within the stipulated time.

We are also thankful to the **e-Project team at Aptech Head Office** for providing us with this opportunity to work on a real-world project that enhanced our practical skills and deepened our understanding of mobile application development.

Our heartfelt thanks also go to the entire **e-Project support team**, whose structured process and mentorship helped us stay focused and goal-oriented. The experience has not only strengthened our technical and problem-solving skills but also boosted our confidence to face future interviews and professional challenges.

Some of the key takeaways from this project include:

- Practical reinforcement of technical and analytical skills through hands-on experience.
- Continuous mentorship ensuring we stayed on track and aligned with project goals.
- Increased self-confidence and preparedness for real-world project discussions and interviews.

SYNOPSIS

In the wake of growing environmental concerns such as climate change, pollution, and resource depletion, there is an urgent need to support individuals in adopting sustainable lifestyles. However, sustainable living can often feel complex and overwhelming, especially for those who are just beginning their journey. People frequently struggle with where to start, how to measure their impact, and which choices truly contribute to a greener future.

To address this need, the **Sustainable Living Guide** mobile application has been developed as an all-in-one solution designed to educate, assist, and motivate users in making eco-conscious decisions. This app aims to provide users with practical tools and personalized guidance to adopt more sustainable habits in their daily lives. The app offers a wide range of features, including a **carbon footprint tracker**, **eco-friendly product recommendations**, **sustainable living challenges**, **energy-saving tips**, **waste reduction tools**, and a **community forum** for user interaction. Additionally, the app provides educational content such as articles, videos, and infographics to enhance users' understanding of environmental issues and inspire continuous improvement.

Built using **Flutter** with **Dart**, and integrated with **Firebase** for data management, the app ensures a responsive, scalable, and user-friendly experience. With a focus on performance, accessibility, and data security, the Sustainable Living Guide empowers users to make informed decisions that align with their values and contribute to a healthier planet.

PROBLEM DEFINITION

In today's world, environmental issues such as climate change, pollution, and resource depletion are becoming increasingly urgent. While many individuals are interested in living sustainably, they often face challenges such as a lack of knowledge, difficulty tracking their environmental impact, and uncertainty about where to begin.

There is currently no single, user-friendly mobile platform that provides personalized guidance, tools, and educational resources to help users adopt and maintain eco-friendly habits in their everyday lives.

The **Sustainable Living Guide** app addresses this gap by offering an all-in-one solution to educate users, track their carbon footprint, suggest eco-friendly alternatives, and promote sustainable practices through challenges and community support. This app aims to simplify the process of sustainable living and empower users to make informed, impactful decisions for a healthier planet.

- **Lack of Awareness & Guidance**
  Many individuals want to adopt a sustainable lifestyle but lack clear guidance on how to begin or which actions have the most impact.
- **No Centralized Platform**
  There is no all-in-one mobile app that combines education, tracking, product recommendations, and community support for eco-friendly living.
- **Difficulty Measuring Environmental Impact**
  Users often struggle to track and understand their carbon footprint or how their daily choices affect the environment.
- **Need for Motivation & Engagement**
  Sustainable habits are hard to maintain without motivation; users benefit from challenges, tips, and community interaction to stay engaged.

CUSTOMER REQUIREMENT SPECIFICATION (CRS)

1. Objective

The **Sustainable Living Guide** is a mobile application designed to promote eco-friendly lifestyles. It provides tools to help users track their carbon footprint, get sustainability tips, find green products, and engage in community-driven challenges. The app aims to make sustainable living easier, informative, and more accessible.

2. Functional Requirements

1. **Carbon Footprint Tracker** – Users input activities to calculate and monitor their carbon impact.
2. **Eco-Friendly Product Suggestions** – Recommends reusable, organic, and energy-efficient products.
3. **Sustainable Living Challenges** – Engaging weekly/monthly eco challenges (e.g., Plastic-Free Week).
4. **Green Certifications Guide** – Helps identify genuine sustainability labels (e.g., Energy Star, Organic).
5. **Waste Reduction Tracker** – Tracks recycling, composting, and plastic use with tips for improvement.
6. **Sustainable Recipes & Meal Planning** – Eco-friendly meal suggestions focusing on local, plant-based foods.
7. **Energy Conservation Tips** – Personalized household energy-saving tips.
8. **Eco-Travel Suggestions** – Green travel alternatives such as public transport and sustainable accommodations.
9. **Community Forum & Support** – Users share progress, tips, and experiences with others.
10. **Progress Dashboard** – Visual tracking of sustainability metrics and habit improvement.

