

ANNAI MIRA COLLEGE OF ENGINEERING AND TECHNOLOGY

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



NM1020–UI&UX DESIGN(NAAN MUDALVAN)

Name :

Register Number :

Year & Branch :

Semester :

Academic Year :

ANNAI MIRA COLLEGE OF ENGINEERING AND TECHNOLOGY

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CERTIFICATE

This is to Certify that the Bonafide record of the practical work done by
Register Number..... of IIIrd year B.E(Computer Science and Engineering)
submitted for the B.E.- Degree practical examination (Vth Semester) in **NM1020–UI&UX DESIGN(NAAN MUDALVAN)** during the academic year **2025 – 2026**.

Staff in-Charge

Head of the Department

Submitted for the practical examination held on _____

Internal Examiner

External Examiner

Introduction to UI & UX Design

(Naan Mudhalvan – NM1020)

1. What is UI & UX Design?

UI (User Interface) and **UX (User Experience)** are two key parts of digital product design that work hand-in-hand to create user-friendly, attractive, and effective applications or websites.

- **User Interface (UI)** focuses on the **visual design and layout** — how things look on the screen. It includes buttons, icons, color schemes, typography, spacing, and imagery.
- **User Experience (UX)** focuses on the **overall journey of the user** — how easy, efficient, and enjoyable it is to use the product. It involves research, user flows, wireframes, and usability testing.

In simple terms:

UI is what people see — UX is what people feel.

A good UI/UX design ensures that the product is **visually appealing**, **intuitive**, and **helps users achieve their goals quickly**.

2. Difference Between UI and UX

Aspect	UI (User Interface)	UX (User Experience)
Focus	Looks and aesthetics	Feel and functionality
Goal	To make the interface attractive and consistent	To make the experience smooth and satisfying
Includes	Colors, fonts, layouts, icons, visual styles	User research, personas, wireframes, user testing

Aspect	UI (User Interface)	UX (User Experience)
Example	The button color, shape, and animation	How easy it is to complete a task using that button

3. Importance of UI/UX Design

- Helps users navigate easily
- Builds trust and brand identity
- Reduces user frustration and errors
- Increases engagement and conversion rate
- Improves accessibility and usability for all

A well-designed interface creates a **positive impression**, while good user experience keeps users **coming back**.

What is Figma?

Figma is a **cloud-based UI/UX design tool** used for creating digital designs, prototypes, and design systems collaboratively. It allows multiple designers to work together in real-time — similar to Google Docs, but for design.

Key Features of Figma:

1. **Web-Based Collaboration** – No installation required; works directly in the browser.
2. **Vector Editing** – Supports precise and scalable vector-based design.
3. **Components and Variants** – Reusable design elements for consistency.
4. **Auto Layout** – Automatically adjusts spacing and alignment when content changes.

5. **Prototyping** – Create interactive flows and animations without writing code.
 6. **Design Systems** – Build and maintain brand guidelines in one shared library.
 7. **Developer Handoff** – Developers can easily inspect, copy, and export assets.
-

4. Why Figma is Used in UI/UX Design

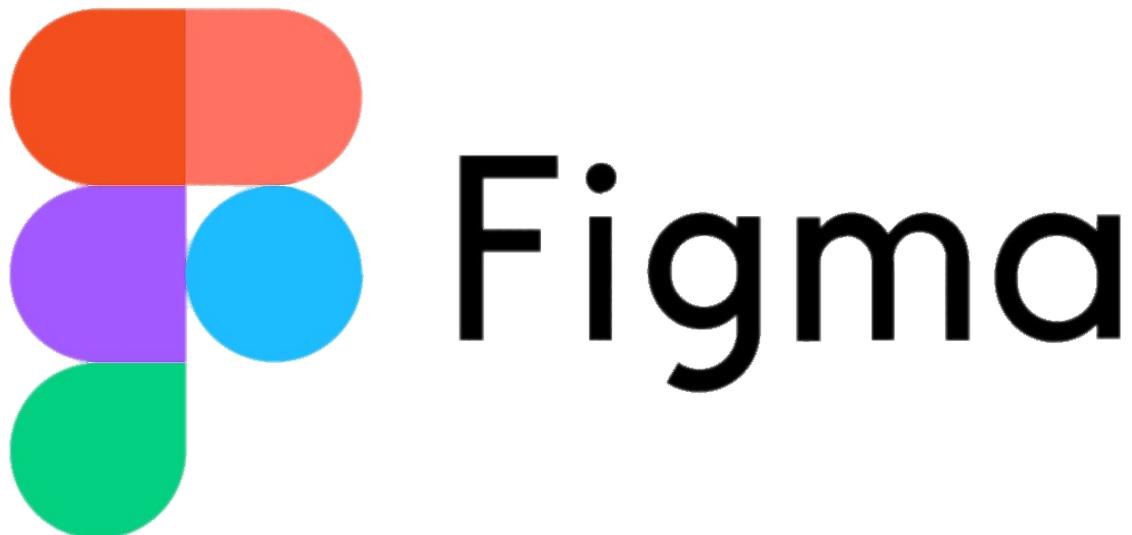
- Enables **collaboration** between designers, developers, and clients.
 - Speeds up the **design-to-prototype** process.
 - Supports **responsive design** for multiple devices.
 - Helps create **wireframes, mockups, and prototypes** in one tool.
 - Cloud storage makes it easy to access and update projects anywhere.
-

5. Figma in Naan Mudhalvan Course

In the **Naan Mudhalvan (NM1020)** course, Figma is used to:

- Learn **practical UI/UX design** skills.
- Build **mini projects** like task management, e-commerce, or health tracking apps.
- Understand how to design for **both mobile and web platforms**.

- Showcase your design process — from **user research** to **final prototype** — in one place.
-



6. Conclusion

UI and UX design together form the **heart of digital product creation**. With tools like **Figma**, students can practically explore user-centered design — focusing not just on how an app looks, but on how it works for real users.

By mastering Figma and UX principles, designers can create experiences that are both **beautiful and meaningful**, improving lives one interface at a time.

Project -1
E-COMMERCE

Naan Mudhalvan – UI/UX Design using Figma

Title: E-Commerce Redesign

Abstract:

The E-Commerce Application project focuses on the design and development of a user-centered online shopping platform inspired by Flipkart's functional model and user experience standards. The project aims to re-imagine an e-commerce interface that delivers a seamless, efficient, and enjoyable shopping journey for users through the application of modern UI/UX design principles.

In an age where digital retail has become a daily necessity, users expect convenience, trust, and personalization from e-commerce platforms. This project emphasizes simplicity, responsiveness, and a visually engaging interface that facilitates easy product discovery, comparison, and purchase. Using Figma as the primary design tool, the project progresses from user research and persona creation to wireframing, high-fidelity prototyping, and usability testing.

