



DIABUDDY

UX/UI CASE STUDY

Project Overview

Project Brief

Diabuddy is a mobile app designed for diabetes management, awareness, and community support, targeting diabetics (22 survey respondents), their families/friends (~70), and the general public (~17). Built from a bilingual survey of 109 participants (55% female, mostly urban, aged 10–60+), patient research, and analysis of apps like mySugr, it integrates tracking, education, and social features using CGM, smart reminders, and AI nutrition tools. As of September 2025, it's in the post-research phase, refining a user-friendly, bilingual (English/Arabic) interface to improve health outcomes and reduce stigma.





Problem Statement

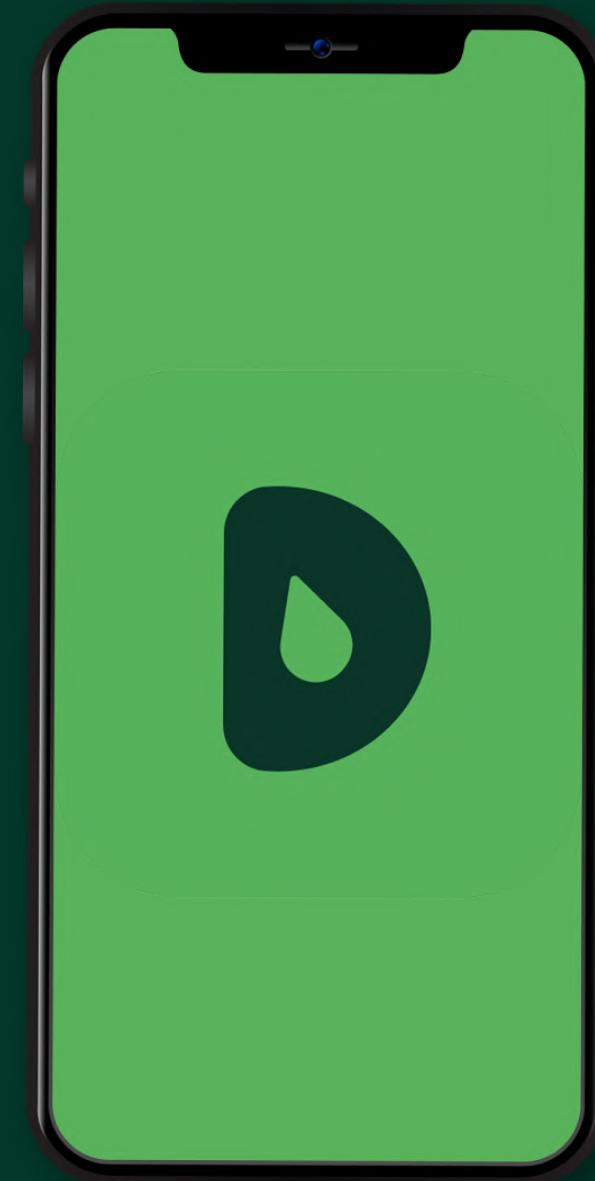
Diabetes patients struggle with meal diversity and adherence (70% report issues), need continuous blood glucose monitoring, and face challenges tracking diet, calories, and nutrients manually. Emotional and social support is lacking (65% note stress/isolation), with limited health information access (70% of non-patients unaware of Type 1 vs. Type 2), poor doctor communication, and risks of forgetting meds or sudden sugar/pressure spikes, worsened by family history (65%) and variable tech comfort (7.2/10 average).

Solution Statement

Diabuddy offers a smart system for daily meal recommendations tailored to patient needs, glucose data input with CGM integration, and automated calorie/nutrient tracking. It includes an in-app community for sharing and peer support, educational videos from doctors/nutritionists, periodic doctor check-ins with dashboards, and smart notifications for meds and emergencies, enhanced by CGM, smart pens, and cuffless BP monitors in a bilingual interface.

Project Objectives

Diabuddy aims to enable easy tracking of blood sugar, calories, and nutrients with shareable reports, foster a supportive app community for motivation and knowledge exchange, and boost health awareness via updated educational content. It also seeks to improve safety with intelligent alerts for sugar levels and meds, targeting 80% confidence in management and fewer complications.



Design Process



Empathize

Research
Star Bursting
Crazy Eights
Mind Maps
Stakeholders interview
Competitive Analysis
User Research