3. General Functional Requirements

- **Home Page**: Dashboard with access to all main modules.
- **About Us**: App goals and purpose.
- **Image Gallery**: Visuals on sustainable living.
- **Contact Us**: User query form (Name, Email, Phone, Message).
- **Search/Sort/Filter**: Easy navigation of app content and products.

4. Non-Functional Requirements

- **Safety**: No malicious or unnecessary downloads.
- **Accessibility**: Clear fonts, buttons, and user-friendly layout.
- **Performance**: Fast loading and smooth page transitions.
- **Scalability**: Supports increased users, data, and features.
- **Security**: User authentication and secure data handling.
- **Availability**: Operational 24/7 with minimal downtime.

5. Technical Requirements

Hardware:

- Intel Core i5 or higher
- 8 GB RAM
- 500 GB HDD
- SVGA Display
- Keyboard & Mouse

Software:

- **IDE**: Android Studio (Android 9+) or Flutter 1.2 (Dart 2.6+)
- **Database**: SQLite or Firebase

e-project Living guide.

6. Project Deliverables

- Problem Definition
- Design Specifications & Diagrams (Flowcharts, DFDs)
- Database Design
- .APK File (Android App)
- Test Data
- Installation Instructions
- User Login Credentials
- Video Demo of App
- Full Documentation (.zip with ReadMe.doc & .sql scripts)

SCOPE OF THE WORK (IN BRIEF)

The scope of this project covers the **design, development, and deployment** of a mobile application titled **Sustainable Living Guide**, aimed at promoting eco-friendly lifestyles. The app will assist users in reducing their environmental impact by offering tools such as **carbon footprint tracking**, **waste reduction monitoring**, **eco-product recommendations**, and **sustainable living tips**.

The application will be developed using **Flutter** (with Dart) for cross-platform mobile development and **Firebase** as the backend service. Firebase will be used for:

- **User Authentication** (login/signup)
- **Realtime Database** or **Cloud Firestore** (to store user activity and progress)
- **Cloud Storage** (for image and video hosting)
- **Firebase Hosting** (for admin dashboards or web companion if required)
- **Firebase Analytics** (to track user engagement)

The project will also feature **educational content**, **community interaction**, and a **personalized progress dashboard**. It will follow responsive UI/UX design principles for a smooth, accessible experience.

Final deliverables will include:

- A fully functional Android (.apk) app
- Firebase-connected backend
- Technical documentation
- Project diagrams
- Test data
- User credentials
- A demonstration video