The resulting design demonstrates how an optimized layout, intuitive navigation, and emotional engagement can improve overall satisfaction and conversion rates. The project also integrates accessibility, responsive adaptation, and visual consistency to ensure a reliable and enjoyable experience across devices.

Tools Required:

- **Figma** – For interface design and prototyping
- **Google Docs / Sheets** – For documentation and feedback
- **Icons8 / Material Icons** – For icons and UI assets

Objective:

The objective of the project is to design a user-friendly and efficient e-commerce platform that provides a rich online shopping experience while maintaining clarity, speed, and usability. The project aims to merge aesthetic appeal with functional precision.

Specific Objectives:

- To understand the needs and expectations of modern online shoppers through user research and competitor analysis.
- To create an intuitive, minimalist interface that prioritizes smooth navigation and fast product access.
- To design responsive layouts adaptable to mobile, tablet, and desktop screens.
- To incorporate essential e-commerce functions—search, product details, cart, and checkout—with minimal clicks.
- To establish a consistent design system using Figma components for scalability and visual harmony.
- To validate the prototype through usability testing and iterative refinement.

By combining visual aesthetics with user empathy, the project aims to produce a design that mirrors Flipkart's functionality while improving clarity, engagement, and accessibility.

Problem Statement:

The rise of online shopping has led to an overflow of e-commerce applications, many of which fail to deliver a consistent and user-friendly experience. Common issues include cluttered product pages, confusing checkout processes, poor search functionality, and intrusive advertisements.

Platforms such as Flipkart and Amazon have established strong design systems, yet even they face challenges such as navigation overload, information fatigue, and limited personalization for diverse user segments.

The E-Commerce Application project addresses these concerns by proposing a simplified, high-performance shopping interface that prioritizes speed, usability, and personalized product presentation. It eliminates unnecessary visual clutter, streamlines checkout, and introduces a modular design adaptable to various devices.

The project's design philosophy is grounded in three core principles: clarity, trust, and convenience — ensuring users can browse, compare, and purchase products with confidence and ease.

Information Architecture:

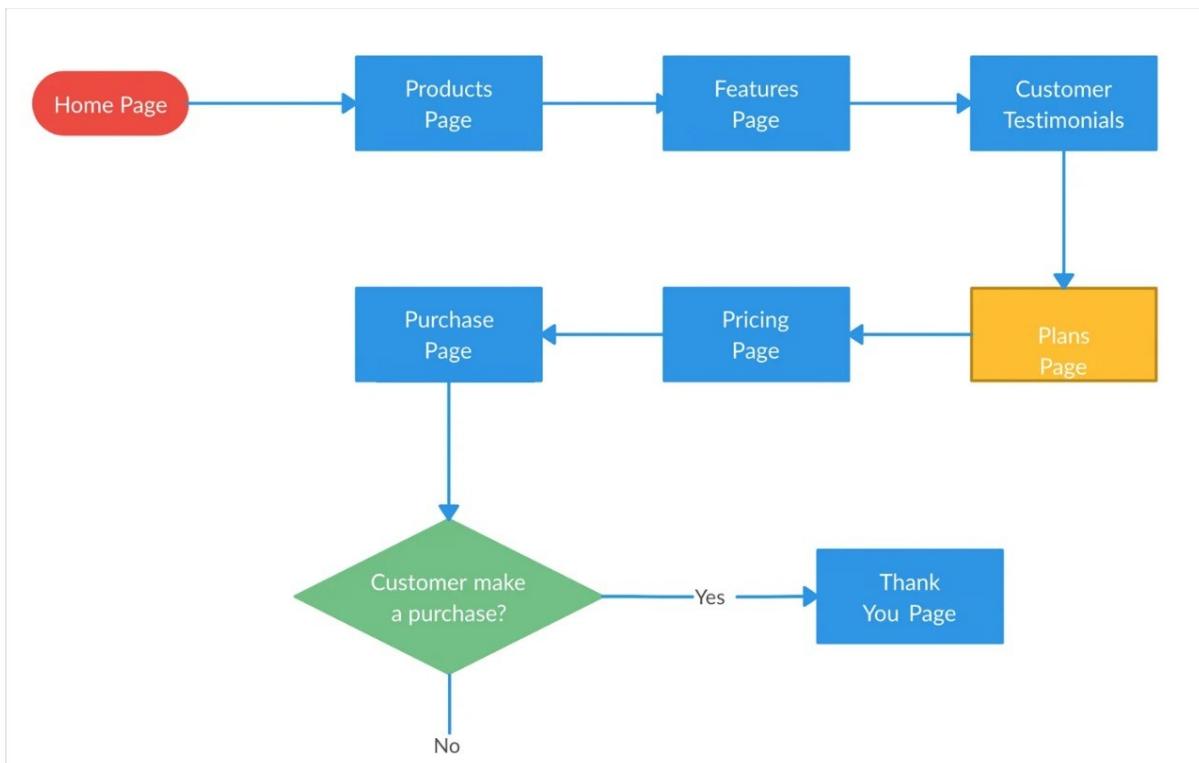
A well-defined information architecture is central to ensuring a smooth shopping experience. The structure of the E-Commerce Application was developed to minimize user effort and provide direct access to key functionalities.

App Flow:

- Splash Screen: Displays the brand logo and tagline.
- Login/Sign-Up: Offers authentication via email, mobile number, or social accounts.
- Home Screen: Contains navigation categories (Electronics, Fashion, Home, etc.), search bar, and promotional banners.
- Product Listing Page: Displays products in grid view with filters for price, brand, and rating.
- Product Details Page: Shows product description, images, price, reviews, and “Add to Cart” or “Buy Now” options.
- Shopping Cart: Lists selected items with quantity control and total price preview.
- Checkout: Includes address selection, payment method, and order confirmation.
- Profile & Orders: Displays user details, previous purchases, and tracking updates.

- The navigation is supported by a persistent bottom navigation bar for mobile and a header menu for web. Logical grouping and category hierarchy ensure the system remains scalable and easy to explore.

The architecture adheres to information clarity, visual hierarchy, and interaction simplicity, which together reduce decision fatigue and enhance conversion.