Define

Persona
Empathy Map
User Journey

Ideate

User Flow
Information architecture
Card sorting

Prototype

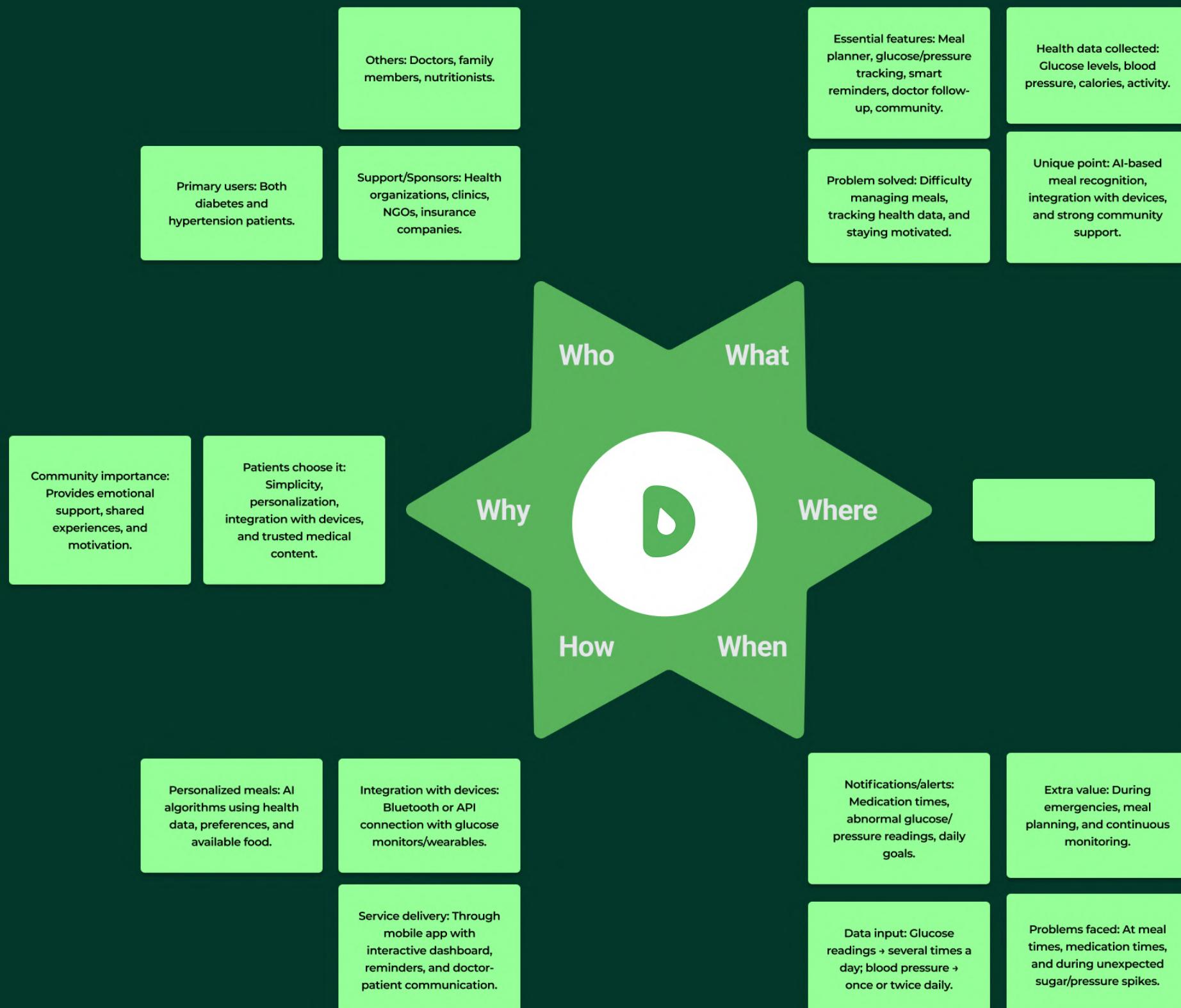
Low Fidelity Prototype
Mid Fidelity Prototype
High Fidelity Prototype
Visual Design
UI Styling
Visual Design
Prototype

Test

Usability Testing
iterating

Empathize Phase

Star Bursting



Empathize Phase

Crazy Eights

Meal System

Display "Today's Meals" in an organized way tailored to the user's needs.

Ability to scan meals using AI to calculate calories and ingredients.

A dedicated section for diabetes-friendly meals.

Customize the diet plan based on (weight - age - activity - type of diabetes).

Suggest healthy Drinks.

Educational Content

Articles and content explaining symptoms and emergency cases.

Daily notifications with tips, information, or motivational content.

Verified recommendations from doctors displayed in the app and community.

Chatbot supported with content from medical specialists.

Smart Reminders

Warnings when medication is skipped.

Flexible alerts (sound/vibration/silent).

Reminders for insulin doses or other medications.

Notifications for upcoming medical checkups.

Community & Social Support

Quick meal or drink suggestions for emergencies.

Immediate first-aid instructions.

Alerts when glucose levels are critically high or low.

Emergency button to call ambulance and share location.

Device Integration & Dashboard

Regular tracking of blood pressure and weight.

Personal Dashboard showing glucose levels - calories - activity - medication.

Enter health data automatically or manually.

Connect the app with glucose or blood pressure devices via Bluetooth.

Community & Social Support

Motivational content from patients or doctors.

In-app support groups for diabetes and hypertension patients.

Voting or commenting on recipes and suggestions.

