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Sub - Front End Technologies

## Assignment

Q.1. What is Figma? Explain its key features and why it is widely used in modern UI/UX design.

Ans Figma is a cloud-based UI/UX design and collaboration tool used to create user interfaces, prototypes, design systems and product ~~overflows~~ workflows.

# Key features & why it's widely used

- (i) Real-time collaboration - Multiple designers, developers, and stakeholders can work simultaneously on the same file.
- (ii) Cloud-Based Accessibility - No installation needed, works on any device with a browser.
- (iii) Powerful Prototyping - Enables creation of interactive prototypes without exporting designs to another tool.
- (iv) Components & Styles - Allows creation of reusable design assets, essential for design system management.
- (v) Auto-layout & Responsive Tools - Make scalable adaptive designs easy to create.
- (vi) Developer Handoff Support - Developers can inspect designs, access CSS code snippets and download assets.
- (vii) Plugins & Interactions - Supports flowcharting, accessibility checks, icons, illustrations and version control.

Q.2 Differentiate between Designing and Prototyping in Figma. Explain with one real-world UI example.

Ans →

Designing	Prototyping
<ul style="list-style-type: none"> <li>• Involves creating static visual layouts: Screens, UI elements, typography, spacing, color themes.</li> </ul>	<ul style="list-style-type: none"> <li>• Involves connecting screens, adding interactions, transitions and flows.</li> </ul>
<ul style="list-style-type: none"> <li>• focus is on how the interface looks.</li> </ul>	<ul style="list-style-type: none"> <li>• focus is on how the interface behaves.</li> </ul>

### # Real-world Example

→ A food delivery app

\* Designing phase: You create the home screen with categories, dish cards, buttons and navigation bar.

\* Prototyping Phase: You link the "order now" button to the checkout screen, add sliding transition and simulate the complete flow from browsing to payment.

Q.3. What are components and styles in Figma? How do they help in maintaining consistency and saving time in large projects?

Ans → \*Components :- Reusable UI elements such as buttons, input fields, navbar, cards or icons.

• Editing a main component automatically updates all instances across the project.

\*Styles :- Reusable definitions for :-

- colors
- Text
- Effects
- Grids & Spacing

# How They help in large projects.

- ① Consistency - Ensures the same button, font or color is used project-wide.
- ② Time-Efficiency - Changing a single component updates hundreds of instances.
- ③ Design System Creation - Helps team build scalable UI kits similar to enterprise-level design systems.
- ④ Improved Collaboration - Designers and developers rely on consistent standardized tokens.



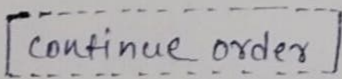
Q.4 Explain Auto-layout in Figma. How does it help in creating responsive designs for different screen sizes?

Ans → Auto-layout automatically arranges and resizes elements based on rules for padding, spacing, direction and alignment.

# How it helps with responsive design.

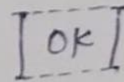
- Frames automatically adjust content when text or nested components expand.
- Buttons resize when text length changes (eg - "OK" → "Continue Order")
- Layout adapts for mobile, tablet and desktop without manually resizing layers.

# Example - If you place text inside a button frame with auto-layout, the button expands or shrinks automatically depending on the text length.

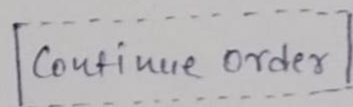
# Diagram :-  → A normal button without auto-layout like a static box.

with-layout → Auto-layout Rules:  
Direction: horizontal →  
Padding: 12 Px, 8 Px  
Alignment: Center

Text = "OK"



Text = "Continue Order"



Q.5 Describe the complete developer handoff process in Figma. How are designs shared, assets exported for developers?

Ans → A complete handoff ensures developers receive everything needed to implement UI accurately.

(Preparing the design)

Step 1: Use Proper names for layers, frames and components.

- Organizes pages into "Design", "Prototype".
- Use styles and components consistently.

Step 2: Sharing the design

- Click share → provide view or edit links.

Step 3: Developers Inspect Mode

- Developers switch to the inspect panel to view:
  - Dimensions
  - Spacing
  - Colors
  - Typography
  - Element properties
  - Code snippets

Step 4: Exporting Assets

- Developers can export -
  - PNG/JPG
  - SVG
  - PDF

Step 5: Using Code Snippets

- Figma auto-generates code snippets for:
  - CSS for web
  - Swift for iOS
  - XML

Step 6: Commenting & Feedback

Stakeholders leave comments directly on frames for revisions, forming a clear communication loop.