Sustainable Living Guide App

Project Report Flowchart
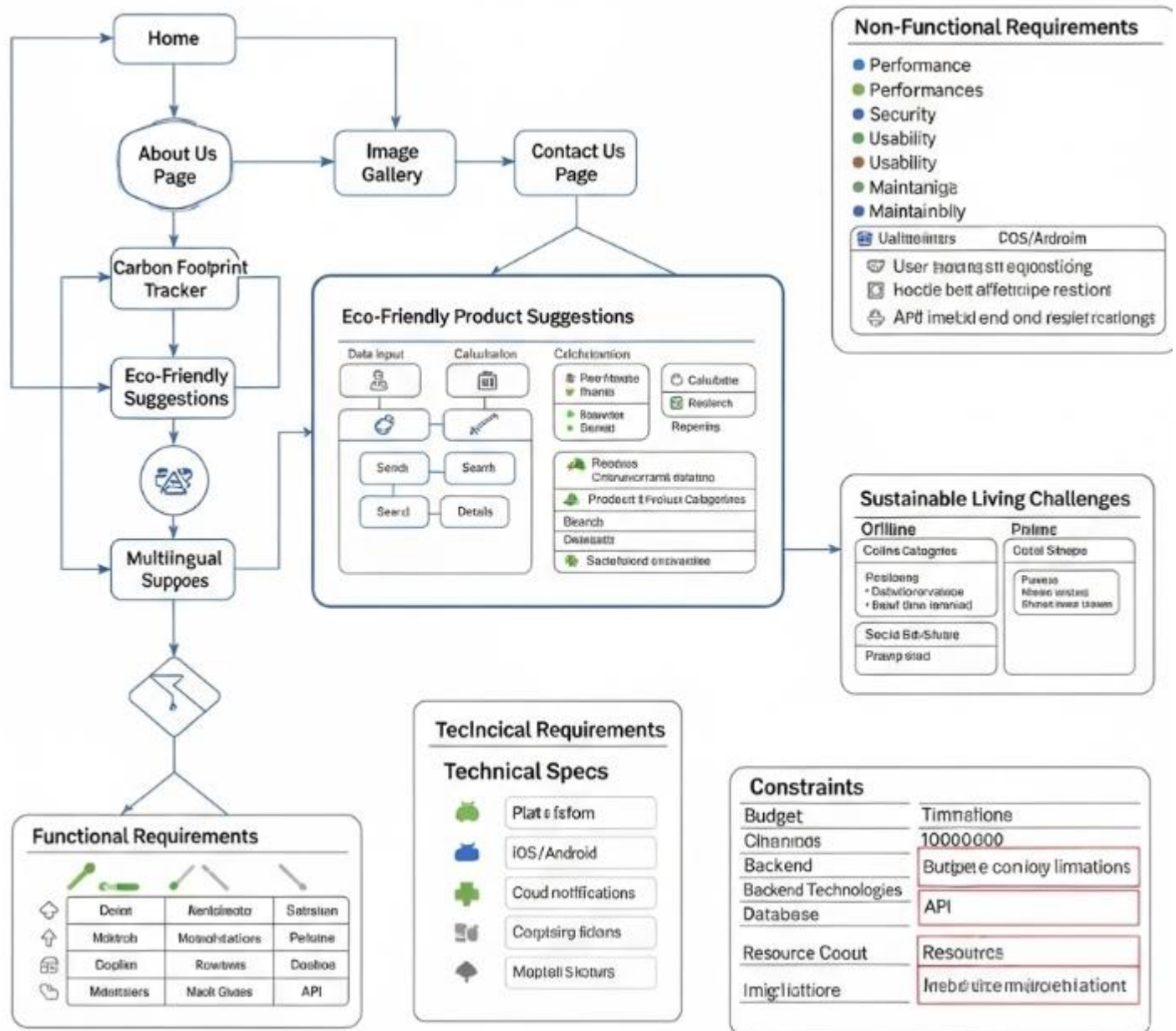
WIREFRAMES

1. Main Layout

e-project Living guide.

2. Splash screen

Living Guide
Your Journey to Sustainable Living

Preparing your eco-journey...

♡ Making Earth Greener

Start small, live sustainably,
make a difference

Version 1.0.0
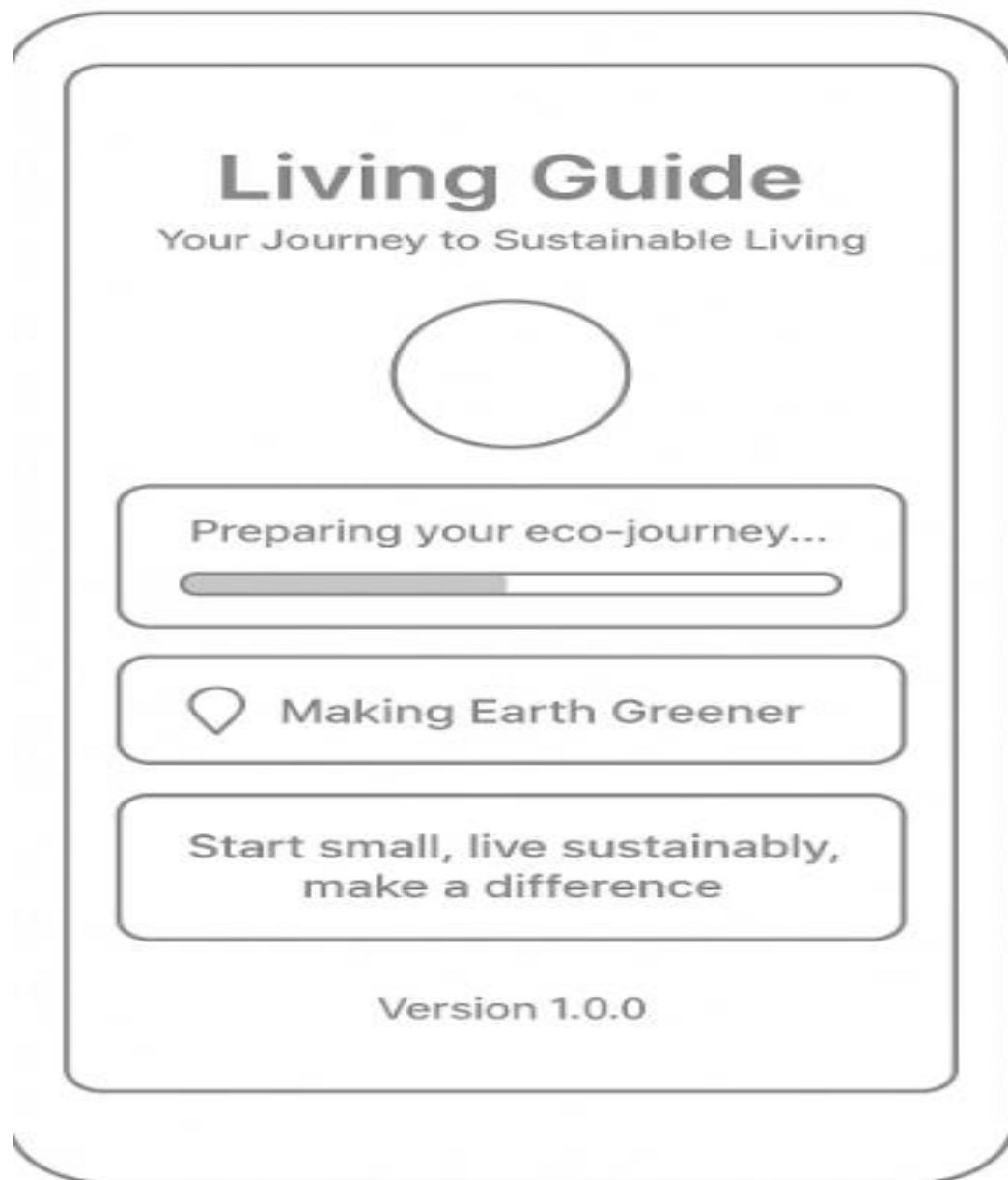
3. Login page/Sign up page.

