UNIT I – UNDERSTANDING UI/UX DESIGN AND DESIGN THINKING

Introduction to UI and UX Design, Importance of User Experience in digital systems, UI vs UX Design, Principles of Good Design, Human-Centered Design, Design Thinking Process, Divergent and Convergent Thinking, Brainstorming and Game storming, Emotional design and cognitive psychology basics, Emerging trends in human-computer interaction.

1.1. Introduction to UI and UX Design

Introduction:

- In today's digital world, users interact with websites, mobile applications, software systems, smart devices, and online services on a daily basis.
- The success of these products depends not only on their functionality but also on how easily and effectively users can interact with them.
- This is where **User Interface (UI) Design** and **User Experience (UX) Design** play a vital role.
- UI and UX are two important disciplines in digital product design that work together to create products that are visually appealing, easy to use, efficient, and enjoyable.
- While UI focuses on the appearance and interactive elements of a product, UX focuses on the overall experience and satisfaction of users.
- A well-designed UI/UX helps users achieve their goals quickly and efficiently, resulting in increased customer satisfaction, loyalty, and business success.

What is UI Design?

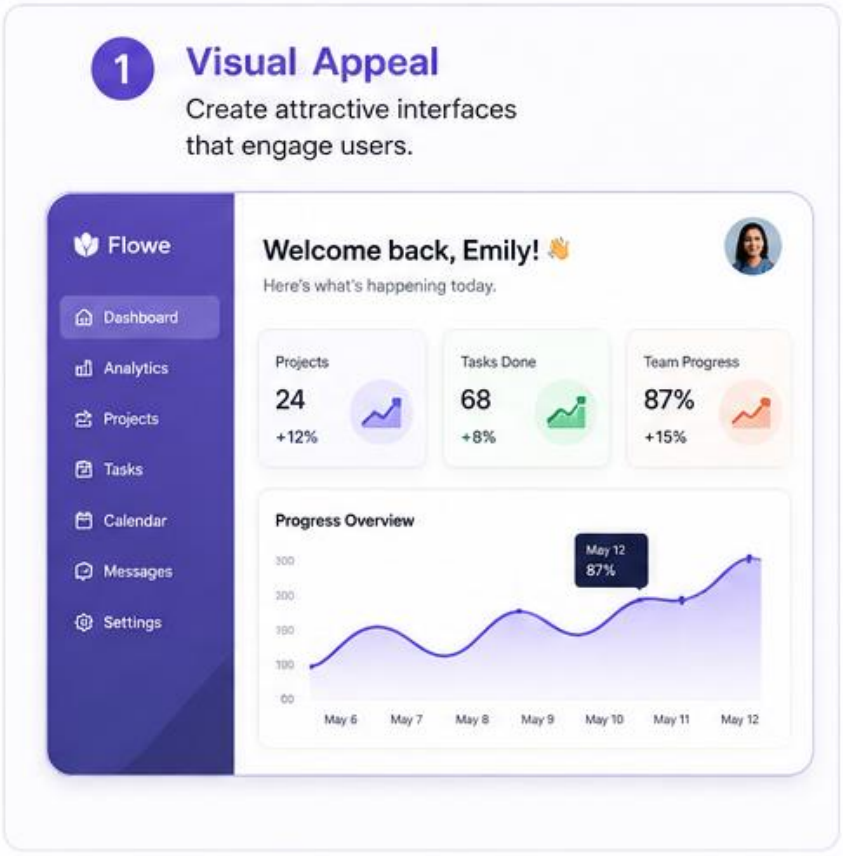
- **User Interface (UI) Design** refers to the process of designing the visual and interactive elements through which users interact with a digital product.
- It focuses on the look, feel, presentation, and interactivity of a system.

