a. Explore the fundamentals of UI and UX

UX is all about how a person feels when using a product, like a website or app. A good UX means it's easy to use, helpful, and enjoyable. If you order food using an app, **UX** is:

How quickly you find your favorite meal

How easy it is to place the order

If the app works smoothly and doesn't confuse you

UX Focuses On:

- Understanding users (what they need or want)
- Making things simple and clear
- Fixing problems so users don't get frustrated

UI is how the product *looks* — the colors, buttons, fonts, images, and layout. On that same food app, **UI** is: The **color of the order button, The layout of the menu, The icons and images** of food

UI Focuses On: Making it look nice and clean, designing buttons and menus, Keeping things consistent and pretty.

- UX = User's overall experience (easy, smooth, helpful)
- **UI = How it looks and feels** (colors, shapes, design). You need both for a great app or website one makes it work well, the other makes it look good.

b. Differentiate between UI and UX using real-world case studies.

UI vs UX: Real-World Case Studies

1. Airbnb

UX (**Experience**): Easy to search, filter, and book a place, Smooth steps from search to payment.

UI (Design): Clean layout, big images, clear buttons, Soothing colors and friendly icons.

2. Instagram

UX: Simple to post, scroll, and like photos, Easy access to Stories and messages.

UI: Minimal look with familiar icons, neat grid layout for profiles.

3. Google Search

UX: Fast, easy, and gives direct answers, Smart suggestions while typing.

UI: Clean page with just a logo and search bar, blue links and clear text make it readable.

c. Illustrate the relationship between UI and UX in design.

UI and UX: How They Work Together

Think of building a **car**:

UX (User Experience) is about how it *drives* — smooth ride, easy controls, comfort, and safety.

UI (**User Interface**) is about how it *looks inside* — the dashboard, steering wheel style, button placement, and screen display.

Their Relationship:

UX creates the structure — it plans how things should work.

UI adds the style — it decides how things should look and feel.

Together, they make a product that's not only functional but also enjoyable.

Design Example: A Shopping App

UX Focus: Easy to browse products, Quick checkout process, Clear feedback (e.g., "Order Placed" message)

UI Focus: Attractive buttons and fonts, Product images and icons, Colors that guide actions (e.g., green for "Buy Now"). UX **is the blueprint**, and **UI is the paint and finish**. One can't succeed without the other.

d. Demonstrate various UI/UX design tools in detail.

Top UI/UX Design Tools (Short Overview)

1. Figma: Browser-based, great for team collaboration. Used for design,

prototyping, and feedback.

2. Adobe XD: Desktop app (Windows & Mac). Great for UI design and

animated prototypes.

3. Sketch: Mac-only, fast and lightweight. Ideal for UI design with

reusable components.

4. InVision: Turns designs into interactive prototypes. Good for user

feedback and developer handoff.

5. Balsamiq: Simple wireframing tool. Great for sketching quick ideas

and layouts.

6. Axure Advanced: UX prototyping with logic and interactions. Best for

detailed UX flows.

7. Marvel: Easy-to-use tool for design and testing. Great for beginners

and quick demos.

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