Post updates, stories, recipes, and tips from users.

Doctor-Patient Follow-up

Notifications for required tests and medical checkups.

Weekly or monthly evaluation reports about the patient's condition.

Ability to contact the doctor through their details (call/visit).

Direct chat with the doctor for follow-up.

Goals & Motivation

Motivational or warning alerts depending on compliance.

Daily challenges (10,000 steps - water intake - healthy meal).

Simple and clear language avoiding complex medical terms.

Easy-to-use interface suitable for elderly patients.

Ease of Use

Ability to customize fonts and colors for visually impaired users.

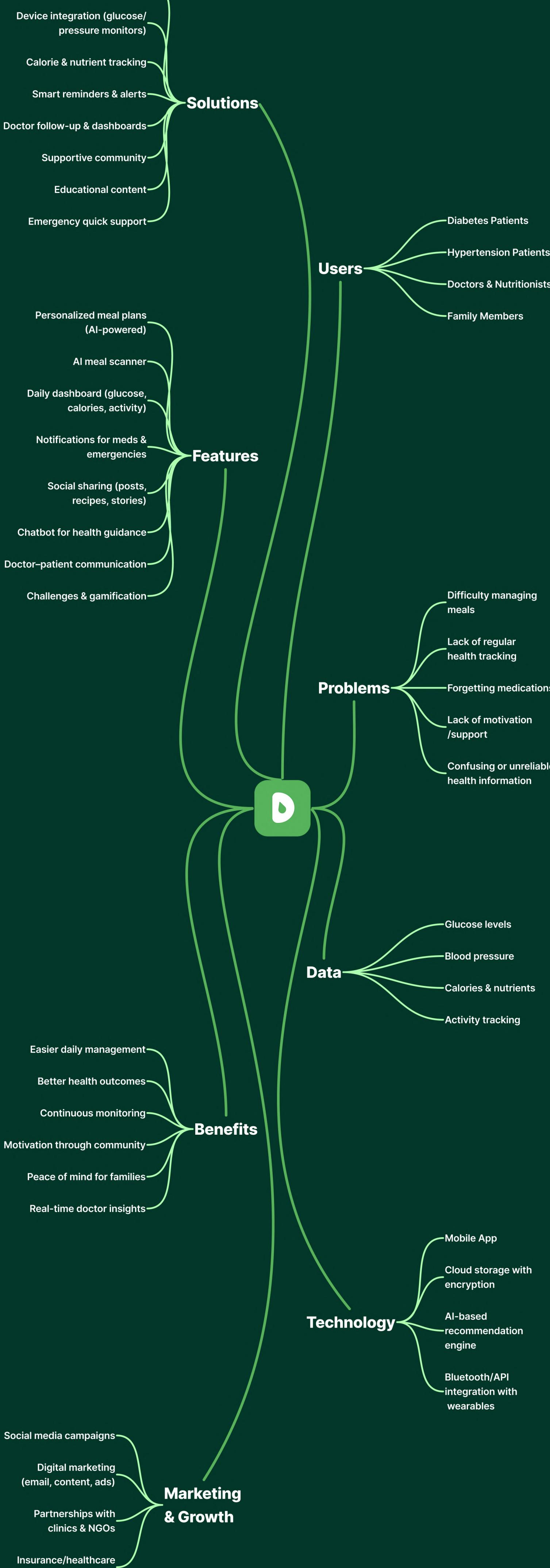
Minimal steps to quickly access any feature.

Simple and clear language avoiding complex medical terms.

Easy-to-use interface suitable for elderly patients.

Empathize Phase

Mind Map



Empathize Phase

Stakeholders Interview

Background & Vision

Can you describe the main vision of the app in your own words?

What motivated you to start this project?

What problem do you want to solve first and foremost?

Who do you see as the primary users of the app (patients, doctors, families)?

Business & Success

What does success look like for this app after launch?

How will you measure the app's success (user adoption, health impact, revenue)?

Who do you see as potential competitors, and how should we differentiate?

Do you have specific markets or regions you want to target first?

Features & Priorities

From your perspective, what are the "must-have" features for the first release?

Are there any features you consider "nice-to-have" no essential in the beginning?

Do you want focus on community features(sharing, groups) in early version?

How important is it to integrate with medical devices (like glucose) from day one?

Users & Needs

How do you expect patients to interact with the app daily?

How should family members or caregivers be involved in the app?

What kind of value should the app provide to doctors?

What challenges do you think users might face in adopting this app?

How important is data security and compliance with regulations (GDPR, HIPAA)?

Should patients be able to share their health data directly with doctors?

Engagement & Growth

How do you want to promote the app (social media, digital marketing, partnerships)?

Do you want gamification or motivational features to keep users engaged?

Would you consider partnerships with hospitals, insurance companies, or NGOs to scale adoption?

Risks & Challenges

What risks do you see in building or launching this app?

What's your biggest concern about user adoption?