Wireframe Design:

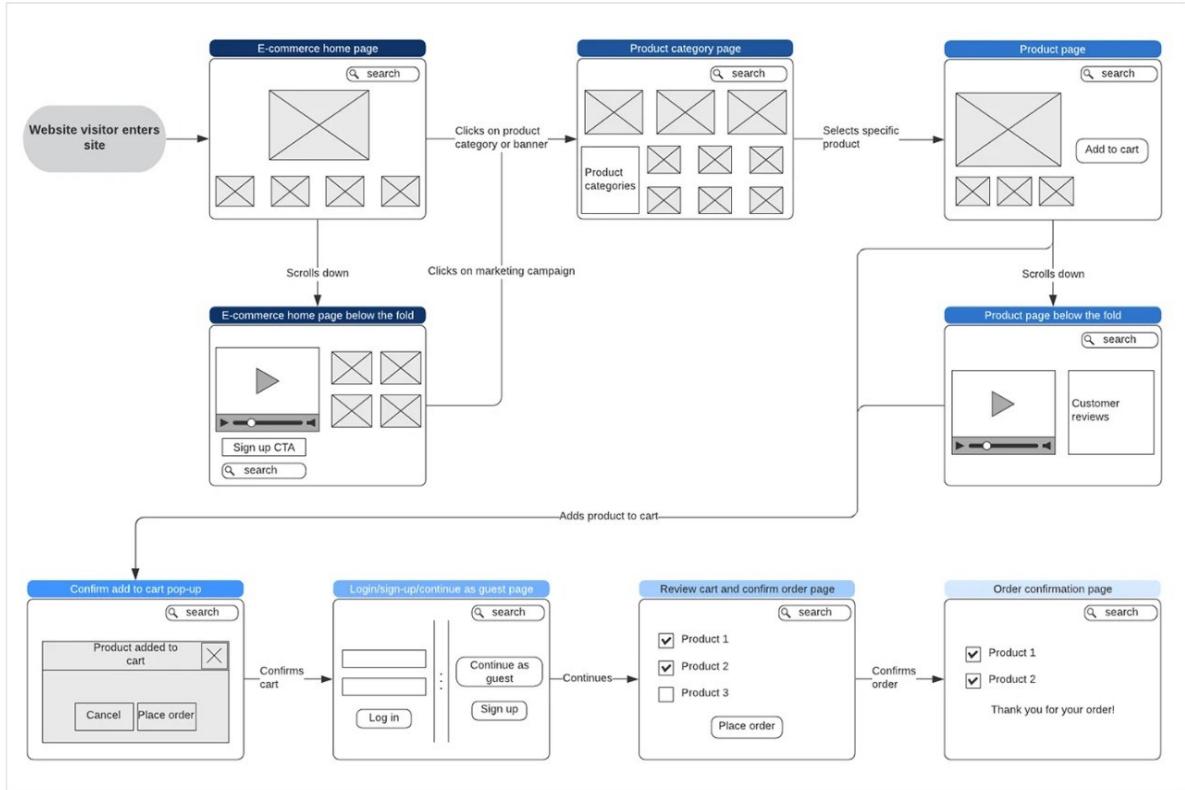
The wireframing phase defined the structural layout of the application before visual design elements were added. Wireframes were built using Figma's vector tools to focus purely on spacing, content hierarchy, and navigational flow.

Key Wireframe Components:

1. Home Page: Grid-based layout with a search bar, category cards, promotional banners, and quick-access icons.
2. Product Page: Simplified grid showing thumbnails, prices, and star ratings; product cards maintain consistent dimensions for visual balance.
3. Product Detail Page: Image carousel, concise description area, and sticky “Add to Cart” button to enhance usability.
4. Cart Page: Scrollable list of products with price summary and quantity adjustments.
5. Checkout Page: Step-by-step guided form for address, payment, and confirmation.

Purpose of Wireframes:

- To visualize and test navigation flow and screen hierarchy.
- To ensure the user can complete the entire purchase process within minimal clicks.
- To validate layout scalability across device resolutions.
- User feedback from initial wireframe reviews suggested improving visibility for offers and simplifying category labels. These changes were incorporated into the final design before proceeding to the high-fidelity prototype stage.



Result:

The final outcome of the E-Commerce Application project is a high-fidelity, interactive prototype that successfully demonstrates the core principles of usability, accessibility, and visual consistency. The design closely resembles the structure of Flipkart while integrating enhancements that improve speed, clarity, and overall user experience.

Future Enhancements / Future Scope:

While the prototype successfully delivers a functional and visually consistent experience, there remains substantial scope for future improvement and scalability. The following areas can be explored to enhance usability and business impact:

Integration with Real-Time Data:

Implementing live APIs for product updates, offers, and inventory would make the system dynamic and ready for deployment.

Personalized Recommendation System:
Incorporating machine learning algorithms to recommend products based on browsing and purchase history can improve user retention.

Voice-Assisted Search:
Adding voice commands and natural language search for accessibility and hands-free browsing, especially for mobile users.

Augmented Reality (AR) Preview:
Introducing AR features for virtual product try-ons (e.g., furniture in a room or fashion items) can enhance interactivity and confidence in purchasing decisions.

Conclusion:

The E-Commerce Application project effectively demonstrates how human-centered design and structured UI/UX methodology can enhance digital retail experiences. By combining user research, competitive benchmarking, and iterative design, the project delivers a product that balances commercial goals with user satisfaction.

Through this project, I gained a comprehensive understanding of designing for large-scale digital ecosystems where clarity, trust, and consistency are key. The approach followed a complete UX design cycle — from empathy and problem definition to wireframing, prototyping, and usability testing.

