Prototyping

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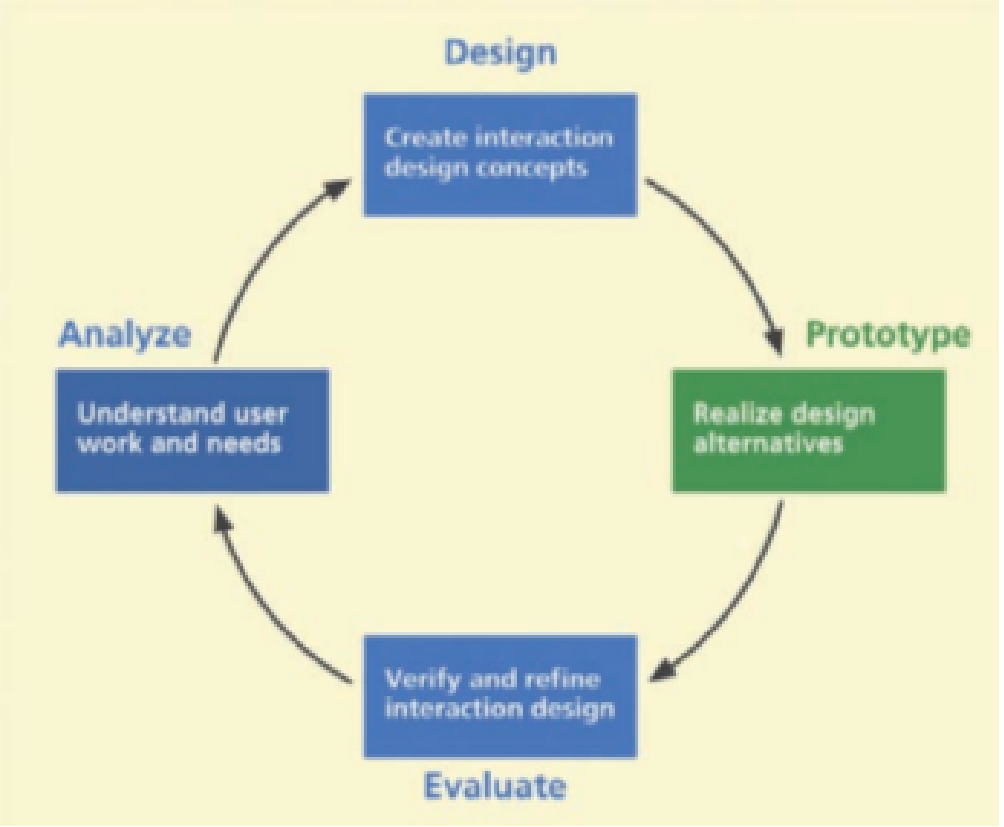
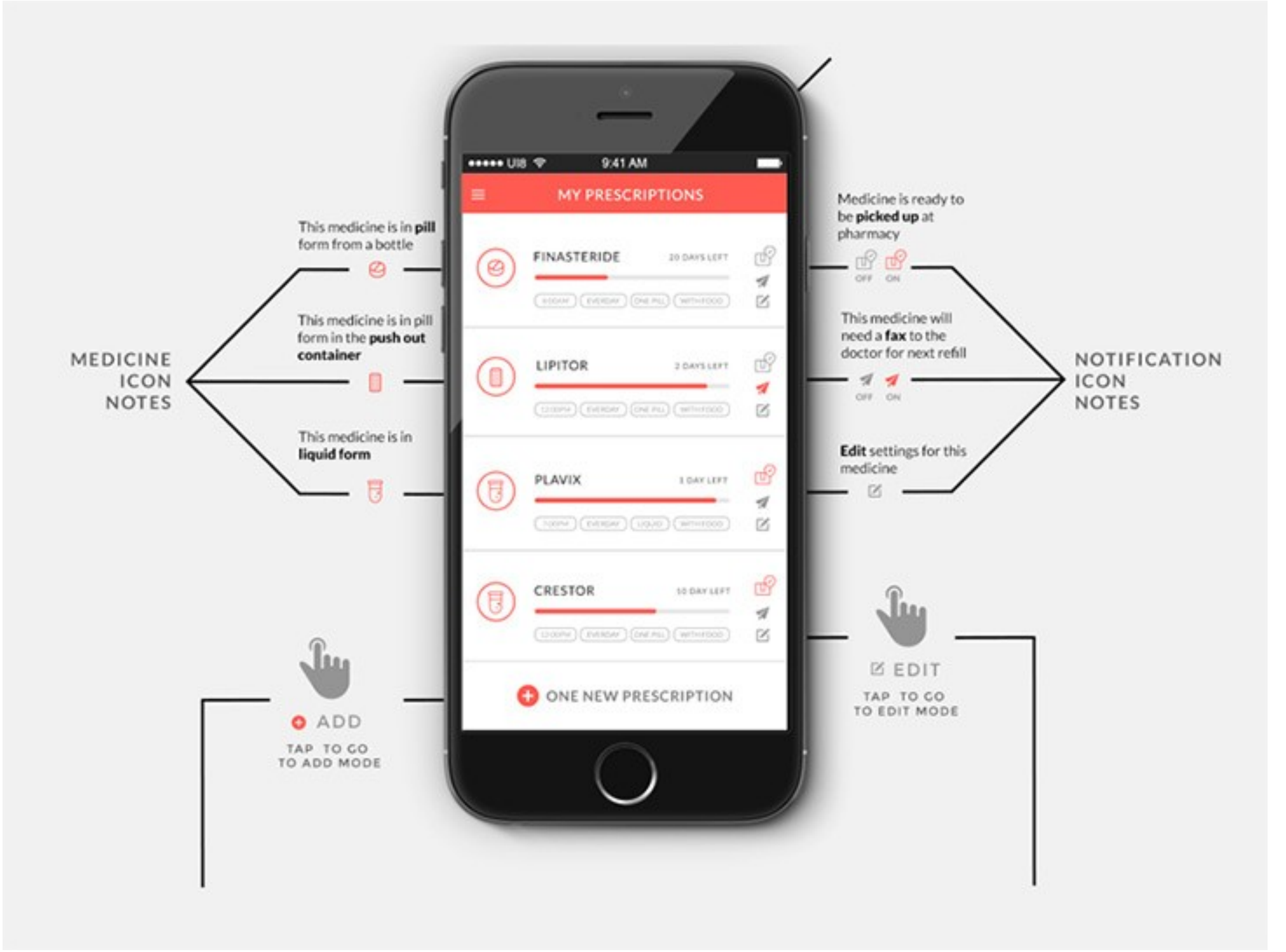
Introduction