Are there financial, technical, or regulatory challenges we need to plan for?

Empathize Phase

Competitive Analysis

Features	mySugr®	BeatO	Health 2 Sync
Glucose Tracking & Device Integration	✓	✓	✓
AI Food & Nutrition Tracking	✗	✗	✗
Doctor Sharing & Reports (basic)	✓	✓	✓
Reminders & Alerts	✓	✗	✓
Education & Awareness (basic)	✓	✓	✓
Psychological & Community Support	✗	✓	✓
Family Connectivity (free)	✗	✓	✗
Emergency Support	✗	✗	✗
Cultural Relevance (Egyptian diet)	✗	✗	✗
User Experience & Accessibilty	✗	✗	✓

Empathize Phase

Research Key Outcomes



The survey of 109 respondents for Diabuddy reveals a predominantly young demographic (40% aged 21-30), with 55% female and 70% urban dwellers, indicating potential for high app adoption among tech-savvy urban youth.

A significant 65% reported a family history of diabetes, aligning with research on genetic factors in Type 2 diabetes, emphasizing the need for preventive education features.



Tech comfort averaged 7.2/10, with 60% rating high (8-10), suggesting the app's bilingual interface and simple UX can accommodate varying user skills while integrating advanced tools like CGM.

Among the 22 diabetic respondents, 70% struggled with diet adherence and 65% reported emotional stress, highlighting the value of features like meal recommendations and mood trackers seen in competitors like mySugr.



80% of diabetics desired reminders for meds and sugar checks, supporting the inclusion of smart notifications and emergency alerts as outlined in DiaFeatures.

For ~70 respondents knowing someone with diabetes, 55% noted stigma and emotional burdens, underscoring the importance of in-app communities for peer support and knowledge sharing.



Awareness gaps were evident in ~17 general respondents, with 70% unaware of Type 1 vs. Type 2 differences, reinforcing the need for educational content on causes, symptoms, and effects as in the Diabetes Research document.

Lifestyle insights show many respondents exercise rarely (common response), smoke minimally (mostly no), and have somewhat healthy eating habits, but frequent symptoms like fatigue (sometimes/often), pointing to opportunities for activity tracking and prevention tips.