Welcome Back!

Sign in to continue your sustainable journey

📧 Email

🔒 Password

☐ Remember me

Sign In

Forgot Password?

Sign In

Create New Account

Continue as Guest

Join EcoGuide

Start your sustainable journey today!

👤 Display Name

📧 Email

🔒 Password

🔒 Confirm Password

☐ I agree to the Terms & Conditions and Privacy

Create Account

Already have an account? Sign in

e-project Living guide.

4. Home Page

EcoGuide   [Sign Up] [Logout]

Your Journey to
Sustainable Living Starts Here

Track your carbon foctprities, discover liane, and join a comunity commited a a positive impact i on our planet.

[Start Your Journey] [Learn More]

50K+
Active Users

2.3M CO_2 Saved (kg)

15K+ CO_2 Saved (kg)

Our Impact Together

Carbon Rootprint Tracker
Monitsr rcour daily activities and seer sual erviornmental impact.

Eco-Friendly Products
Discover sustbon feerbs and see their friendsy envinerts impact.

Food
Erlucamal Ciwips
Diccover eurfirulike iwes, iwldes stlsuf a aeartainable products

Community Support
Learn practloort indiatsat nd nreice, puite, tips, and support on sagxot each cther.

Suejrotrrration
Lemitor suctical ways i tme, reuse, and recycle.

Educatiortal Content
Access artcles, vidors, vildes abdes abuild ecpstainable living

Sustaiballity Challenges
Join weekly and monthly chalinges to build eco-friendly habits

Waste Reduction Tips
Learn practical ways to-rs reuse, and recycle.

[Explore →] [Explore →] [Explore →] [Explore →]

5.Carbon foot tracker Page

Carbon Footprint Tracker

Log Activity   History   Charts

Log Your Daily Activities

Track your carbon footprint by logging your daily activities.

Activity Type

🚗 Transportation   ▭ Food   ▢ Energy   Waste   Shopping

Instance of 'ActivityType' Activity

Specific Activity

Specific Activity ▼

Quantity

Date

13/9/2025 📅

Notes (optional)

Log Activity

Carbon Impact by Activity

0 kg

Total This Week

📈

0 kg

Daily Average

6. ECO friendly Page

Search products...

Category

All

Sort by

Newest

Stainless Steel Water Bottle

Insulated stainless steel water bottle that keeps drinks cold for 24 hours or hot for 12 hours.

Kitchen ★ 4.7/5

$24.99

Mediterranean Chickpea Salad

A refreshing and healthy salad featuring chickpeas, fresh herbs, and a light lemon vinaigrette.

Easy ⏱ 0.8 kg

$12.99

Organic | Local | Vegetarian | Gluten-free | Mediterran-

+ Add to Meal Plan ♡

7. Recipe & meal planner Page

Recipes & Meal Planner

🔍 Search recipes...

Mediterranean Chickpea Salad

A refreshing and healthy salad featuring chickpeas, fresh herbs, and a light lemon vinaigrette.

