CONDUCTING USABILITY TESTS

1. Introduction:

- Usability testing is a systematic evaluation technique used in UI/UX design to assess how effectively, efficiently, and satisfactorily users can interact with a digital product such as a website, mobile application, or software system.
- It focuses on real users performing real tasks to uncover usability problems, design gaps, and user experience issues.
- Usability testing is a core component of User-Centered Design (UCD) and ensures that the product meets user needs rather than designer assumptions.

2. Definition:

Usability Testing is the process of observing representative users as they attempt to complete tasks using a product, in order to identify usability issues and improve the overall user experience.

According to ISO 9241:

Usability is the extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency, and satisfaction.

3. Objectives of Usability Testing

The main objectives are:

- To evaluate **ease of use and learnability**
- To identify **user errors and confusion points**
- To verify whether users can **complete tasks successfully**
- To measure **efficiency** (time and effort required)
- To assess **user satisfaction and comfort**
- To validate design decisions before final release

4. Importance of Usability Testing in UI/UX

- Ensures **user-friendly interfaces**
- Reduces **development and maintenance costs**
- Improves **user retention and engagement**
- Prevents **product failure after launch**
- Supports **data-driven design improvements**
- Enhances **accessibility and inclusiveness**

5. When to Conduct Usability Testing

Usability testing should be conducted **throughout the design lifecycle**:

1. **Early Stage**
    - Paper sketches, wireframes
    - Detects major design flaws early
2. **Mid Stage**
    - Interactive prototypes
    - Tests navigation, content flow, interaction
3. **Late Stage**
    - Fully functional product
    - Identifies minor usability issues
4. **Post-Launch**
    - Continuous improvement based on user feedback

6. Types of Usability Testing

6.1 Moderated Usability Testing

- Conducted with a **facilitator**
- Users perform tasks while being observed
- Facilitator can ask follow-up questions
- Provides **rich qualitative insights**

Example: Lab testing with facilitator guidance

6.2 Unmoderated Usability Testing

- Users complete tasks independently
- No facilitator interaction
- Faster and cost-effective
- Suitable for large user samples

Example: Online testing using Maze or UsabilityHub

6.3 Remote Usability Testing

- Conducted over the internet
- Useful for geographically dispersed users
- Can be moderated or unmoderated

6.4 In-Person Usability Testing

- Conducted in usability labs

- Observes facial expressions and body language
- More controlled environment

6.5 Guerrilla Usability Testing

- Informal and quick testing
- Conducted in public places
- Low cost and rapid feedback

7. Usability Testing Process (Step-by-Step)

Step 1: Define Goals and Scope

- Identify what needs to be tested
- Examples:
  - Navigation clarity
  - Button visibility
  - Form usability
  - Error handling

Step 2: Identify Target Users

- Select users based on **personas**
- Users should match real-world demographics
- Typically **5–8 users** reveal most usability issues

Step 3: Design Test Scenarios and Tasks

- Tasks must be **realistic and goal-oriented**
- Avoid giving instructions
- Examples:
  - "Report an emergency"
  - "Create a new account"
  - "Find nearby help services"

Step 4: Select Testing Method and Tools

- Choose moderated or unmoderated testing
- Common tools:
  - Figma / Adobe XD (prototypes)
  - Maze
  - Lookback
  - UserTesting

- UsabilityHub

Step 5: Conduct the Usability Test

- Observe how users interact with the interface
- Use **Think-Aloud Technique**
- Do not guide or correct users
- Record user actions and reactions

Step 6: Collect Data

- **Qualitative Data**
  - User comments
  - Confusion points
  - Frustrations
- **Quantitative Data**
  - Task completion time
  - Error rate
  - Success/failure rate

Step 7: Analyze Results

- Identify recurring issues
- Classify issues based on severity:
  - Critical
  - Major
  - Minor
- Prioritize fixes based on impact

Step 8: Implement Improvements and Retest

- Modify UI based on findings
- Conduct follow-up usability tests
- Validate improvements

8. Usability Metrics

- Task Success Rate
- Time on Task
- Error Rate
- System Usability Scale (SUS)
- User Satisfaction Score

- Learnability

9. Usability Testing vs User Testing

Aspect	Usability Testing	User Testing
Focus	Interface & interaction	Overall experience
Goal	Identify usability issues	Validate user needs
Method	Task-based	Feedback-based

10. Advantages of Usability Testing

- Improves usability and accessibility
- Reduces rework and redesign costs
- Enhances user satisfaction
- Identifies problems early
- Improves product success rate

11. Limitations of Usability Testing

- Time-consuming if poorly planned
- Requires representative users
- Limited sample size
- Results depend on test environment

12. Real-World Example (Women's Safety App)

Usability testing can reveal:

- SOS button not easily accessible
- Confusing emergency contact setup
- Poor readability in low-light conditions

Improvements after testing:

- One-tap SOS access
- Clear icons and labels
- High-contrast UI for night usage