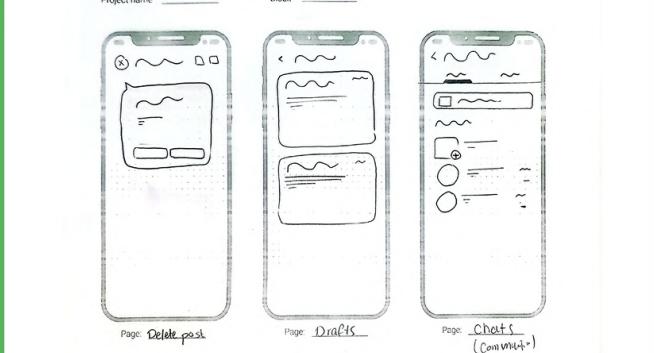
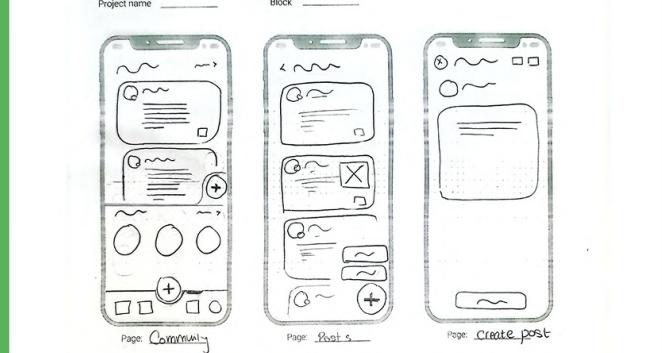
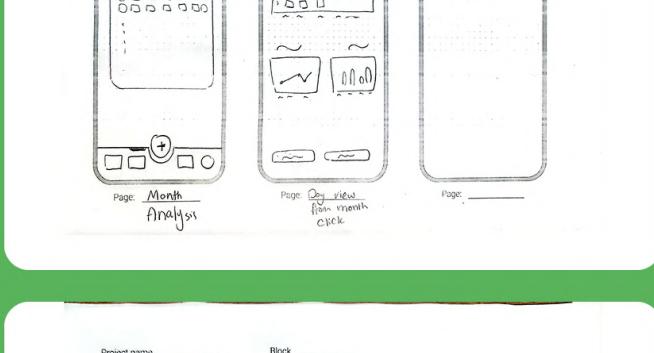
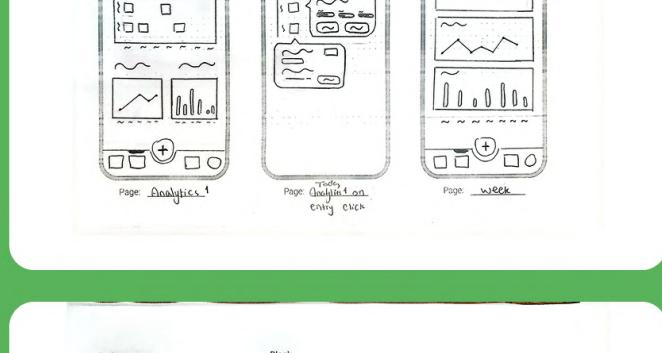
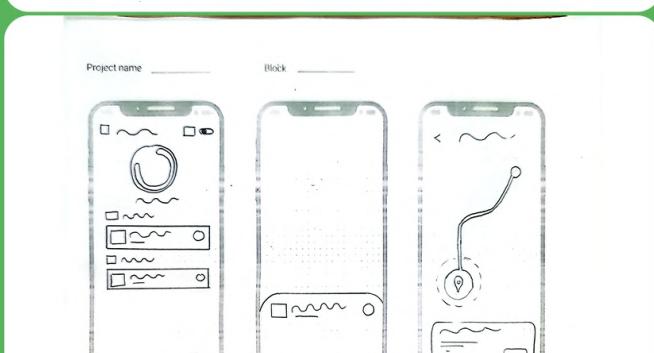
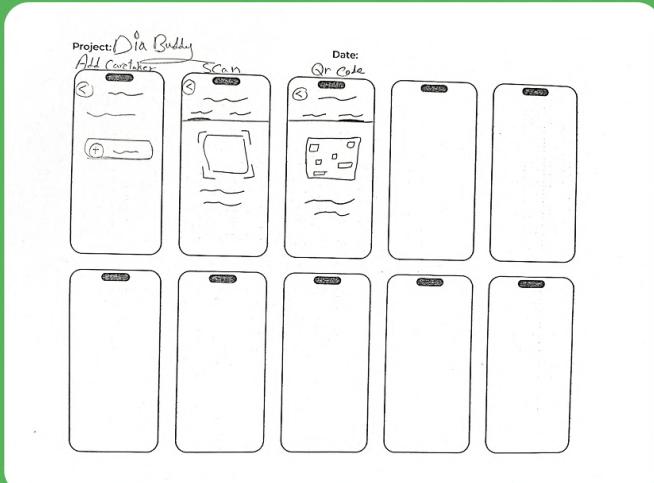
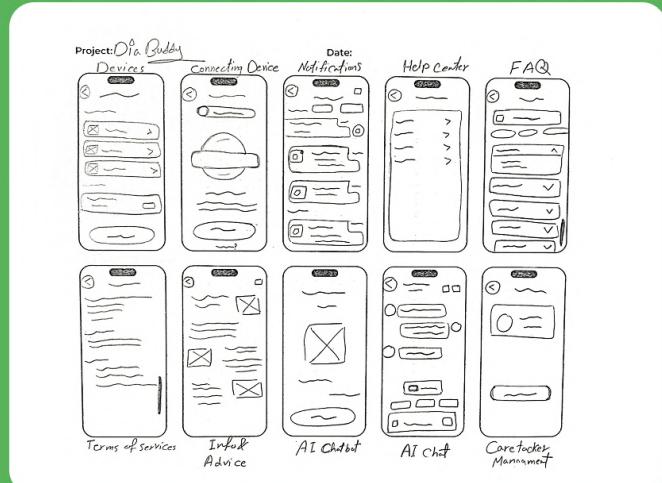
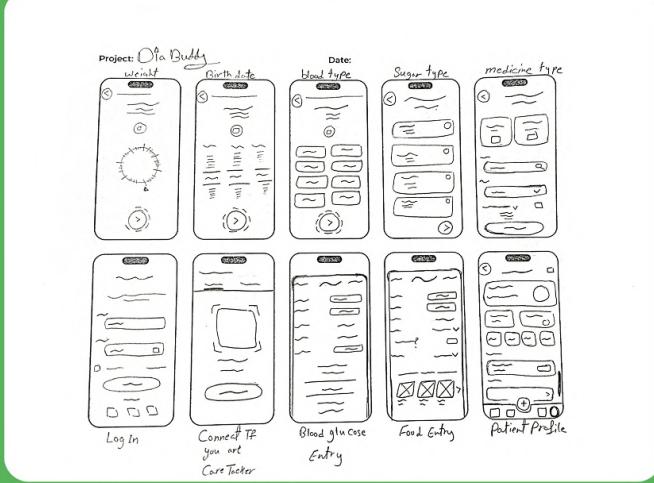
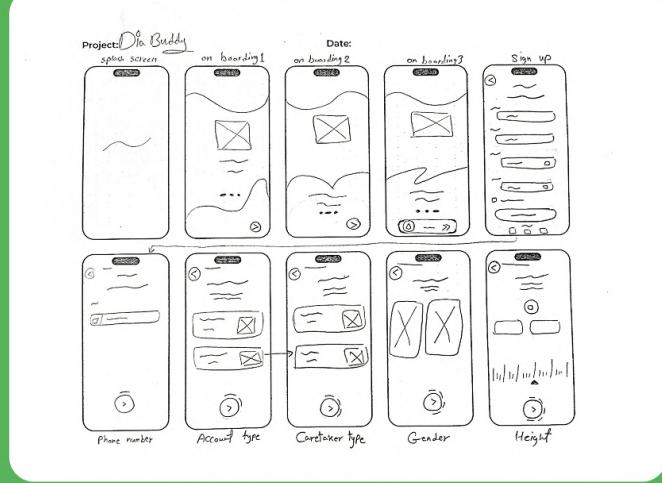
Open-ended suggestions from diabetics focused on blood sugar estimation without devices, personalized diets, and insulin accessibility, which can inform AI-driven calculators and integrations with tech solutions like smart insulin pens.