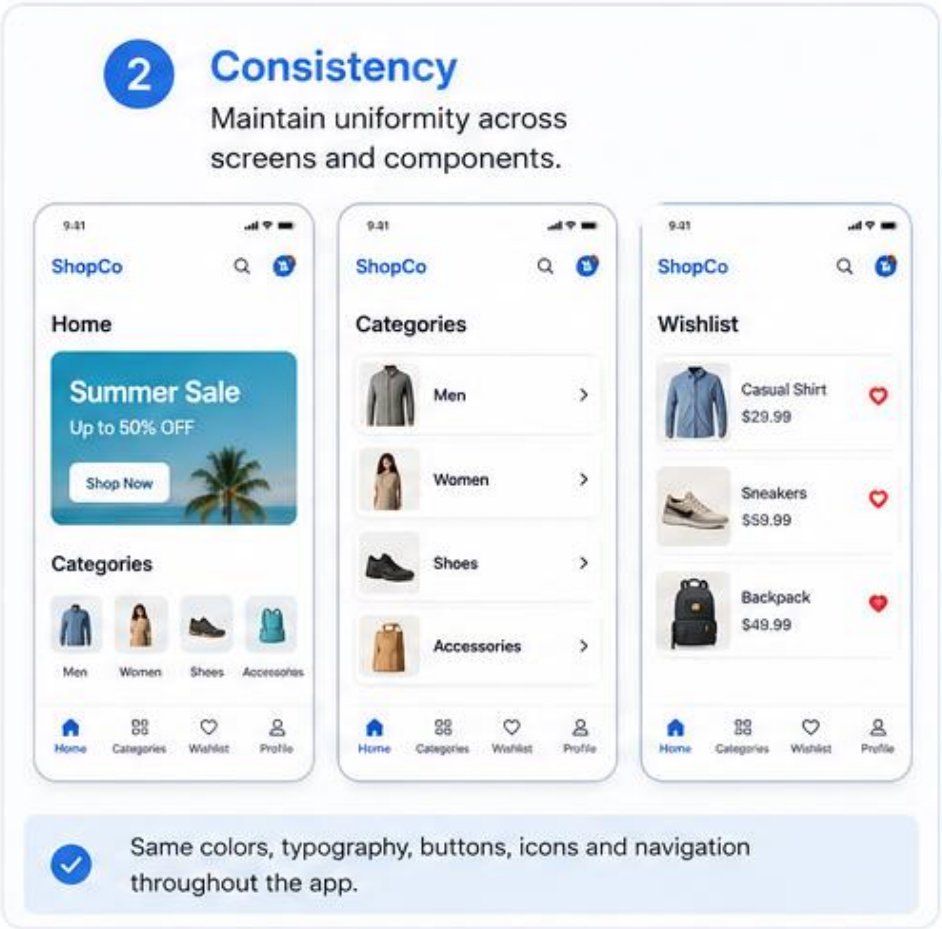
UI Includes

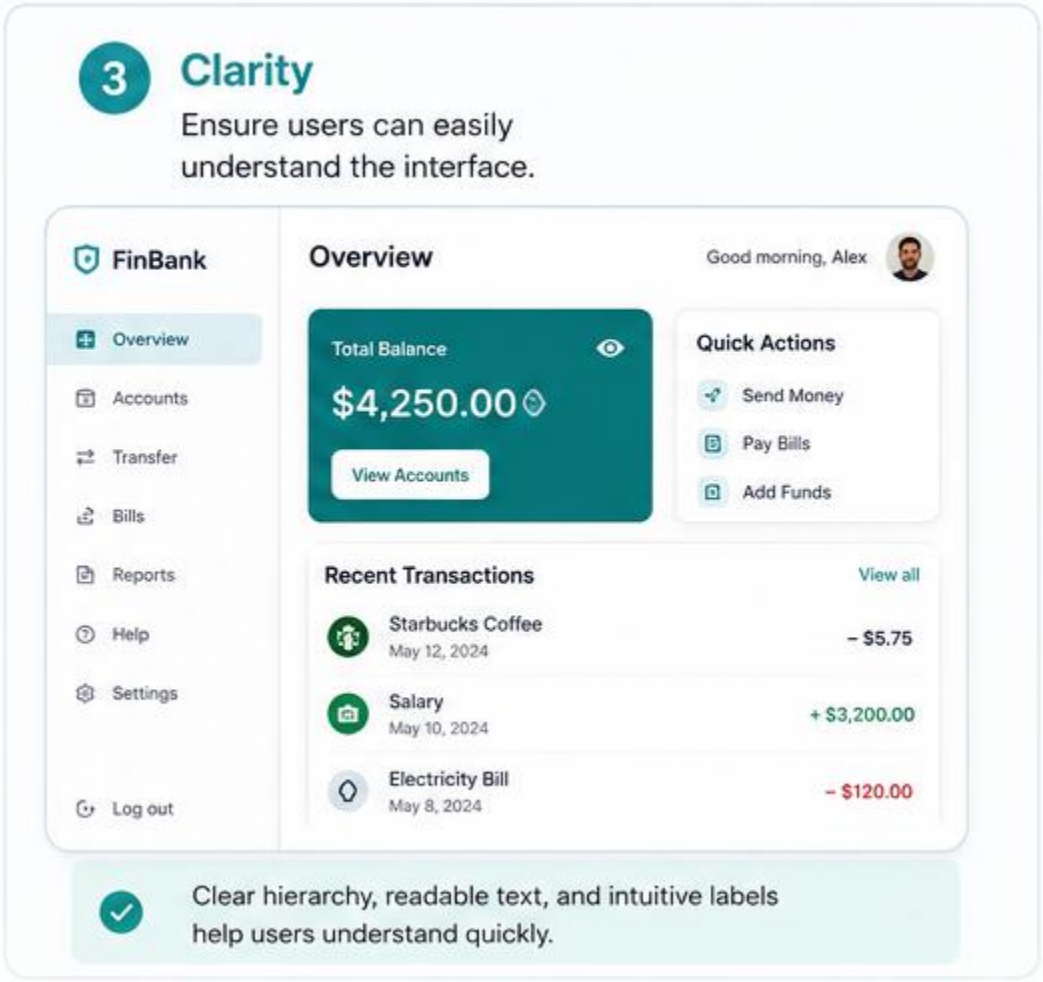
- ✓ Buttons
- ✓ Menus
- ✓ Icons
- ✓ Typography
- ✓ Colors
- ✓ Images
- ✓ Forms
- ✓ Navigation bars
- ✓ Layouts
- ✓ Animations

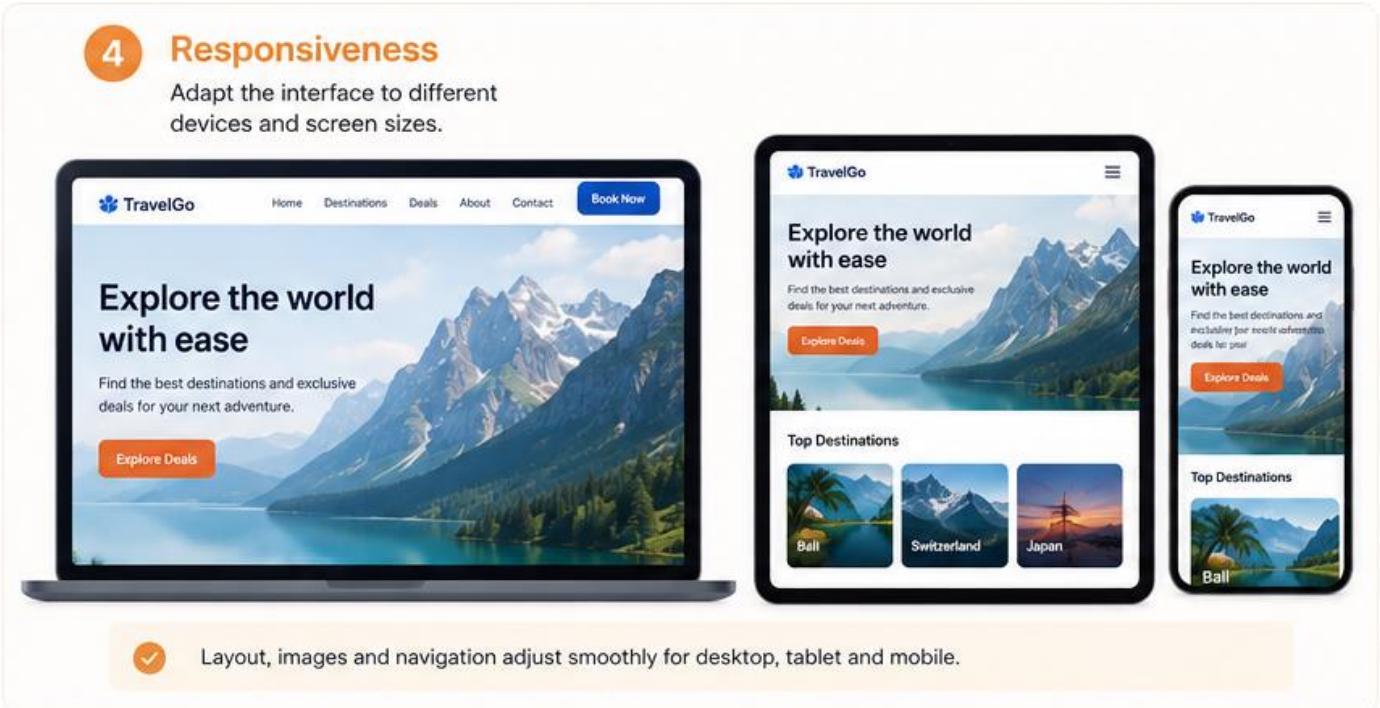
The main objective of UI design is to create interfaces that are aesthetically pleasing, consistent, and easy to use.

