COLLEGE OF
COMPUTER STUDIES

QUEZON CITY
UNIVERSITY

WEEK 14
HCI Project Development

Project's Three Phases

- **Understanding the user needs**

- Interviews, observations, data collection

- Defining Users, Tasks, User Needs, Constraints

- Creating models of how users work

Project's Three Phases

- **Designing a technological solution to meet those needs**

- Generating alternative designs to meet user needs

- Choosing the best design

- Prototyping: low-fidelity

Project's Three Phases

- **Implementation**

- Hi-fidelity prototypes of the best design

- Evaluation

Interviewing

- Interviewing to figure out the user's goals

-In-person interviews, observations, video

-Lots of data

-Data collection: Notes, Audio/Video recording

-Analyzing data

-Categorizing/Labelling data

Contextual Inquiry

- Similar to an interview, but done in the “context” where the participant is likely to interact with the technology.
- Greater partnership with the participant, working together to figure out how a workflow actually happens.

Pros
- Rich data similar to a normal unstructured or semi-structured interview
- Get to see the space where users normally interact with your technology
-Opportunity to identify “obvious” things that users don’t mention

Cons
- More involved, travel to location, 1-3 hour inquiry
- Less structured data is harder to analyze
- May require special permission to visit and record space

Contextual Design

Design Pattern

- Similar to a recipe for how to handle common user interface design issues
- When facing a design problem it can be useful to look at several patterns and see if they help you solve the problem

- Pros

- Good way to not reinvent the wheel

- Learn from others' mistakes

- Cons

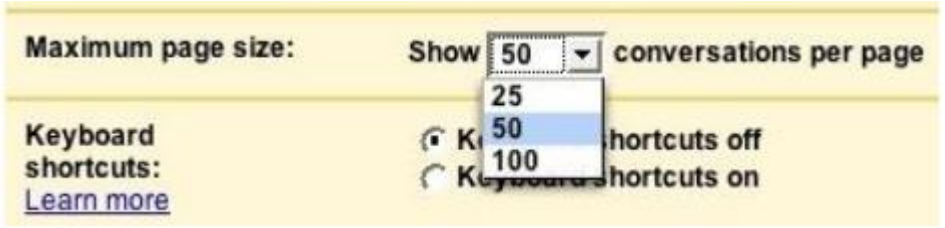
- Only common things have patterns

- Patterns are not one-size-fits-all, what works in one situation may not work in another

Getting Input

- Flexible Format

- Fill in the blank



- Structured format

Design Process

Two types of Design:

- Conceptual
- Physical

Prototype

- A limited representation of a design that allow users to interact with it and to explore its suitability.
- Allows stakeholders to interact with the envisioned product, gain some experience of using and explore imagined uses.

Why Prototype?

- Communication
- Testing
- Effectiveness
- Compatibility

Types of Prototypes

Low-fidelity Prototype

- very coarse-grained
- fuzzy layouts of general system requirements
- paper-based and digital
- sketching
- screen mockups
- storyboards
- used to gather feedback on the basic functionality or visual layout