Easy   🕐 20m   🚫 6 servings

$22.99

Organic | Local | Vegetarian | Gluten-free

+ Add to Meal Plan   ♡

8.Challenge page
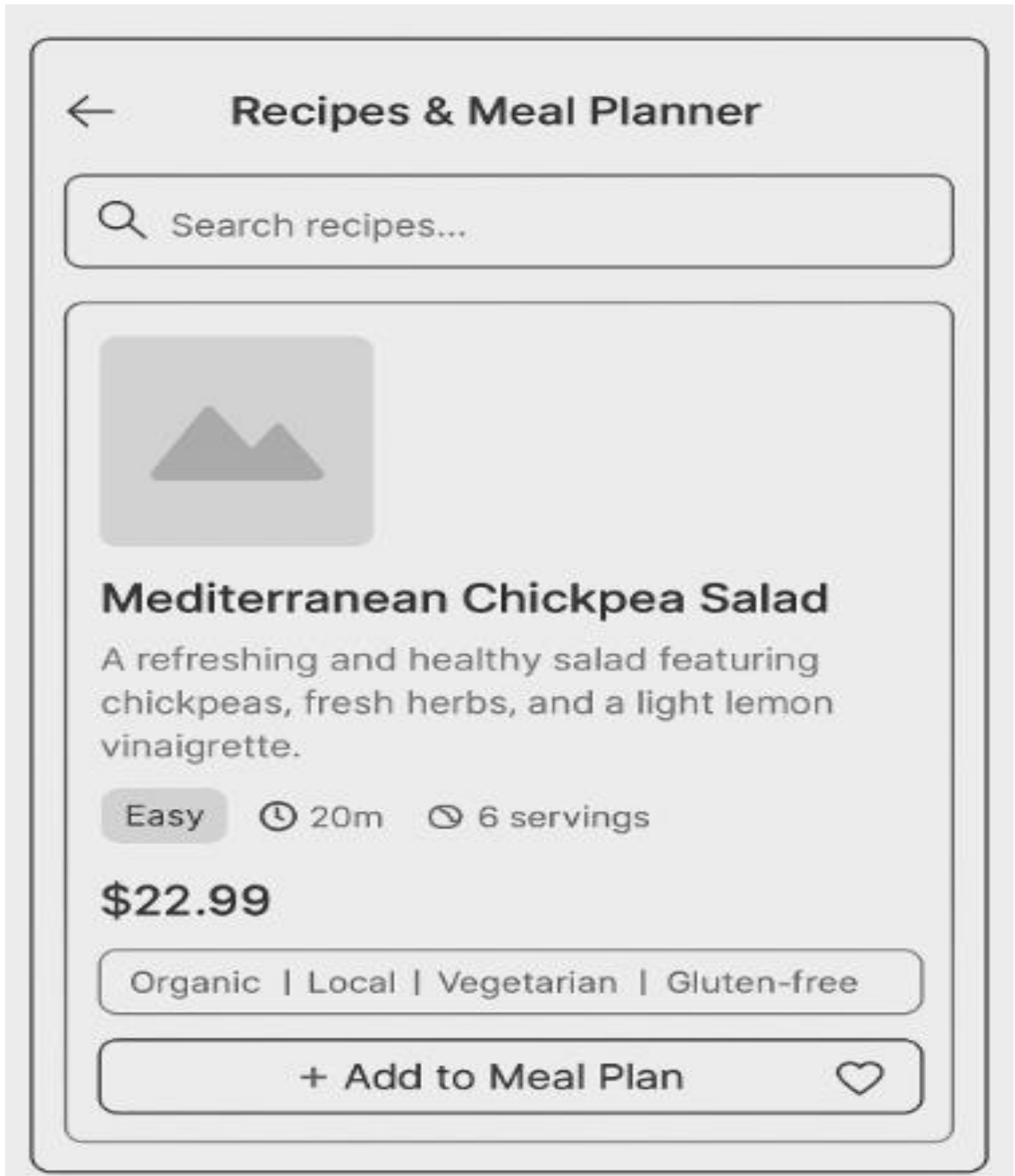
← Challenges

Active   **Available**   Completed

Available

Easy
Community Clean-Up
Organize or join a neighborhood clean-up event
Community
250 pts   1456

Medium
Sustainable Shopping Week
Buy only second-hand or eco-friendly items for a
Consumption
400 pts   892

Hard
Carbon Footprint Tracker
Track and reduce your weekly carbon emissions
Climate
600 pts   534

10.Waste tracker page

← Waste Reduction Tracker

Track Your Waste Reduction

Log your waste reduction efforts to see your impact over time.