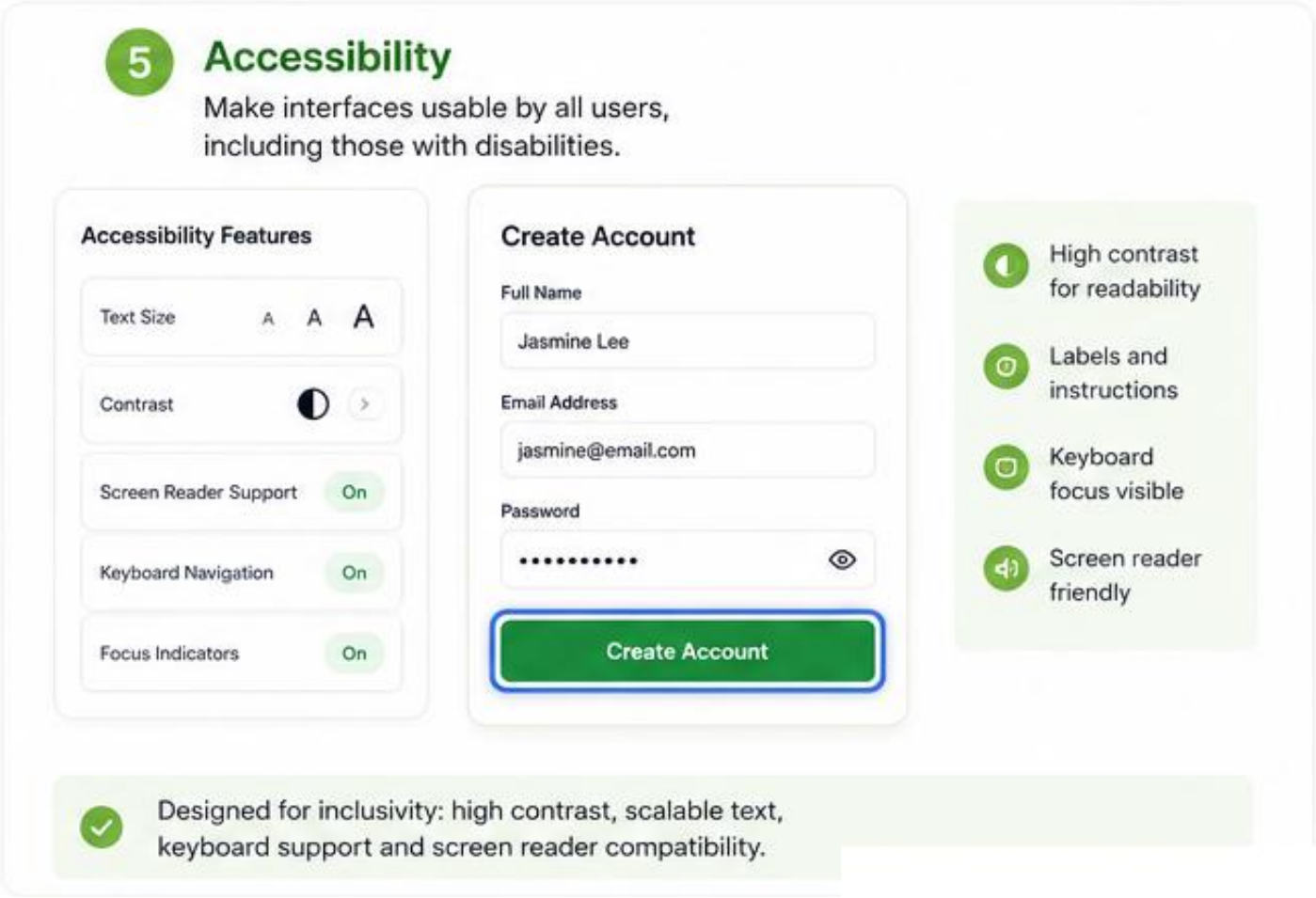
Goals of UI Design:






3
Clarity
Ensure users can easily understand the interface.
FinBank
Overview
Good morning, Alex
Overview
Accounts
Transfer
Bills
Reports
Help
Settings
Log out
Total Balance
$4,250.00
View Accounts
Quick Actions
Send Money
Pay Bills
Add Funds
Recent Transactions
View all
Starbucks Coffee
May 12, 2024
- $5.75
Salary
May 10, 2024
+ $3,200.00
Electricity Bill
May 8, 2024
- $120.00
Clear hierarchy, readable text, and intuitive labels help users understand quickly.