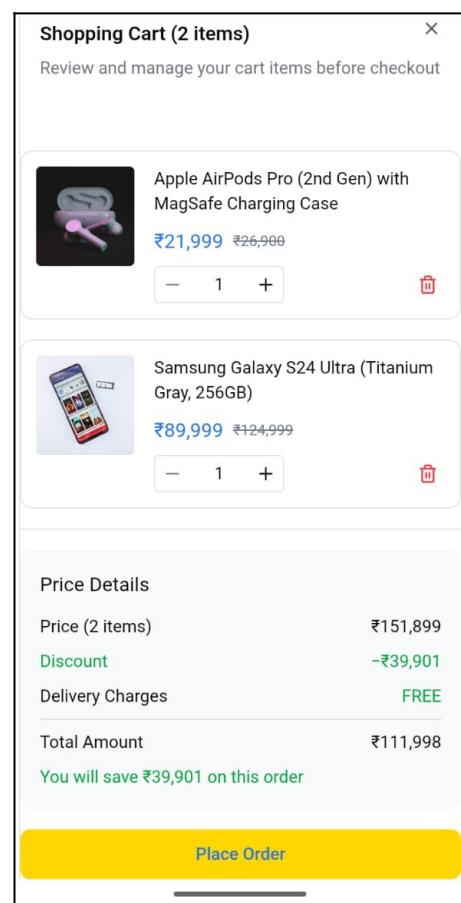
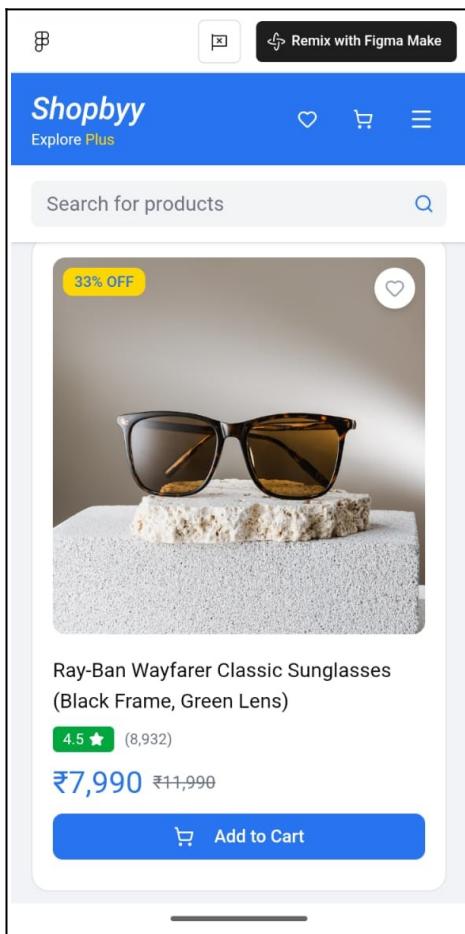
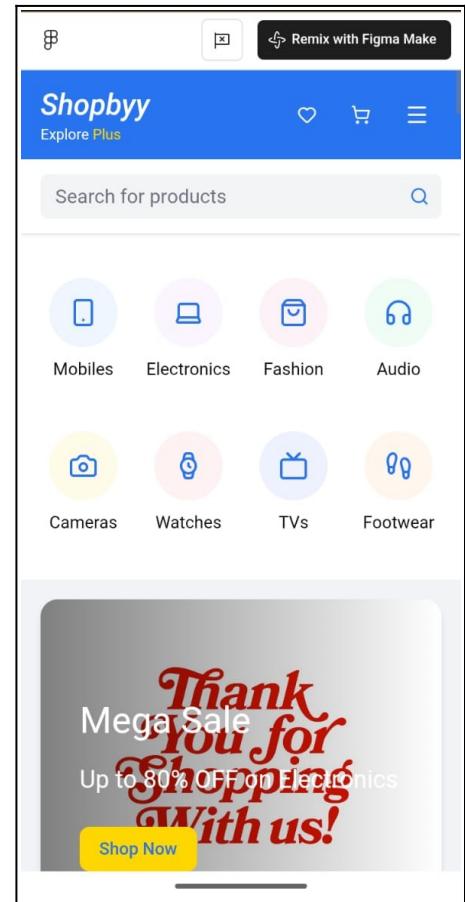
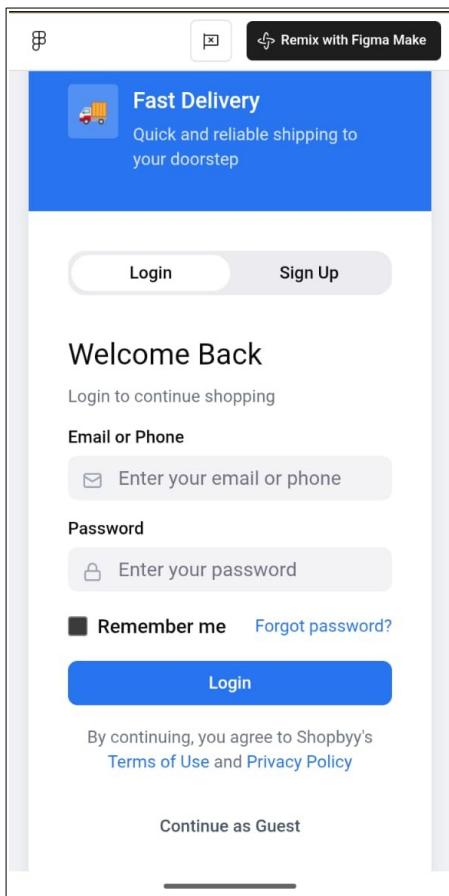
The results validate the importance of minimalism and intuitive structure in e-commerce platforms. Unlike traditional models that overwhelm users with multiple offers and complex hierarchies, this design focuses on clarity, emotion, and efficiency, leading to a more meaningful interaction between the user and the platform.

The experience further reinforced the relevance of accessibility, micro-interactions, and design system scalability in modern digital product design. It highlights how Figma's collaborative tools and prototyping features can bridge the gap between creativity and implementation.

Summary of Learning:

This project served as a complete hands-on experience in UI/UX design — integrating creativity, functionality, and empathy. From conceptualization to prototype, the process demonstrated how structured design thinking can simplify complex e-commerce interactions while ensuring customer satisfaction and business relevance.

The outcome stands as a practical example of how Flipkart-like digital experiences can be re-imagined using modern design tools and research-driven methodology.



Project -2

Health And Wealth

1. Project Overview

App Name: Health And Wealth

Tagline: "Your Path to a Healthier, Wealthier You."

Category: Health & Fitness

Platform: Mobile Application(Android / iOS)

Purpose:

The purpose of Health and Wealth is to empower individuals to achieve balance in life by improving both their physical well-being and financial stability. The app helps users build healthy habits, track their wellness goals, and manage their finances wisely promoting a lifestyle where good health and smart wealth go hand in hand.

2.Target Users:

Young Professionals (Ages 20–35)

- Ambitious individuals focused on career growth.
- Interested in building wealth while maintaining fitness and mental balance.