Low-fidelity Prototype Example

Paper Prototypes

Sketches and screen mock-ups

- quick to build
- easy to run

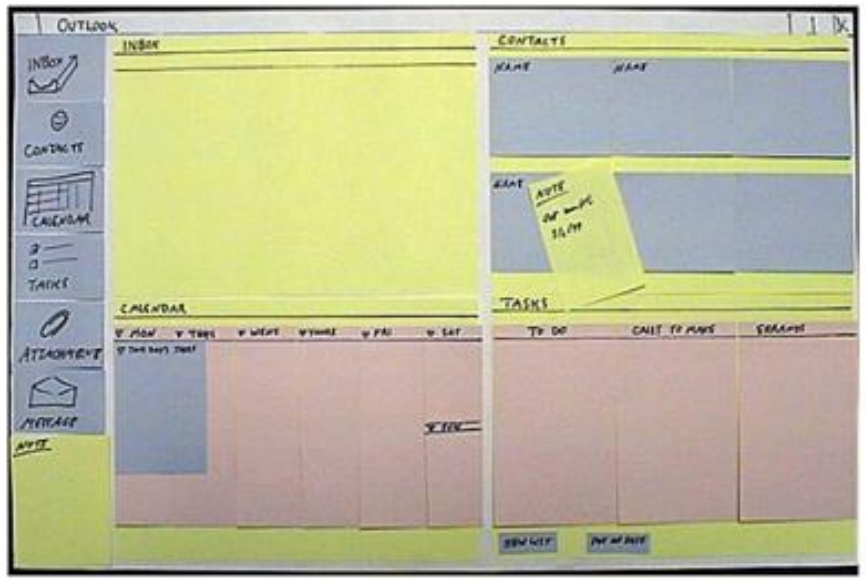
Storyboards

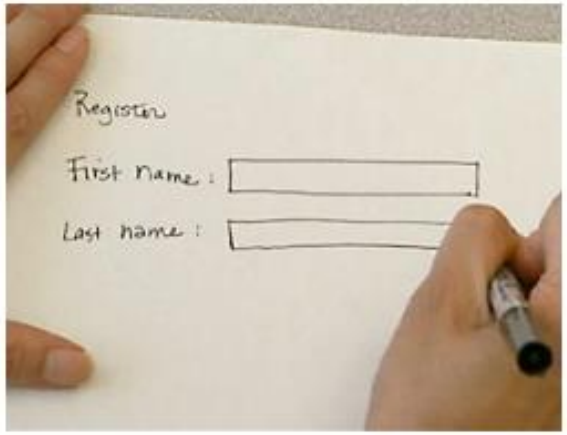
- sequence of screens focusing on a user action
- don’t capture every detail, just systems’ major functionality
- could be limited in scope, more rigidly linear

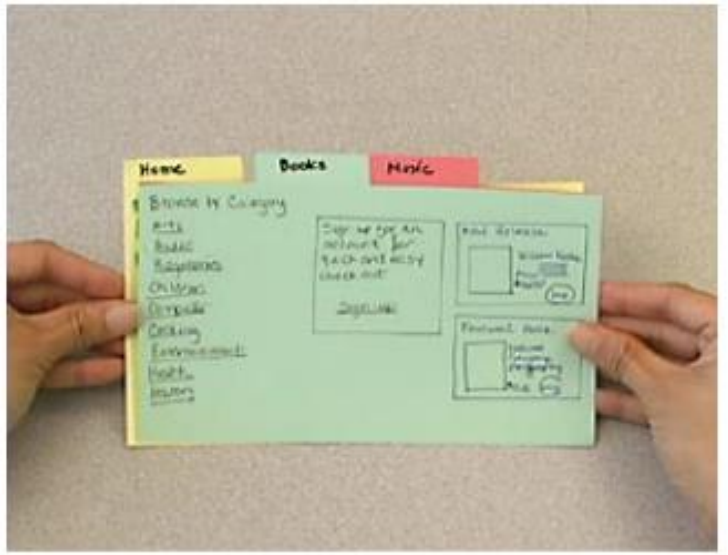
Users love paper prototypes

- opportunity to contribute to the new design

Paper Prototypes







High Fidelity Prototypes

- fine-grained
- highly elaborate and polished digital versions of the system

High Fidelity Prototypes Example

- Software Prototyping
- Computer-based mock-ups of interface enabling sophisticated user-system interactions
- Variety of prototyping tools exist to support developers with differing levels of fidelity, e.g.

- MS Powerpoint
- Authorware
- Macromedia Flash
- Macromedia Director

USABILITY ENGINEERING

The ultimate test of usability based on measurement of user experience

Usability specification

- usability attribute/principle
- measuring concept
- measuring method
- now level/ worst case/ planned level/ best case

- Problems

- usability specification requires level of detail that may not be
- possible early in design satisfying a usability specification
- does not necessarily satisfy usability

ISO USABILITY STANDARD 9241

adopts traditional usability categories:

-effectiveness

can you achieve what you want to?

- efficiency

can you do it without wasting effort?

- satisfaction

do you enjoy the process?

The End