Overall, the data indicates strong demand for a holistic app combining tracking (e.g., glucose logging as in Glucose Buddy), education, and support, aiming to boost confidence in management (average 6/10 currently) and reduce health impacts on daily life (reported as somewhat/a lot by many).



Empathize Phase

Low Fidelity Prototypes



Define Phase

Personas

Ahmed Hassan

Accountant



Age: 45
Occupation: Accountant
Location: Cairo, Egypt
Married with 2 children
Has type 2 Diabetes for 8 years

Bio

Ahmed is a middle-aged professional who spends most of his day at the office. He struggles with keeping a balanced diet due to work stress and lack of time. He is motivated to stay healthy for his family but finds it difficult to maintain consistency.

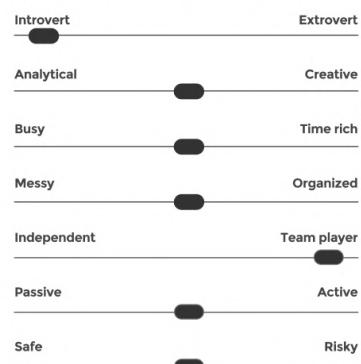
Needs and expectations

- Easy-to-use tool for meal planning.
- Reliable glucose tracking and reminders.
- Educational content for his condition.

Interests

- Healthy cooking and trying new recipes.
- Walking or light exercise after work.
- Reading articles about health and nutrition.

Personality



Motivations

- Staying healthy for his children.
- Reducing dependency on medication.
- Feeling in control of his health.

Goals

- Keep blood sugar levels stable.
- Avoid diabetes-related complications.
- Have a variety of meal options without getting bored.

Pain points and frustrations

- Boredom from repetitive meals.
- Forgetting to log glucose readings.
- Confusion due to contradictory health advice online.

Sara Mahmoud

Endocrinologist



Age: 38
Occupation: Endocrinologist
Location: Alexandria, Egypt
Single
Works at a government hospital and also runs a private clinic

Bio

Dr. Sara is an experienced endocrinologist who sees many diabetes and hypertension patients daily. She is passionate about preventive care and believes technology can bridge the gap between doctors and patients.

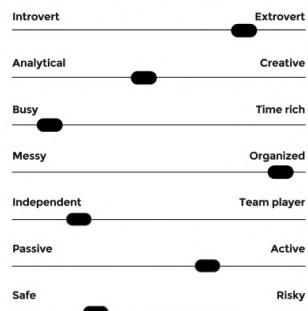
Needs and expectations

- A reliable system to monitor patients remotely.
- Clear visual data on glucose and nutrition trends.
- Patients who engage actively with their plan.

Interests

- Researching new medical studies on diabetes.
- Using digital tools to improve healthcare delivery.
- Attending medical conferences and workshops.

Personality



Influences

- Clinical guidelines and best practices.
- Peer discussions with other specialists.
- Feedback and outcomes from her patients.

Motivations

- Desire to improve quality of life for her patients.
- Professional reputation as a caring and effective doctor.
- Interest in adopting innovative healthcare solutions.

Goals

- Improve patient compliance with treatment plans.
- Access accurate and real-time patient data.
- Save time during consultations with well-prepared reports.

Pain points and frustrations

- Patients not following her advice consistently.
- Lack of reliable and continuous patient data.
- Overload of patients with limited consultation time.