4
Responsiveness
Adapt the interface to different devices and screen sizes.
TravelGo
Home
Destinations
Deals
About
Contact
Book Now
Explore the world with ease
Find the best destinations and exclusive deals for your next adventure.
Explore Deals
Top Destinations
Bali
Switzerland
Japan
Layout, images and navigation adjust smoothly for desktop, tablet and mobile.



Example of UI Design:

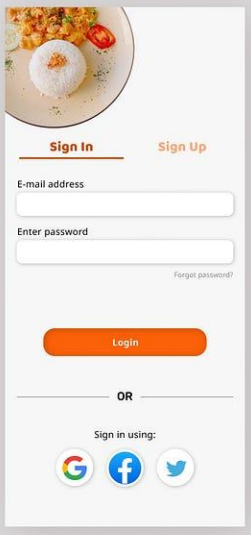
Consider a food delivery application.

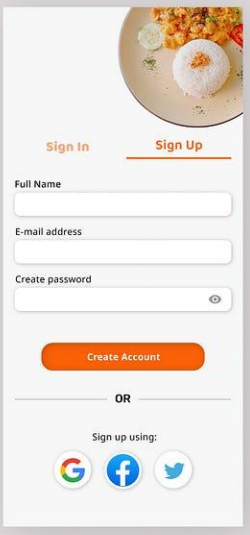
UI elements include:

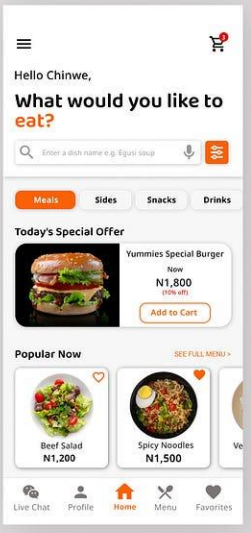
- Restaurant images
- Search bar
- Order button
- Menu layouts
- Color schemes
- Typography styles

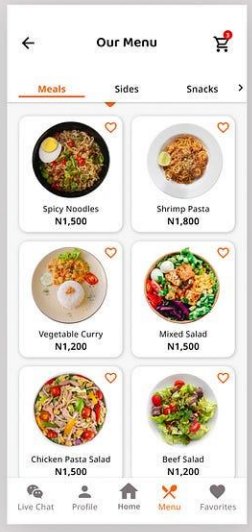
These elements determine how the application looks and how users interact with it visually.

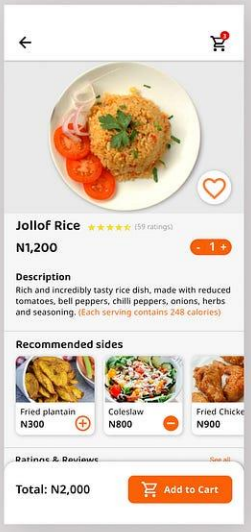

Yummies
Tasty meals delivered to your doorstep
Get Started

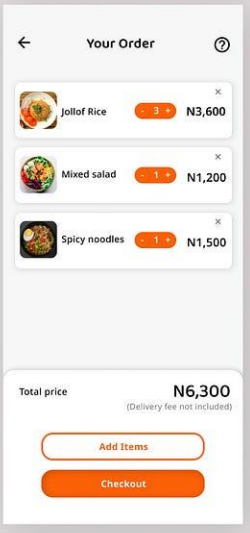

Sign In
Sign Up
E-mail address
Enter password
Forgot password?
Login
OR
Sign in using:

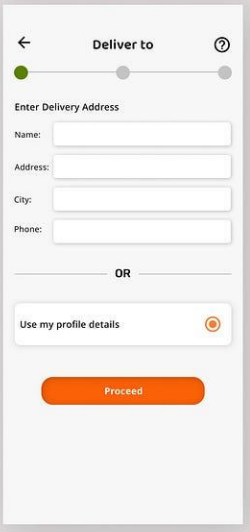

Sign In
Sign Up
Full Name
E-mail address
Create password
Create Account
OR
Sign up using:

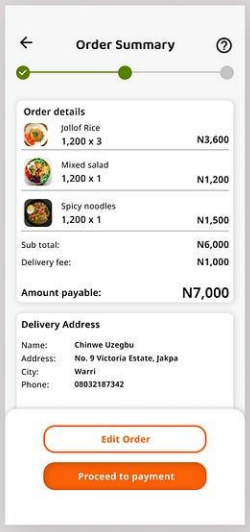

Hello Chinwe,
What would you like to eat?
Meals
Sides
Snacks
Drinks
Today's Special Offer
Yummies Special Burger
Now
N1,800
Add to Cart
Popular Now
Beef Salad
N1,200
Spicy Noodles
N1,500
Live Chat
Profile
Home
Menu
Favorites

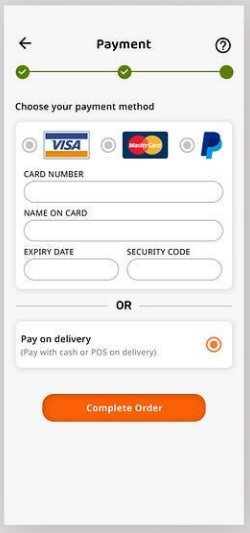

Our Menu
Meals
Sides
Snacks
Spicy Noodles
N1,500
Shrimp Pasta
N1,800
Vegetable Curry
N1,200
Mixed Salad
N1,500
Chicken Pasta Salad
N1,500
Beef Salad
N1,200
Live Chat
Profile
Home
Menu
Favorites

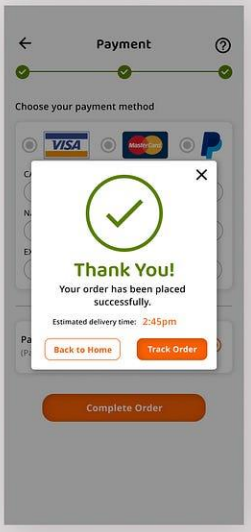

Jollof Rice
N1,200
Description
Rich and incredibly tasty rice dish, made with reduced tomatoes, bell peppers, chilli peppers, onions, herbs and seasoning. (Each serving contains 248 calories)
Recommended sides
Fried plantain
N300
Coleslaw
N800
Total: N2,000
Add to Cart