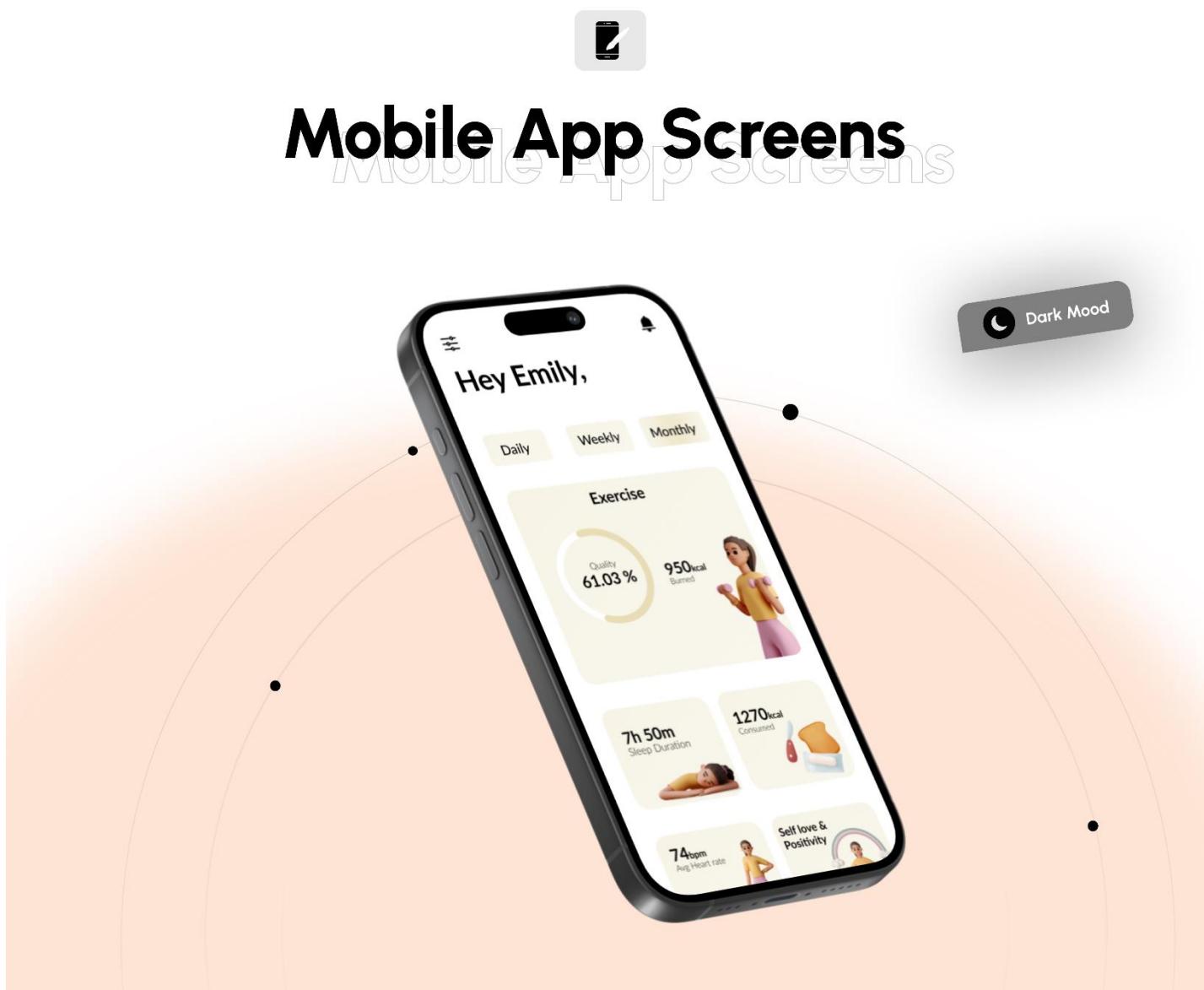
Entrepreneurs & Business Owners

- People managing busy schedules who want tools to stay healthy and financially organized.

Health-Conscious Individual

- Users already focused on fitness, nutrition, or mindfulness who also want to manage their financial wellbeing.

3. Wireframe Design Concepts:



I. Splash & Onboarding

Purpose: Create a strong first impression and introduce the app's dual purpose — *Health + Wealth*.

Layout Concept:

- Center logo with tagline (“Balance Your Health. Build Your Wealth.”)
- Clean gradient background (e.g., blue-green blend for vitality + growth)
- Animated loading or motivational quote
- Onboarding slides:
 - Slide 1 → “Track Your Fitness”
 - Slide 2 → “Grow Your Finances”
 - Slide 3 → “Achieve Life Balance”
- Buttons: **Sign Up | Log In**

II. Home Dashboard

Purpose: Quick overview of both Health and Wealth status.

Layout Concept:

- **Top:** Greeting (“Good Morning, Alex”) + profile icon
- **Center:**
 - Two cards side by side or stacked:
 -  **Health Summary:** Steps, Calories, Sleep, Water
 -  **Wealth Summary:** Income, Expenses, Savings Goal Progress
- **Bottom Navigation Tabs:**
 - Home | Health | Wealth | Goals | Profile

III. Health Hub

Purpose: Track and visualize health metrics.

Layout Concept:

- Graphs: Steps, Calories Burned, Sleep Hours
- Buttons: “Add Activity” / “Add Meal”
- Tabs:
 - **Activity Tracker**
 - **Nutrition**
 - **Insights** (personalized tips, streaks)
- Visual cue (green theme) for health-related data

IV. Wealth Hub

Purpose: Manage finances with simple tools.

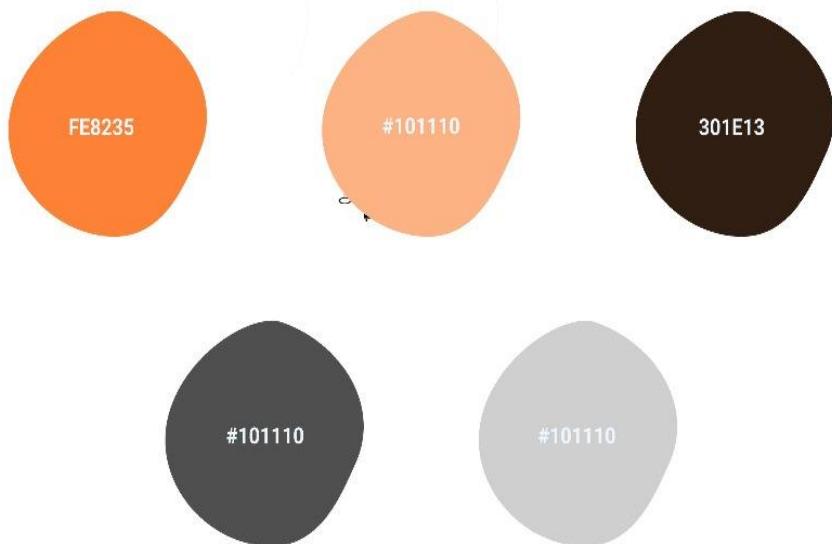
Layout Concept:

- Top summary bar: Balance | Monthly Spend | Savings
- Graph (spending by category)
- Buttons: “Add Expense”, “Set Budget”, “View Report”
- Tabs:
 - **Transactions**
 - **Goals** (e.g., saving for vacation)
 - **Insights** (budget tips, investment basics)
- Visual cue (blue/gold theme) for financial section

4 . UI Design (Colors & Typography)