Define Phase

Empathy Map



Ideate Phase

Card Sorting

Screen 1: On boarding

Rawan



Darine

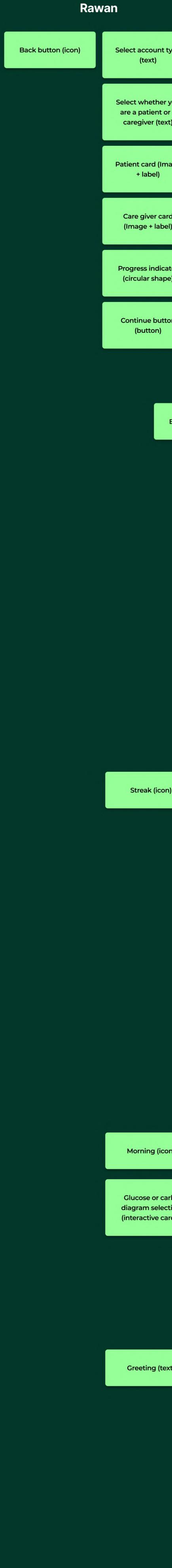


Ibrahim

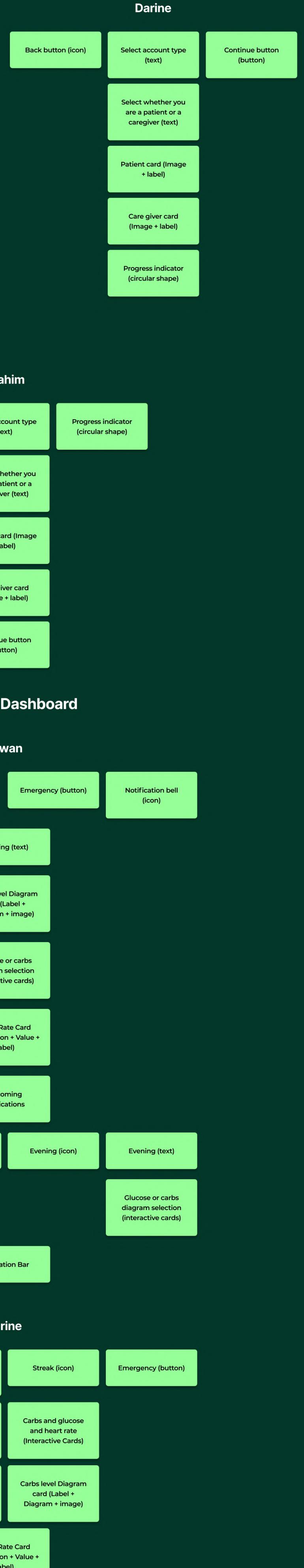


Screen 2: Sign up

Rawan



Darine

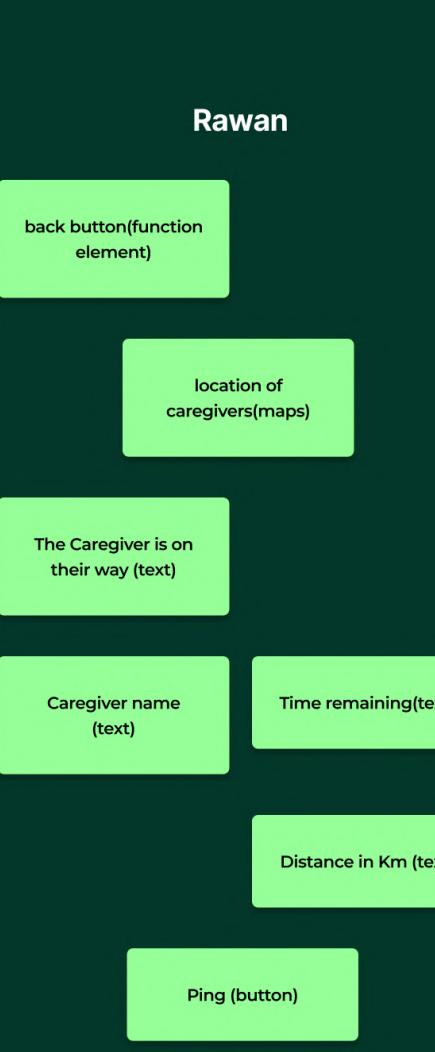


Ibrahim



Screen 3: Account Type

Rawan



Darine



Ibrahim



Screen 4: Dashboard

Rawan