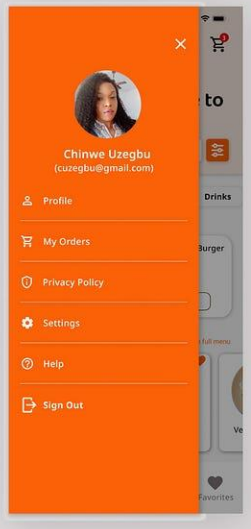

Your Order
Jollof Rice
N3,600
Mixed salad
N1,200
Spicy noodles
N1,500
Total price
N6,300
(Delivery fee not included)
Add Items
Checkout


Deliver to
Enter Delivery Address
Name:
Address:
City:
Phone:
OR
Use my profile details
Proceed


Order Summary
Order details
Jollof Rice
1,200 x 3
N3,600
Mixed salad
1,200 x 1
N1,200
Spicy noodles
1,200 x 1
N1,500
Sub total:
N6,000
Delivery fee:
N1,000
Amount payable:
N7,000
Delivery Address
Name: Chinwe Uzegbu
Address: No. 9 Victoria Estate, Jakpa
City: Warri
Phone: 08032187342
Edit Order
Proceed to payment


Payment
Choose your payment method
CARD NUMBER
NAME ON CARD
EXPIRY DATE
SECURITY CODE
OR
Pay on delivery
(Pay with cash or POS on delivery)
Complete Order


Payment
Choose your payment method
Thank You!
Your order has been placed successfully.
Estimated delivery time: 2:45pm
Back to Home
Track Order
Complete Order


Chinwe Uzegbu
(cuzegbu@gmail.com)
Profile
My Orders
Privacy Policy
Settings
Help
Sign Out

Types of user interfaces:

The various types of user interfaces include:

1. Graphical User Interface (GUI)
2. Command Line Interface (CLI)
3. Menu-Driven User Interface
4. Touch User Interface
5. Voice User Interface (VUI)
6. Form-Based User Interface
7. Natural Language User Interface

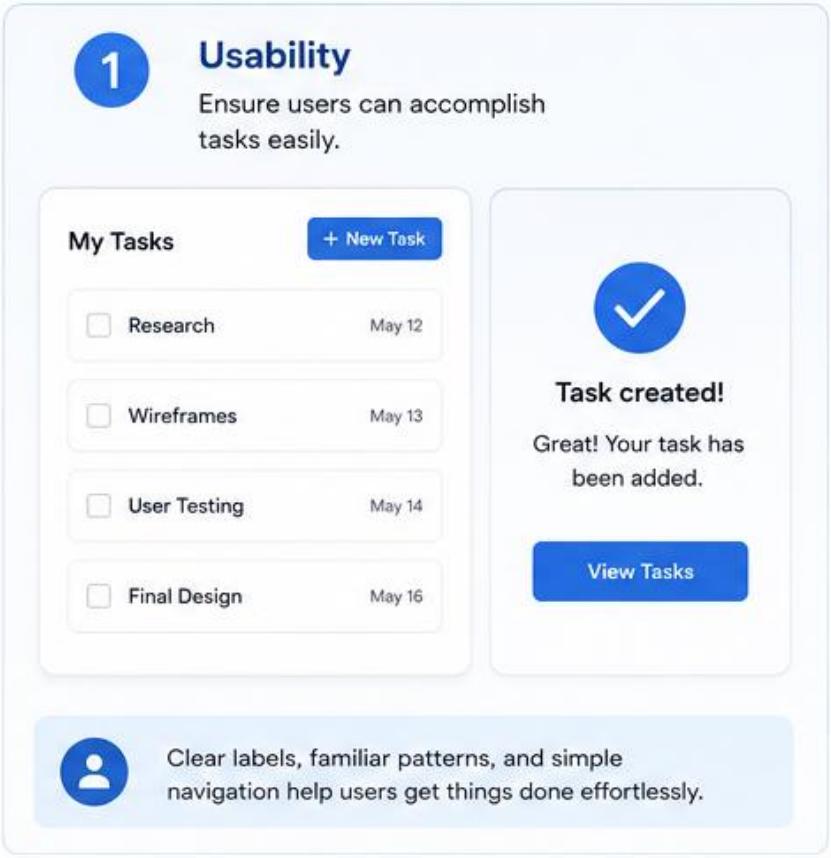
What is UX Design?