- A prototype is a design representation.
- So, as you create the design and system's representation, you are creating the prototype.



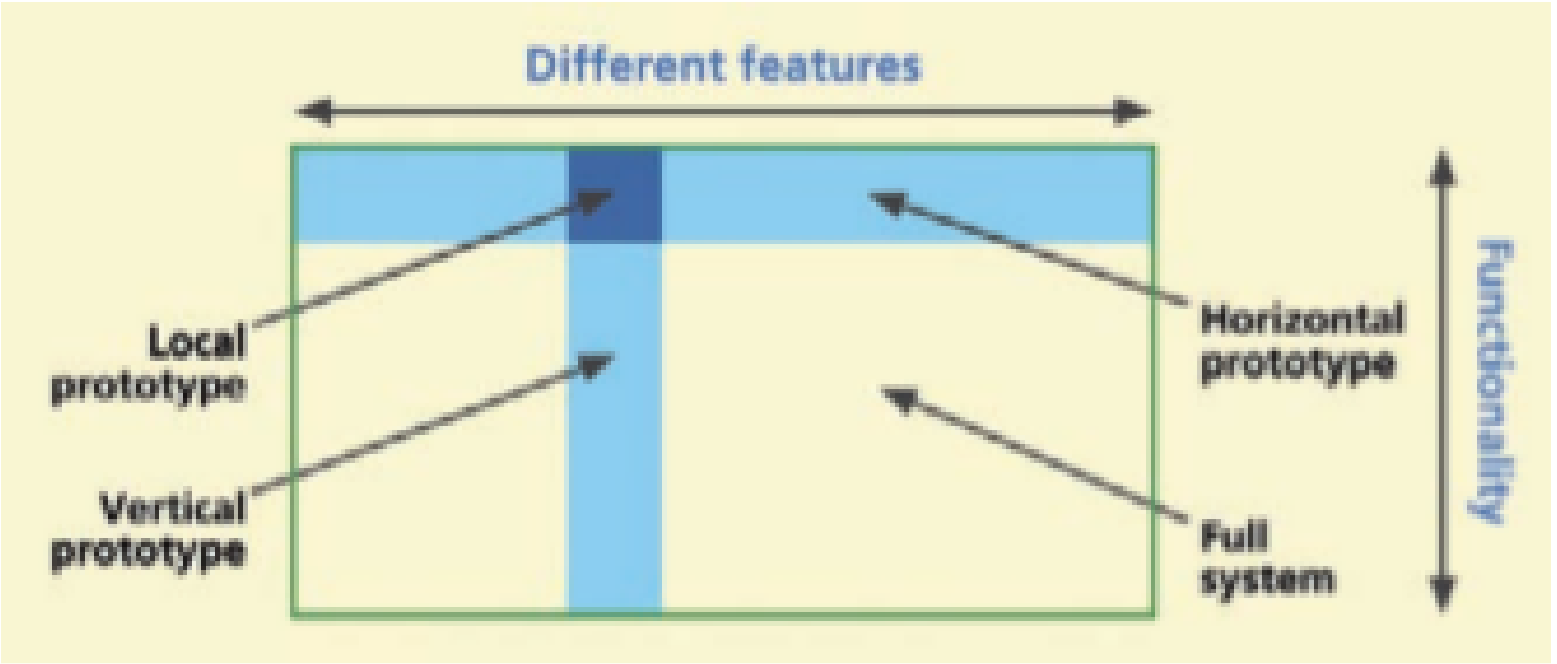
Introduction

- A prototype gives you something to evaluate before you have to commit resources to build the real thing.
- Because prototyping provides an early version of the system that can be constructed much faster and is less expensive, something to stand instead of the real system to evaluate and inform refinement of the design, it has become a principal technique of the iterative lifecycle.
- **Examples-** Automobile designers build and test mockups, architects and sculptors make models, circuit designers use “bread-boards,” artists work with sketches, and aircraft designers build and fly experimental designs.


MEDICINE ICON NOTES
This medicine is in **pill** form from a bottle
This medicine is in pill form in the **push out container**
This medicine is in **liquid form**
9:41 AM
MY PRESCRIPTIONS
FINASTERIDE
20 DAYS LEFT
LIPITOR
2 DAYS LEFT
PLAVIX
1 DAY LEFT
CRESTOR
10 DAY LEFT
ONE NEW PRESCRIPTION
Medicine is ready to be **picked up** at pharmacy
OFF ON
This medicine will need a **fax** to the doctor for next refill
OFF ON
Edit settings for this medicine
NOTIFICATION ICON NOTES
ADD
TAP TO GO TO ADD MODE
EDIT
TAP TO GO TO EDIT MODE

DEPTH AND BREADTH OF A PROTOTYPE

- Depth: Degree of fuctionality
- Breadth: % of features covered



FIDELITY OF PROTOTYPES

- The fidelity of a prototype reflects how “finished” it is perceived to be by customers and users, not how authentic or correct the underlying code is.
- **Low-Fidelity Prototypes**- Low-fidelity prototyping involves the use of basic models or examples of the product being tested. **For example,** the model might be incomplete or it might be constructed using materials not intended for the finished article, such as wood, paper, or metal for a plastic product.

  Examples-

  - Storyboarding.
  - Sketching
  - Card sorting.
  - Wizard of Oz
- **Medium-Fidelity Prototypes-** Sometimes you need a prototype with a level in between low fidelity and high fidelity. Sometimes you have to choose one level of fidelity to stick with because you do not have time or other resources for your prototype to evolve from low fidelity to high-fidelity. For teams that want a bit more fidelity in their design representations than you can get with paper and want to step up to computer-based representations, medium-fidelity prototypes can be the answer.
- **High-Fidelity Prototypes-** High-fidelity prototypes are prototypes that look and operate closer to the finished product.