Style Guide



Aa
Almarai

Weights

Light

Regular

Bold

Extra Bold

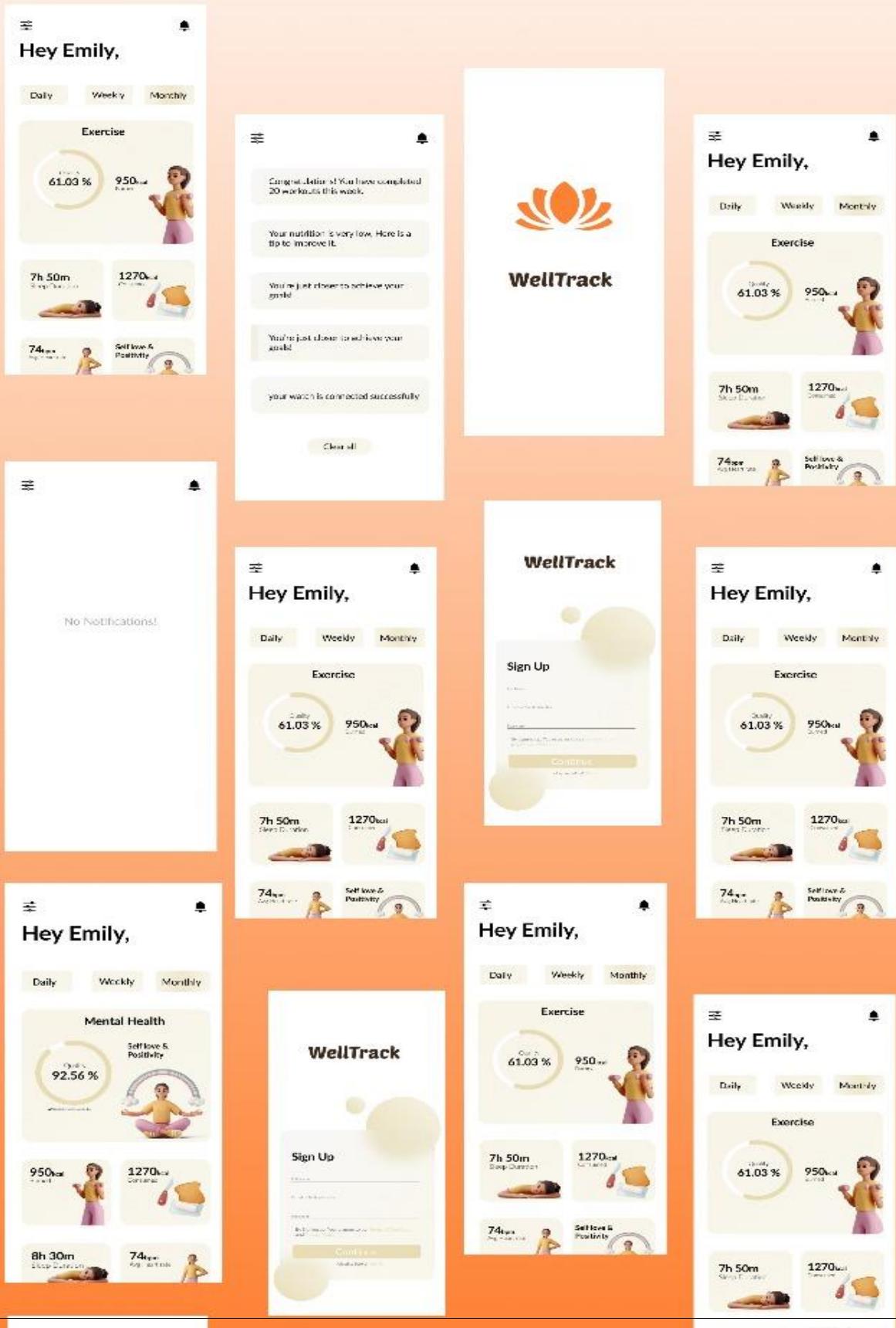
Characters

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

a b c d e f g h i j k l m n o p q r s t u v w x y z

0 1 2 3 4 5 6 7 8 9

UI Screens



I. Color Palette

Purpose	Color	HEX	Description
Health Primary	Emerald Green	#34C759	Symbolizes vitality, energy, and growth.
Wealth Primary	Royal Blue	#007AFF	Represents trust, intelligence, and financial confidence.
Neutral Background	Light Gray	#F5F5F7	Clean and modern base for readability.
Text Primary	Charcoal	#1C1C1E	High contrast, easy to read.
Accent / Action	Gold	#FFD700	Adds warmth and a sense of achievement.

II. Gradients (Optional)

Use blended gradients for header backgrounds or dashboard cards:

- Health Gradient: linear-gradient(90deg, #34C759, #00E676)
- Wealth Gradient: linear-gradient(90deg, #007AFF, #00B4D8)

III. Typography

Text Role	Font	Weight	Size	Use Case
Logo / App Name	Poppins	Bold	28–32px	Splash screen, top bar
Headings (H1–H3)	Poppins	Semi-Bold	20–26px	Section titles (“Health Overview”, “Spending Summary”)
Body Text	Inter or Roboto	Regular	14–16px	General content, summaries
Labels & Buttons	Poppins	Medium	12–14px	Calls to action, tabs
Numeric Data	Roboto Mono	Regular	14–18px	Steps, calories, amounts, etc.

5. Technologies & Tools Used:

Front-End (User Interface):

Purpose	Technology / Tool	Description
Mobile Framework	Flutter (or React Native)	Enables cross-platform app development for Android & iOS with a single codebase.
UI Design System	Material Design / Cupertino Widgets	Provides a modern, responsive, and consistent UI experience.
Styling & Animations	Lottie / Rive	Adds engaging animations for onboarding and progress visualization.

6. Future Enhancements

- AI-Powered Personal Coach
- Chatbot Assistance
- Advanced Analytics Dashboard

MOCKUP IMAGE:



WellTrack

The screenshot displays the WellTrack app's user interface. At the top, there are three small icons: a gear, a bell, and a search bar. Below this is a large orange box titled "Upcoming Session" featuring a profile picture of "Sahana V, Msc in Clinical Psychology" and the time "7:30 PM - 8:30 PM". A "Join Now" button is at the bottom. Below this is a dropdown menu labeled "All Sessions". Underneath are three separate session cards for "Sahana V", each with a profile picture, the date "31st March '22", the time "7:30 PM - 8:30 PM", and two buttons: "Reschedule" and "Join Now" (the last one is orange). At the bottom of the screen are four navigation icons: a house, a video camera, a speech bubble, and a group of people.

7. CONSULTATION

- The **Health and Wealth App** is an innovative digital platform designed to help users achieve a **balanced lifestyle** by integrating **physical wellness** and **financial well-being** into one seamless experience. By combining **health tracking**, **financial management**, and **motivational tools**, the app empowers users to take control of two of the most important aspects of their lives — **body and budget**.
- Through an intuitive interface, real-time analytics, and secure data handling, the app simplifies the journey toward a **healthier and wealthier lifestyle**. It not only tracks progress but also inspires consistency and mindfulness, creating long-term positive habits.
- With future enhancements such as **AI-driven insights**, **community engagement**, and **wearable integrations**.