Darine



Ibrahim

Screen 5: Blood glucose entry

Rawan

Darine

Ibrahim

Screen 6: Medication

Rawan

Darine

Ibrahim

Screen 7: On Emergency click

Rawan

Darine

Ibrahim

Screen 8: Patient profile

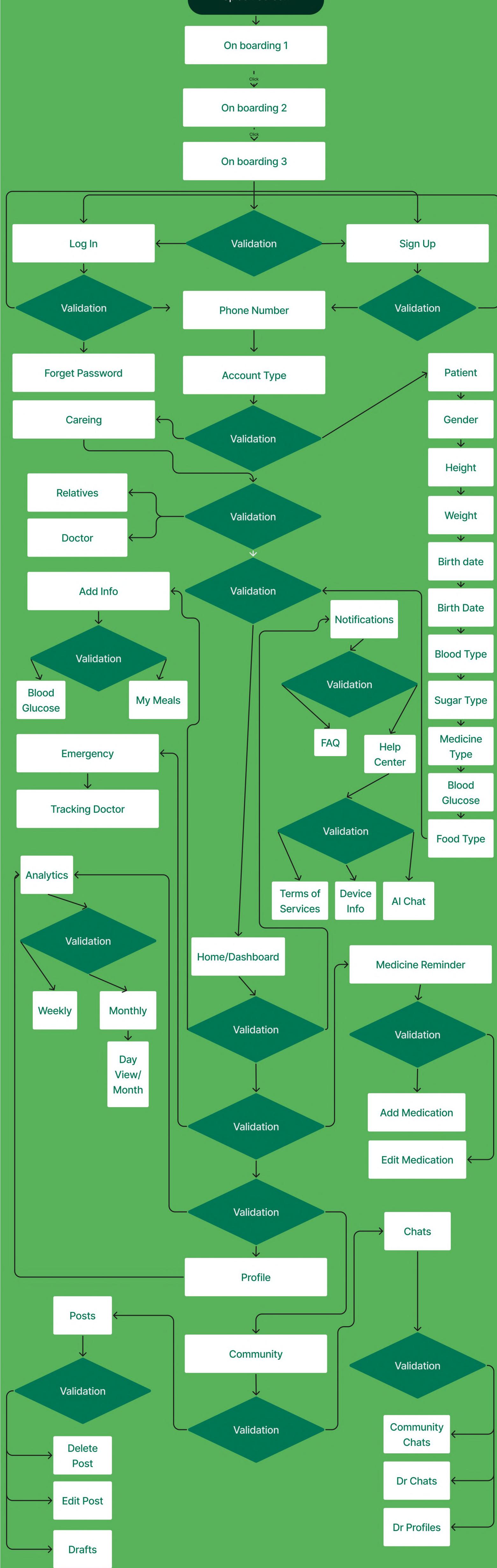
Rawan

Darine

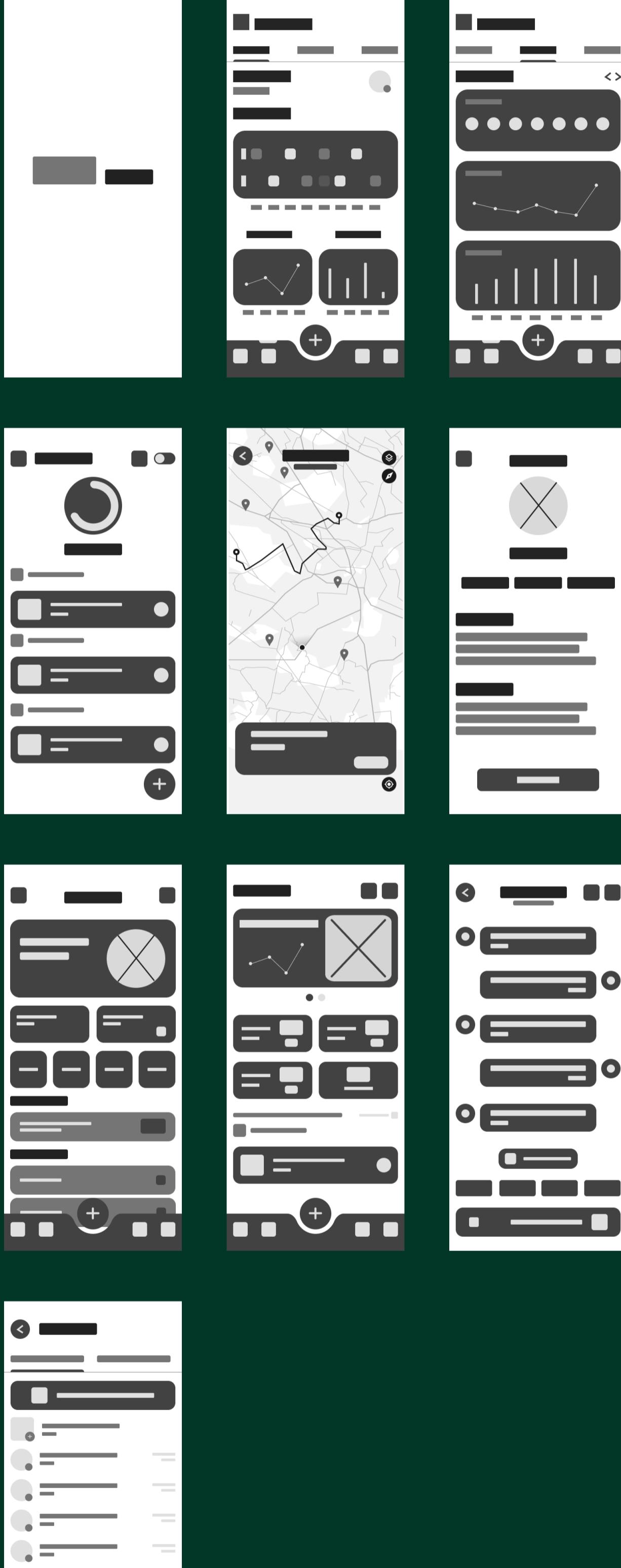
Ibrahim

Ideate Phase

User flow



Mid Fidelity



High Fidelity