  - For example, a 3D plastic model with movable parts (allowing users to manipulate and interact with a device in the same manner as the final design) is high-fi in comparison to, say, a wooden block. Likewise, an early version of a software system developed using a design program such as Sketch or Adobe Illustrator is high-fi in comparison to a paper prototype.

INTERACTIVITY OF PROTOTYPES

- The amount of interactivity allowed by a prototype is not independent of the level of fidelity. In general, high interactivity requires high-fidelity.

1. Scripted and "Click-Through" Prototypes- Both are medium fidelity prototypes. Scripted prototypes are designed using high-level scripting language. Click-through prototypes include some links or buttons in them to interact with the pages in the website.

2. A Fully Programmed Prototype- It is a high fidelity prototype. It is full funtional prototype almost like the end product. A real programming language gives the most flexibility to produce exactly the desired look and feel.

3. Animated Prototypes- It includes some animated pictures or video animations to make the pages more interactive.

PAPER PROTOTYPES

- Paper Prototyping is a technique that consists of creating hand drawings of user interfaces in order to enable them to be rapidly designed, simulated and tested.
- Paper prototypes are used-
  - To communicate ideas: between designers, developers, users and other stakeholders in the first stages of the user-centered design process.
  - As a usability testing technique: to observe the human interaction with user interfaces even before these interfaces are designed and developed.


Think.Pin.Create!


Project name
Page
of
Notes & Comments
Notes & Comments
Pin

Advantages of Prototyping

- Offer concrete baseline for communication between users and designers
- Provide conversational “prop” to support communication of concepts not easily conveyed verbally
- Allow users to “take the design for a spin” (who would buy a car without taking it for a test drive or buy a stereo system without first listening to it?)
- Give project visibility and buy-in within customer and developer organizations
- Encourage early user participation and involvement
- Give impression that design is easy to change because a prototype is obviously not finished
- Afford designers immediate observation of user performance and consequences of design decisions
- Help sell management an idea for new product
- Help affect a paradigm shift from existing system to new system

THANK YOU