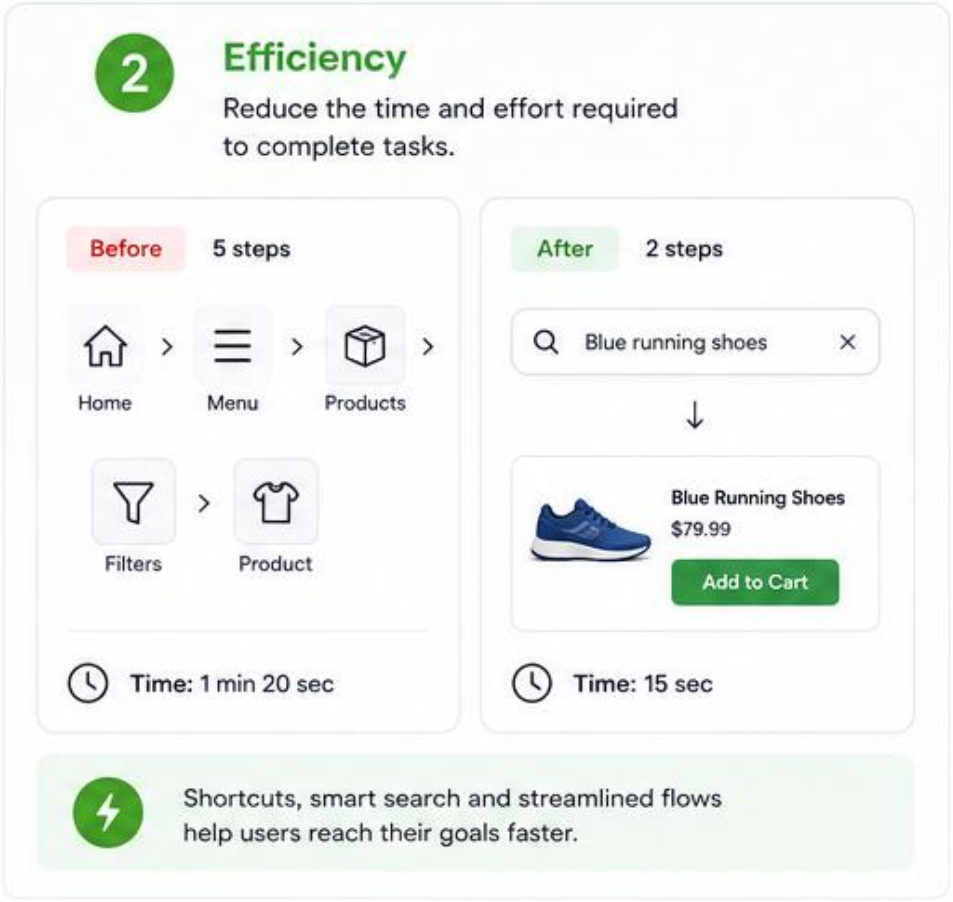
- **User Experience (UX) Design** is the process of designing products that provide meaningful, efficient, and satisfying experiences to users.
- UX focuses on understanding users, identifying their needs, and improving their overall interaction with a product.

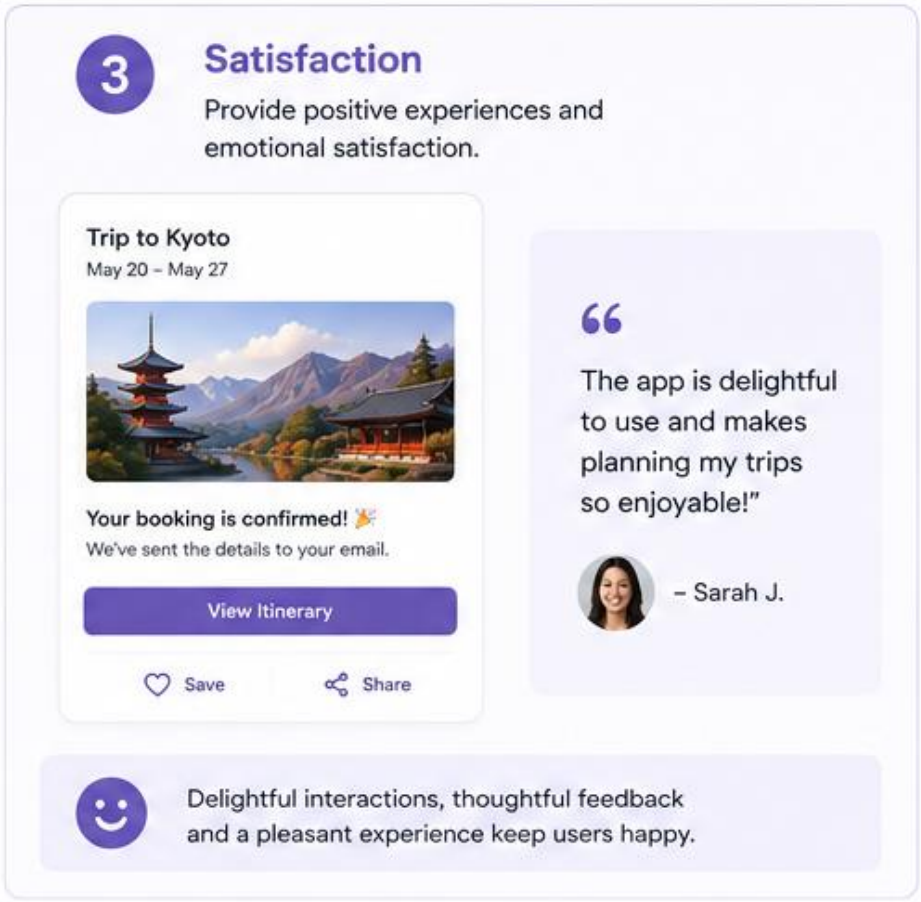
It answers questions such as:

