Design Thinking for User Needs Analysis

- Subject: Advanced User Interface Design (31901-2001)

- Instructor: supreeya Rattanawithtayaphan

- Level: Vocational Certificate (High Vocational Diploma)

What is Design Thinking?

- - A human-centered approach to problem-solving.

- - Focuses on understanding users, challenging assumptions, and creating innovative solutions.

- - Commonly used in UI/UX design and product development.

The Five Stages of Design Thinking

- 1. Empathize – Understand users and their needs.

- 2. Define – Identify the core problem.

- 3. Ideate – Generate creative ideas.

- 4. Prototype – Build simple versions of solutions.

- 5. Test – Evaluate with users and improve.

Stage 1 – Empathize

- - Observe users in their real environment.

- - Conduct interviews and surveys.

- - Use empathy maps to capture user emotions, thoughts, and behaviors.

- Goal: Understand what users really need.

Stage 2 – Define

- - Analyze collected data.

- - Identify user pain points and key challenges.

- - Create a clear Problem Statement:

-   "Users need a way to ___ because ___."

Stage 3 – Ideate

- - Brainstorm possible solutions without judgment.

- - Use techniques like:

-   * Mind mapping

-   * Crazy 8's sketching

-   * SCAMPER method

- Goal: Explore many possibilities before choosing one.

Stage 4 – Prototype

- - Build quick, low-cost models (wireframes or mockups).
- - Test ideas visually and interactively.
- - Use tools like Figma, Adobe XD, or paper sketches.

Stage 5 – Test

- - Get user feedback on prototypes.

- - Observe user interactions and note issues.

- - Refine and repeat until the design meets user needs.

Benefits of Using Design Thinking

- - Encourages creativity and innovation.

- - Ensures user-centered design.

- - Reduces development risks.

- - Improves user satisfaction and usability.

Example Activity

- Class Exercise:

- - Choose a simple problem (e.g., booking a dorm room).

- - Apply all 5 stages of Design Thinking.

- - Present your prototype and user feedback.

Summary

- - Design Thinking = Understand $\longrightarrow$ Define $\longrightarrow$ Create $\longrightarrow$ Test $\longrightarrow$ Improve

- - Focus on users first — technology comes second.

- - A powerful tool for UI/UX designers.

References

- - IDEO. Design Thinking Process

- - Stanford d.school. An Introduction to Design Thinking

- - Interaction Design Foundation (IDF)