Project -3

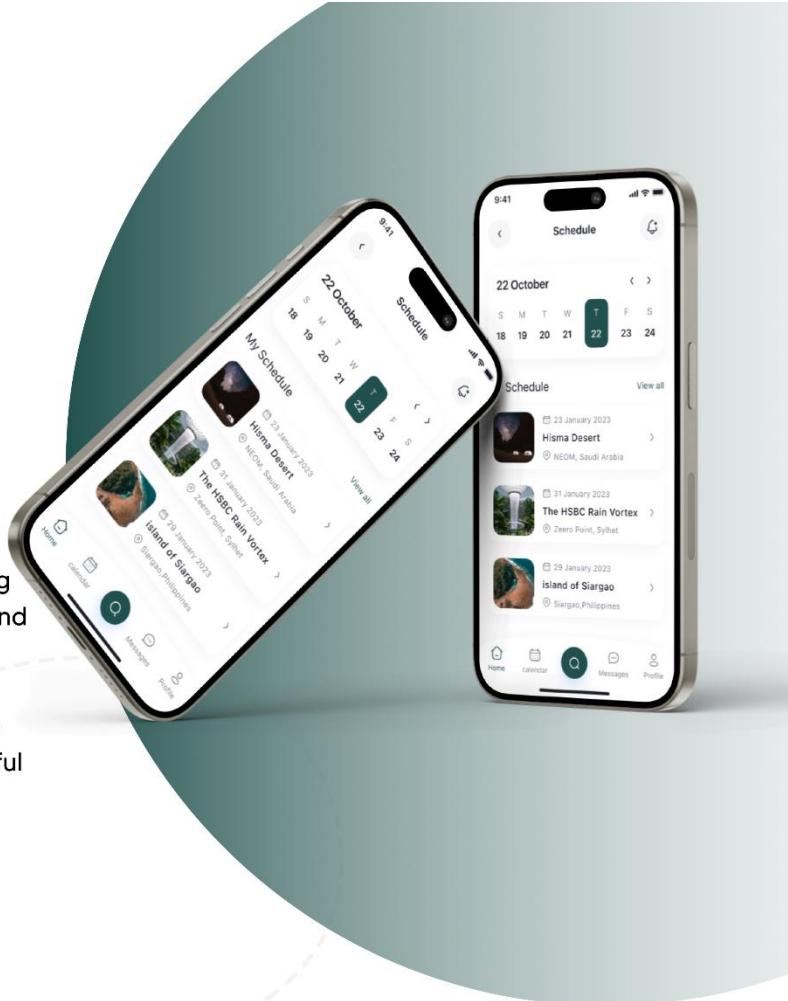
TravelMate – Smart Travel.

Infinite Adventures

TravelMate – Smart Travel. Infinite Adventures.

Tourist

Vibe Vault is a modern, elegant music streaming app designed to help you discover, organize, and enjoy your favorite tracks in perfect harmony with your mood. With its clean white interface, soft pastel tones, and intuitive navigation, Vibe Vault turns every listening session into a peaceful and immersive experience.



Category: Travel & Lifestyle

Platform: Android / iOS

Purpose:

TravelMate is a next-generation mobile application designed to simplify the way people explore the world. It enables users to **discover destinations, plan personalized trips, and immerse themselves in diverse cultures** with ease. Through **smart recommendations, curated itineraries, and interactive travel guides**, the app ensures that every journey feels unique, convenient, and memorable.

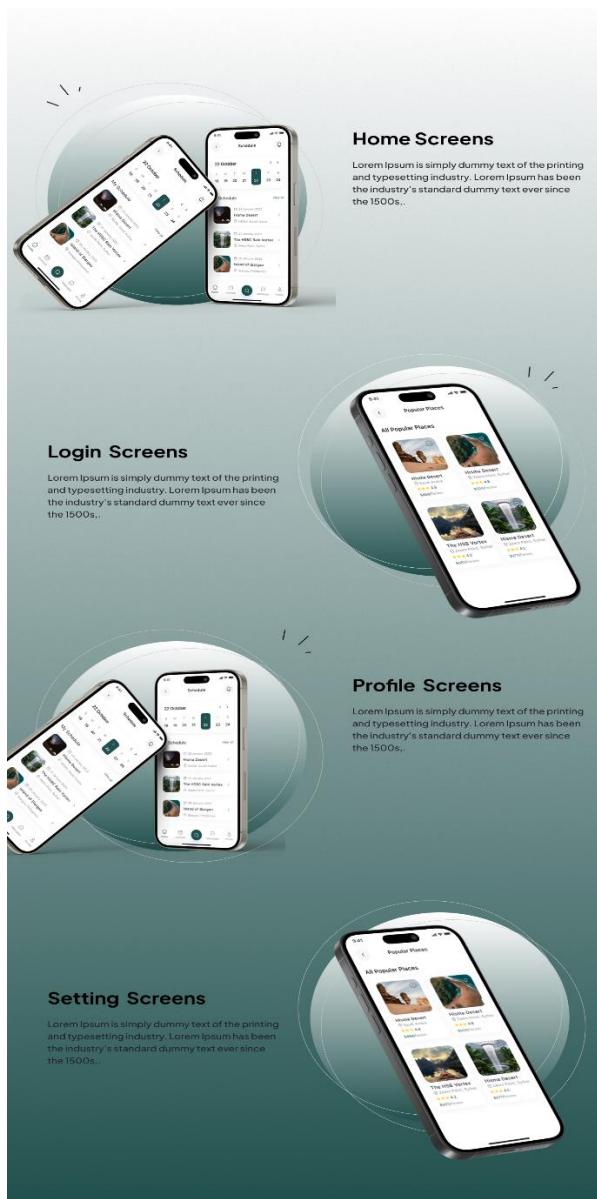
Whether you're an adventurous backpacker, a family on vacation, or a solo traveler seeking authentic experiences, TravelMate tailors your journey to your interests, budget, and travel goals. The app's mission is to connect people through travel — fostering curiosity, creativity, and meaningful experiences that bring the world closer together.

Target Users

TravelMate is designed for a wide range of users, including:

- **Travelers and explorers** who love discovering new destinations.
- **Backpackers and adventure seekers** looking for offbeat experiences.
- **Solo travelers** who prioritize safety and guided exploration.
- **Families** planning vacations, sightseeing trips, or getaways.
- **Travel bloggers and influencers** documenting their journeys.
- **Casual explorers** looking for inspiration and travel planning tools.

Wireframe Overview



The TravelMate app structure follows an intuitive, user-friendly design to deliver seamless navigation and accessibility across all stages of a traveler's journey.

I. Splash Screen

- Animated logo and tagline: “*Wander Freely, Explore Smartly*”
- Simple gradient background with travel icon animation.
- Login options: *Continue with Google / Apple / Email*.

II. Onboarding

- 3–4 short introduction slides highlighting main features:
 - *Discover New Destinations*
 - *Plan Personalized Trips*
 - *Offline Maps & Guides*
 - *Connect with Fellow Travelers*
- Ends with a “Get Started” button to begin the experience.

III. Home Screen

- Dynamic carousel of *Recommended Destinations*.
- Sections for *Trending Spots*, *Hidden Gems*, and *Saved Trips*.
- Integrated weather widget and smart search bar.

IV. Explore Screen

- Search destinations with filters for region, interest, and budget.
- Category chips for *Beaches*, *Mountains*, *City Life*, *Culture*, and *Food*.
- Interactive map view for visual exploration.

V. Trip Planner

- Calendar-based itinerary creator.
- Add activities, transport options, accommodation, and notes.
- Smart suggestions for nearby attractions and restaurants.

VI. Favorites / Saved Trips

- Tabs for *Trips*, *Destinations*, and *Experiences*.
- “Create New Trip” button with gradient glow.
- List and grid view options with thumbnails.

VII. Profile Screen

- Personalized profile with user photo, travel stats, and badges.

- Settings for *Theme*, *Notifications*, *Currency*, and *Language*.
- Premium upgrade for *AI Smart Travel Assistant*.