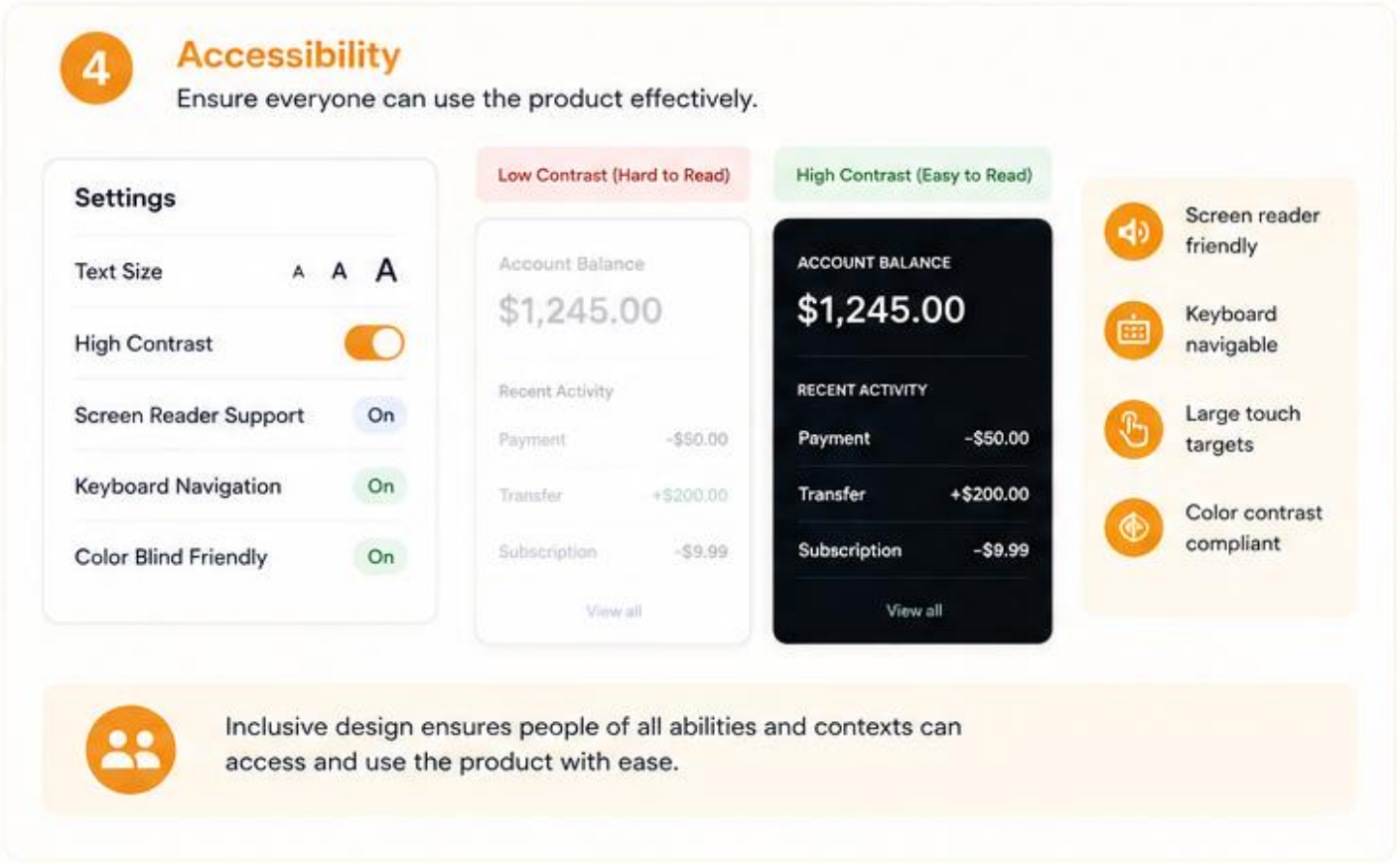
- ✓ Is the product easy to use?
- ✓ Can users complete tasks efficiently?
- ✓ Does the product solve user problems?
- ✓ Are users satisfied with their experience?

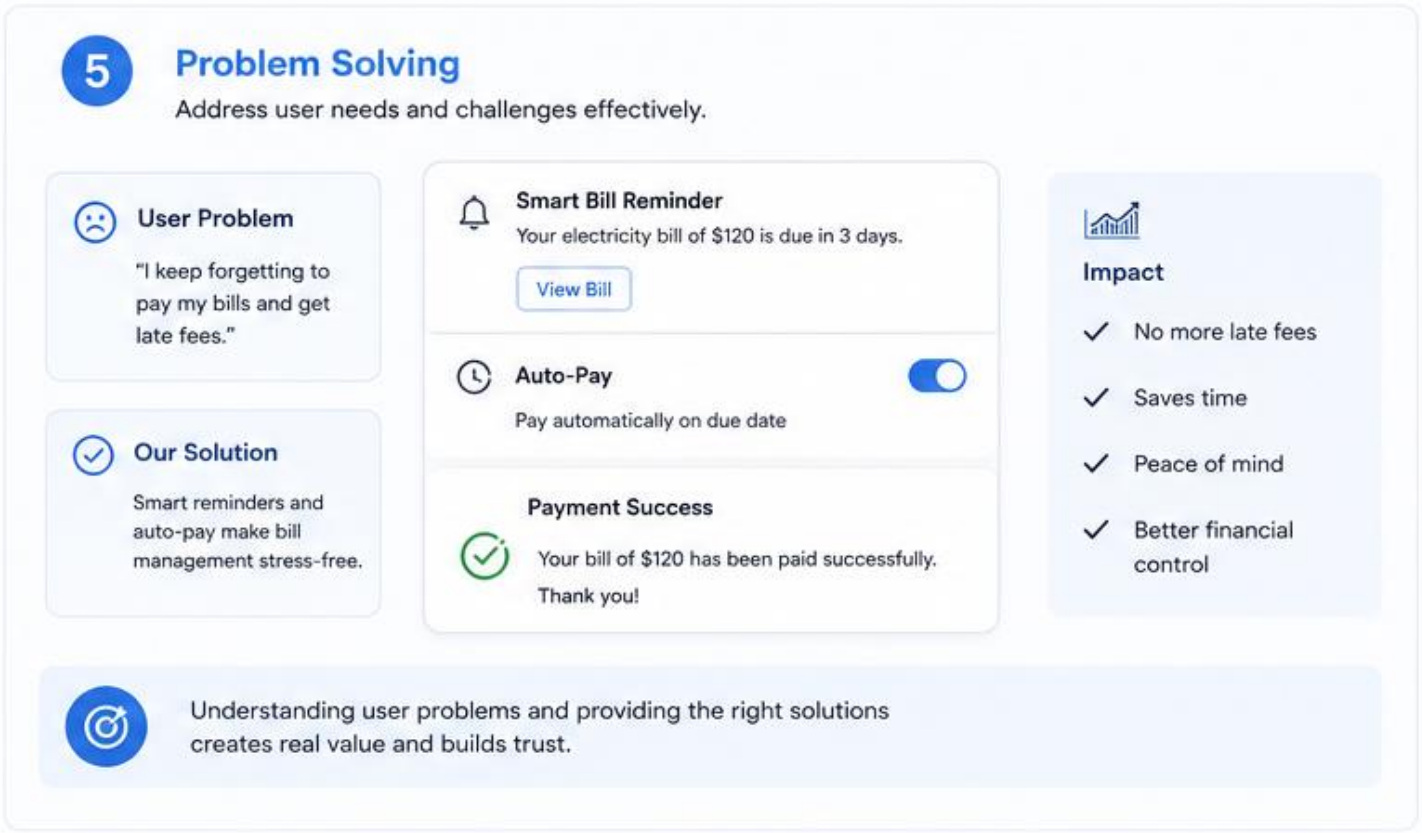
Goals of UX Design:




2
Efficiency
Reduce the time and effort required to complete tasks.
Before
5 steps
Home
Menu
Products
Filters
Product
Time: 1 min 20 sec
After
2 steps
Blue running shoes
Blue Running Shoes
$79.99
Add to Cart
Time: 15 sec
Shortcuts, smart search and streamlined flows help users reach their goals faster.