Waste Type ∨

PLASTIC | Unit ∨

13/9/2025 📅

Notes (optional)

Add Waste Entry

Recent Entries

_____

_____

11.Dashboard page

Your Impact Dashboard

Track your progress, monitor your environmental impact,
and celebrate your achievements.

Carbon Footprint	Eco Actions
0.0 kg (0%)	0
Points Earned	**Days Active**
0	0

Active Challenges

Water Conservation Challenge

Water - 5 days left

Biodiversity Boost

Biodiversity - 10 days left

Eco-Friendly Transport

Transport - 3 days left
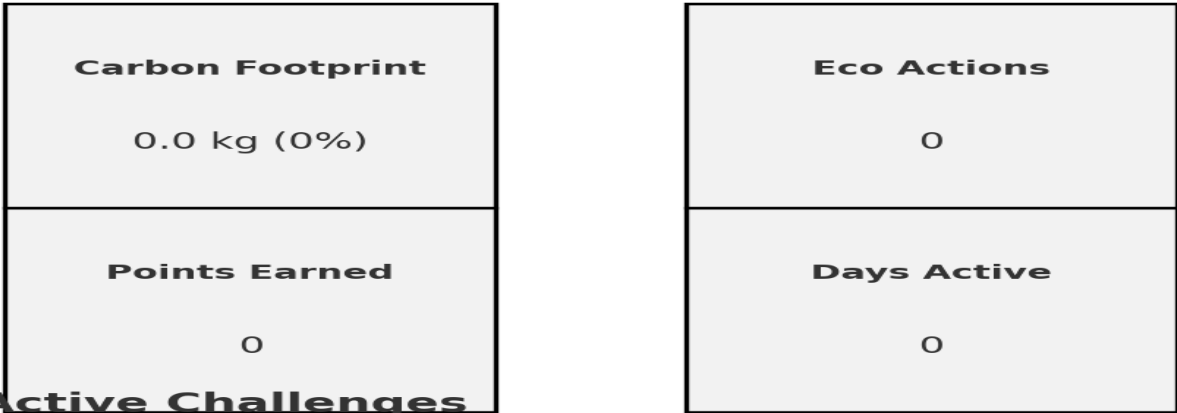
+ View All Challenges

Activity Breakdown

Chart

☐ Transportation

☐ Energy

☐ Food
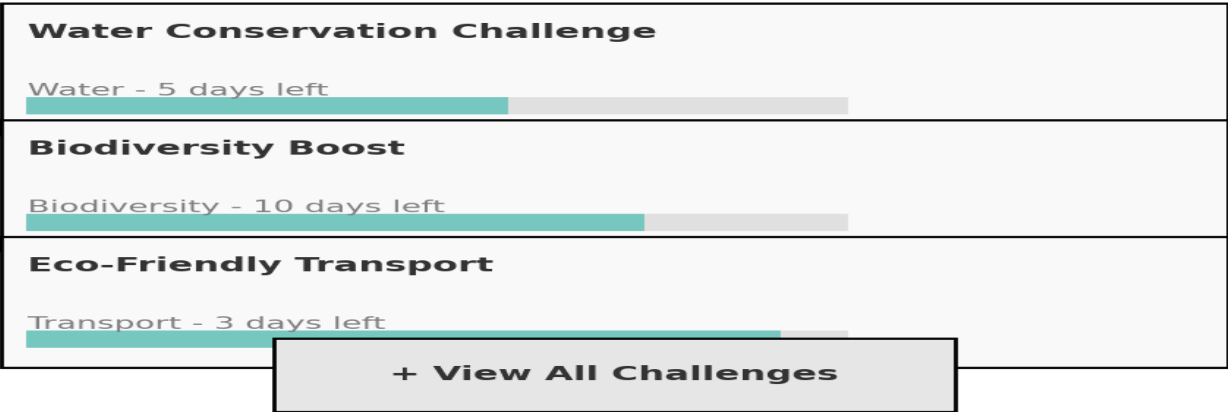
Environmental Impact Overview

No environmental data available

e-project Living guide.
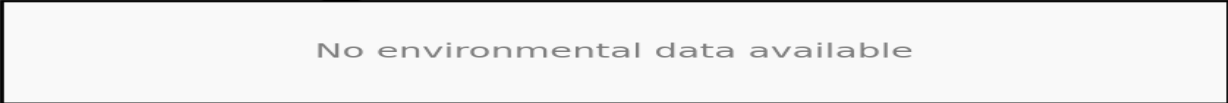
11About page
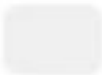
About EcoGuide

Your trusted companion on the journey to sustainable living

Our Mission

EcoGuide was founded with a imple yet powerful mission, to make sustainable living accessible and achievable for everyone. We believe that small changes, when multiplied by millions of people.