UI Design Style:

The **UI design** of TravelMate reflects modernity, simplicity, and inspiration — appealing to both casual travelers and digital nomads.

- **Look & Feel:** Clean, minimal, and travel-centric.
- **Color Palette:**
 - Primary: *Sky Blue Gradient* (#00AEEF → #0072FF)
 - Accent: *Coral Orange / Sunset Gold*
 - Background: *Soft Beige / Off-White* for readability
- **Typography:**
 - *Poppins / Nunito* — Headings (friendly and rounded)
 - *Open Sans / Roboto* — Body text (clean and legible)
- **Icons:** Minimalist travel-themed line icons for clarity.
- **Theme Options:** Dual-mode interface — *Light* and *Dark* .

Key Screens

• Home & Explore:

Hero carousel for top destinations, category cards (Adventure, Culture, Relaxation), and horizontal scroll for trending ideas.

• Trip Planner:

Interactive calendar, smart itinerary builder, and the ability to add notes, activities, and attractions.

• Favorites & Profile:

Saved trip cards with thumbnails, map previews, and achievement badges.

Microinteractions

TravelMate enhances engagement through small yet delightful details:

- *Animated globe* spins on launch.
- *Heart pulse* when saving a trip.
- *Smooth transitions* between destinations.

- *Flash animation* when uploading travel photos.

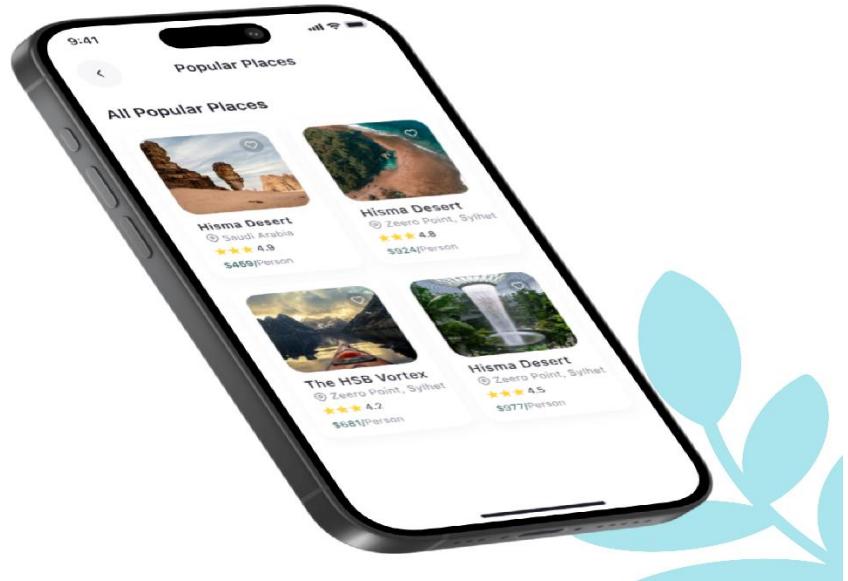
These microinteractions create a responsive, intuitive, and enjoyable user experience.

Future Enhancements

To stay ahead in the travel tech landscape, TravelMate plans to integrate advanced features:

- **AI-Based Travel Assistant:** Personalized itinerary generation.
- **Offline Maps & AR Navigation:** Real-time guidance without internet.
- **Social Travel Sharing:** Connect, share, and collaborate with other travelers.
- **Smart Budgeting & Safety Tools:** Financial tracking and safety alerts.

MOCKUP IMAGE:



Conclusion:

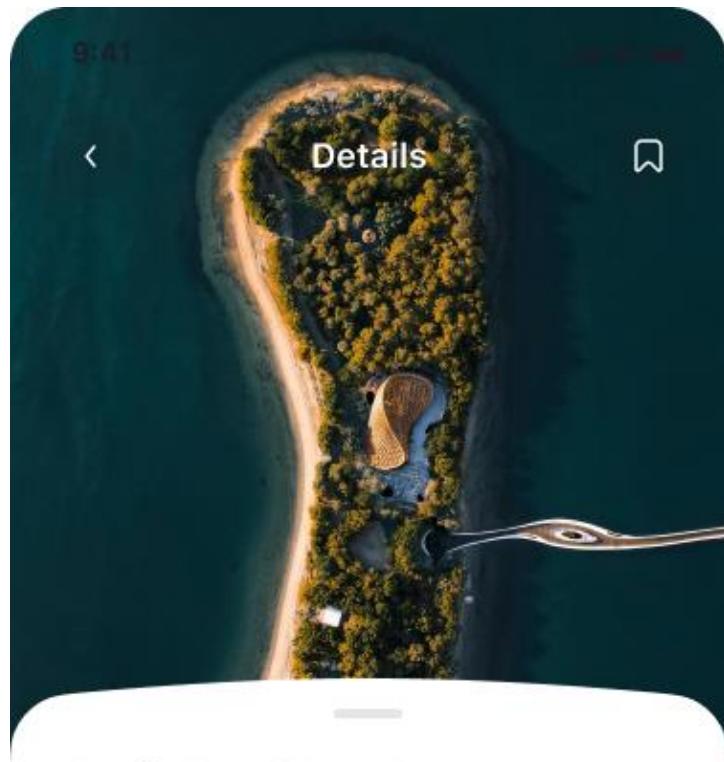
TravelMate is more than just a travel app — it's a companion that redefines how people explore the world.

By merging **intuitive design, intelligent recommendations, and seamless functionality**, it empowers users to travel smarter, safer, and more meaningfully.

As technology evolves, TravelMate continues to grow — shaping the future of travel through **innovation, connectivity, and inspiration**.

Every journey becomes more than a trip — it becomes an **unforgettable adventure**.

Screen Image:



Khai island beach

Chang Wat Phang-nga



◎ Thailand

★ 4.9(280)

\$80/Person



About Destination

Experience the ultimate vacation package with our beach travel package. From airline tickets to recommended hotel rooms and transportation, we have everything you need ETC... [Read More](#)

[Book Now](#)

9:41



Favorite Places

Favorite Places



Niladri Reservoir

◎ Tekergat, Sunamgnj



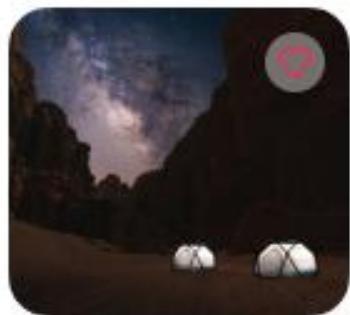
Casa Las Tirtugas

◎ Av Damero, Mexico



Aonang Villa Resort

◎ Bastola, Islampur



Rangauti Resort

◎ Sylhet, Airport Road



Kachura Resort

◎ Vellima, Island



Shakardu Resort

◎ Shakartu, Pakistan

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Edit Profile

Done



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Change Profile Picture

First Name

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Location

Algeria



Mobile Number

+213 ▾ 7653247990