3
Satisfaction
Provide positive experiences and emotional satisfaction.
Trip to Kyoto
May 20 – May 27
Your booking is confirmed!
We've sent the details to your email.
View Itinerary
Save
Share
The app is delightful to use and makes planning my trips so enjoyable!"
– Sarah J.
Delightful interactions, thoughtful feedback and a pleasant experience keep users happy.


4
Accessibility
Ensure everyone can use the product effectively.
Settings
Text Size
A A A
High Contrast
Screen Reader Support
On
Keyboard Navigation
On
Color Blind Friendly
On
Low Contrast (Hard to Read)
Account Balance
$1,245.00
Recent Activity
Payment -$50.00
Transfer +$200.00
Subscription -$9.99
View all
High Contrast (Easy to Read)
ACCOUNT BALANCE
$1,245.00
RECENT ACTIVITY
Payment -$50.00
Transfer +$200.00
Subscription -$9.99
View all
Screen reader friendly
Keyboard navigable
Large touch targets
Color contrast compliant
Inclusive design ensures people of all abilities and contexts can access and use the product with ease.


5
Problem Solving
Address user needs and challenges effectively.
User Problem
"I keep forgetting to pay my bills and get late fees."
Our Solution
Smart reminders and auto-pay make bill management stress-free.
Smart Bill Reminder
Your electricity bill of $120 is due in 3 days.
View Bill
Auto-Pay
Pay automatically on due date
Payment Success
Your bill of $120 has been paid successfully.
Thank you!
Impact
No more late fees
Saves time
Peace of mind
Better financial control
Understanding user problems and providing the right solutions creates real value and builds trust.

Example of UX Design:

Using the same food delivery app:

UX considerations include:

- ✓ How quickly users find restaurants.
- ✓ Ease of placing an order.
- ✓ Simplicity of payment methods.
- ✓ Real-time delivery tracking.
- ✓ User satisfaction after ordering.

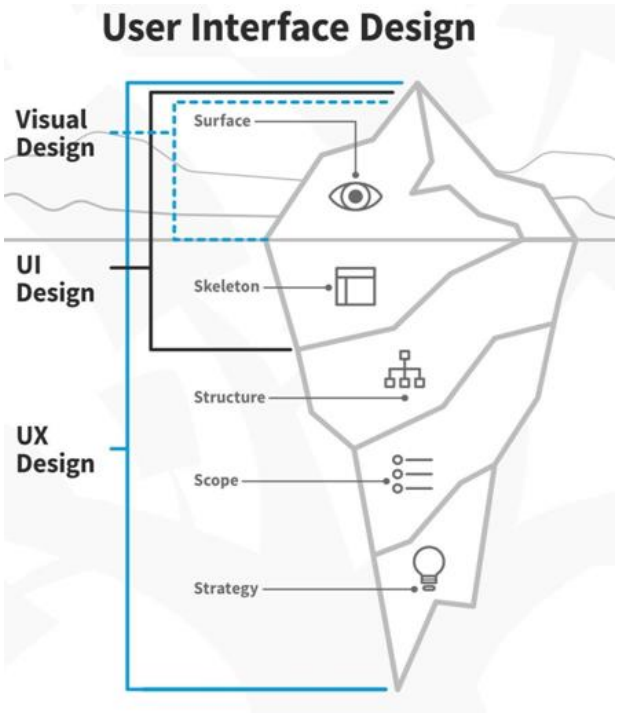
The entire journey from opening the app to receiving food is part of the user experience.

Relationship Between UI and UX



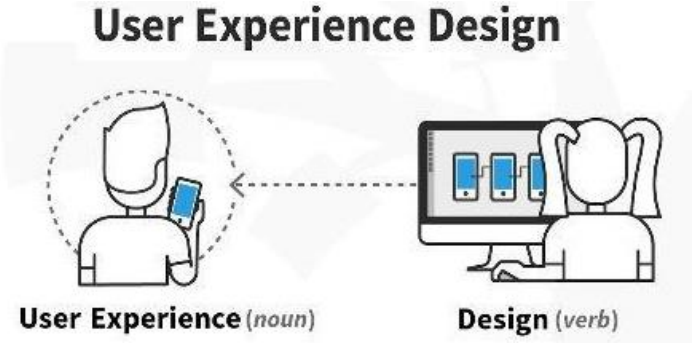
Differences Between UI and UX

UI Design	UX Design
Focuses on visual appearance.	Focuses on overall experience.
Concerned with aesthetics.	Concerned with usability.
Deals with screens and elements.	Deals with user journeys.
Makes products attractive.	Makes products useful.
Uses colors, icons, typography.	Uses research, testing, and analysis.



The image illustrates the **relationship between UI Design, Visual Design, and UX Design** using an **iceberg model**. The main idea is:

- ✓ The **visible part of the iceberg** represents what users can **see and interact** with (UI and Visual Design).
- ✓ The **hidden part below the water** represents the **UX Design process**, which users do not see but which determines whether the product is easy and enjoyable to use.



User Experience (Noun) -> User + Mobile Phone -> This represents the **experience of the user** while interacting with a product or service.

Design (Verb) -> Designer + Computer -> This represents the **process of creating and improving the user's experience**.