Our platform provides practical tools, resources, and community support to help you reduce your environmental footprint and live in harmony with our .

Sustainable Living

Discover practical tips and guides to reduce your environment

Waste Reduction

Learn how to properly recycle, compost, and mini-

Carbon Tracking

Monitor your carbon footprint and get personalized reco-

Our Impact

50,000+
Active Users

120+
Countries Reached

15,000+
Tons of CO_2 Redu-

95%
User Satisfaction

Our Team

Sarah Johnson
Founder & CEO

Michael Chen
Lead Developer

Elena Rodriguez
Sustainability Expert

**David Kim**
Community Manager

12.Gallery page

Gallery

A collection of tips and tricks to help you improve
your overall health and well-being

All Tips   Nutrition   Hydration   Sleep   Exercise

Stay Hydrated

Drink at least 8 glasses of
water a day to maintain
energy levels and support
bodily functions.

Hydration   Daily Habit

Eat a Balanced Diet

Focus on consuming whole
foods, including fruits,
vegetables, lean proteins,
and whole grains.

Nutrition   Diet

Prioritize Sleep

Aim for 7-3 hours of
quality sleep per night to
allow your body to repair
and rejuvenate.

Sleep   Recovery

More Wellness Tips

EcoGuide

Your journey to sustainable living
starts here. Practical toals,
resources, and community support
for a greenet litestyle

Quick Links

Home
Gallery
Tips

Contact

support@ecoguide.app
+123—456-2690
City. Country

e-project Living guide.

13.Profile page

Profile Information

Name
ai

Email
ai@gmail.com

Member Since
12/9/2025

Bio
Eco enthusiast passionate about sustainable living and reducing environmental impact. Love sharing tips and learning from the community.
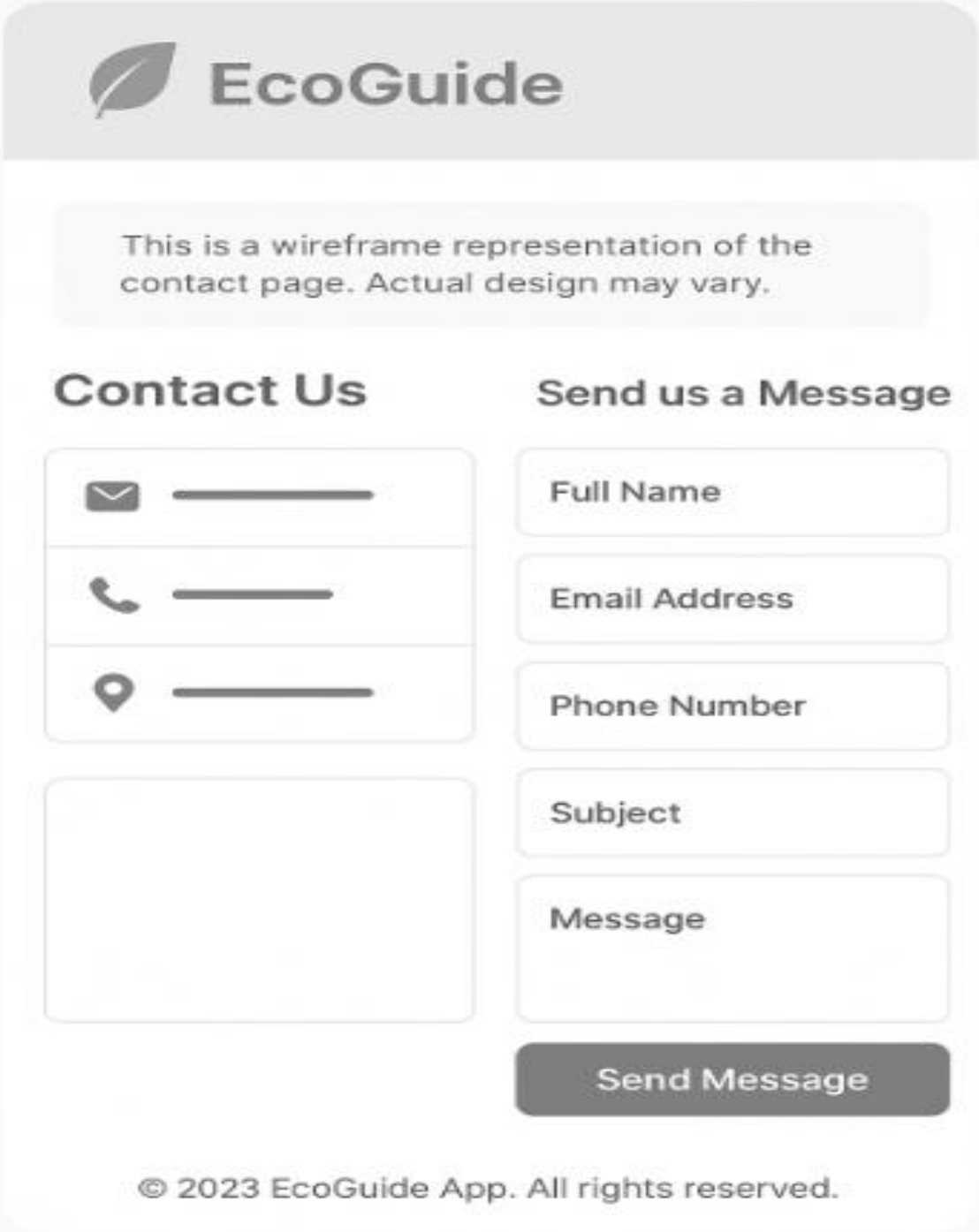
Edit Profile | Change Password

Privacy Settings

ai
Eco Enthusiast

42 Tips
18 Badges

Achievements

Edit Profile

14.Contact us page

Chcgmgn

Database

➤ Authentication

➤ Carbon entries

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➢ Meal plans

➢ Posts

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➢ Products

➢ recipes

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➢ User challenges

➢ User favorites

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➢ Users

➢ Waste entries

TASK SHEET REVIEW 1

No.	Task / Module	Actual Start Date	Actual Days	Team-mate Names	Status
1	**Home Page**	18-Aug-2025	1	Ali	☑
2	**About Us Page**	19-Aug-2025	1	Hannan Talha	☑
3	**Carbon Footprint Tracker**	20-Aug-2025	1	Anoosh Ali	☑
4	**Eco-Friendly Product Suggestions**	21-Aug-2025	1	Anoosh Ali	☑
5	**Sustainable Living Challenges**	22-Aug-2025	1	Anoosh Ali	☑
6	**Green Certifications & Labels Guide**	23-Aug-2025	1	BILAL	☑
7	**Waste Reduction Tracker**	24-Aug-2025	1	Anoosh Ali	☑
8	**Sustainable Recipes & Meal Planning**	25-Aug-2025	1	Anoosh	☑

9	Energy Conservation Tips	**26-Aug-2025**	**1**	Anoosh	✅
10	**Eco-Travel Suggestions**	27-Aug-2025	1	Ali	✅
11	**Community Forum & Support**	28-Aug-2025	1	Anoosh	✅
12	**Sustainability Progress Dashboard**	29-Aug-2025	1	Ali Anoosh	✅
13	**Educational Content**	30-Aug-2025	1	NIDA Hannan	✅
14	**Image Gallery**	31-Aug-2025	1	Nida	✅
15	**Contact Us Page**	01-Sep-2025	1	Hannan Talha	✅
16	**Search, Sort, and Filter**	02-Sep-2025	1	Nida	✅

TASK SHEET REVIEW 2

No.	Task / Module	Actual Start Date	Actual Days	Team-mate Names	Status
1	**Integrate Modules**	03-Sep-2025	3	Nida	✅
2	**UI/UX Test**	06-Sep-2025	2	Ali	✅
3	**Performance Test**	08-Sep-2025	1	Anoosh	✅
4	**Security Test**	09-Sep-2025	1	Hannan	✅
5	**DB Test**	10-Sep-2025	1	Anoosh	✅
6	**Bug Fix & Optimize**	11-Sep-2025	1	Ali Anoosh	✅
7	**Scalability Test**	12-Sep-2025	1	Talha	✅
8	**Generate APK**	12-Sep-2025	1	Anoosh Bilal	✅
9	**User Docs**	13-Sep-2025	1	Ali	✅
10	**Project Report**	13-Sep-2025	1	Ali	✅
11	**Demo Video**	14-Sep-2025	1	Hannan	✅
12	**Final Submission**	16-Sep-2025	1	Ali Anoosh Hannan Bilal Talha Nida	✅

Thank you