Develop

Arindam Ghosh
Prof. Giuseppe Riccardi

SiS LAB
Signals & Interactive Systems

Design, Develop and Deliver

Arindam Ghosh
Prof. Giuseppe Riccardi

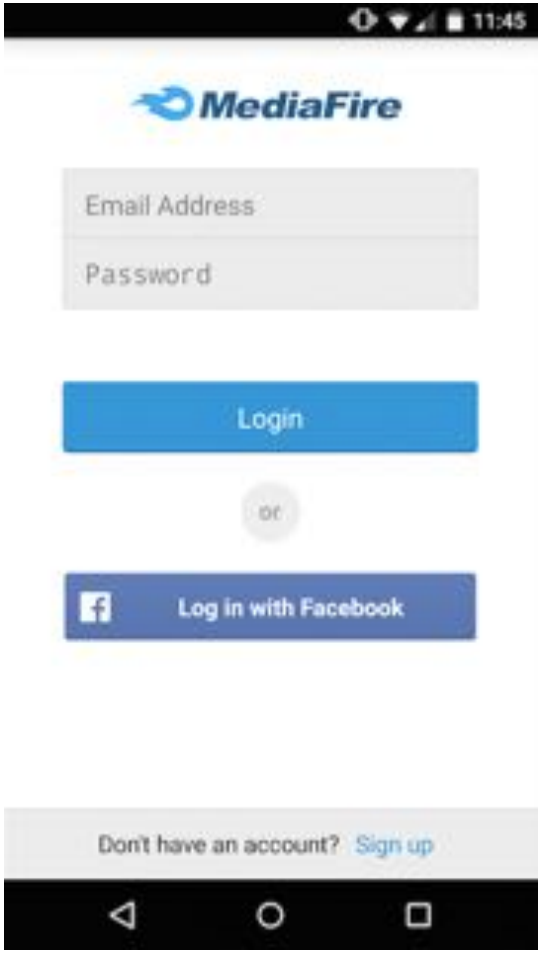
SiS LAB
Signals & Interactive Systems

D-D-D

1
2
-1
0
-2

PIANO TERRA -1
Aule A101->A108
Reception
PIANO PRIMO 0
Aule A201->A224
Lab. Didattico Meccanica
PIANO SECONDO 1
DISI Secretary
ICT Doctoral School

Sign up screen – social or not?



NEWS

Android M's getting the equivalent of Apple's Touch ID

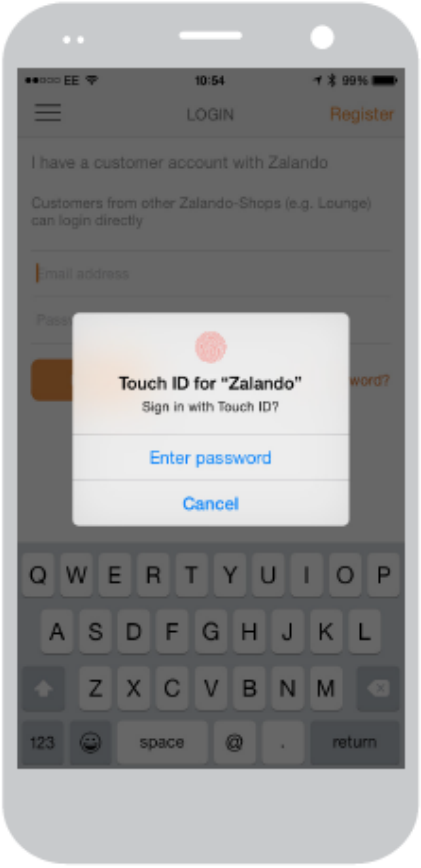


image 10

Requirements

#	Functionality	Host	Guest	To be completed by	Completed
1	Login	✓		17 March 2011	✓
2	Register	✓		17 March 2011	✓
3	Retrieve guest list	✓		24 March 2011	✓
4	Add guest	✓		24 March 2011	✓
5	Remove guest	✓		24 March 2011	✓
6	Update guest	✓		24 March 2011	✓
7	Create questionnaire	✓		24 March 2011	*
8	Retrieve questionnaire	✓		2 April 2011	*
9	Remove questionnaire	✓		2 April 2011	*
10	Send questionnaire	✓		2 April 2011	*
11	Answer questionnaire		✓	2 April 2011	*
12	Create HTML	✓		2 April 2011	✓

* Down scoped

LOST
CONFUSED
UNSURE
UNCLEAR
PERPLEXED
DISORIENTED
BEWILDERED

Stylus or Touch Screen ?

APPLE TECH

Is Apple making an 'iPad Pro' with a stylus?

By Sam Byford on January 18, 2015 08:41 pm Email @345triangle

http://www.theverge.com/2015/1/18/7785443/apple-ipad-pro-stylus

DAVID PIERCE GEAR 09.12.15 7:00 AM

ONLY APPLE CAN MAKE THE PERFECT STYLUS IT ONCE SPURNED

Alarm App - cool or simple?

YOU HAD ONE JOB

1
2
-1
0
-2

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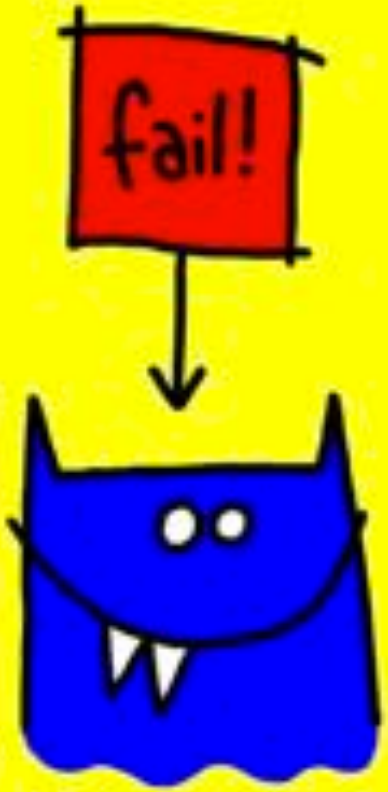
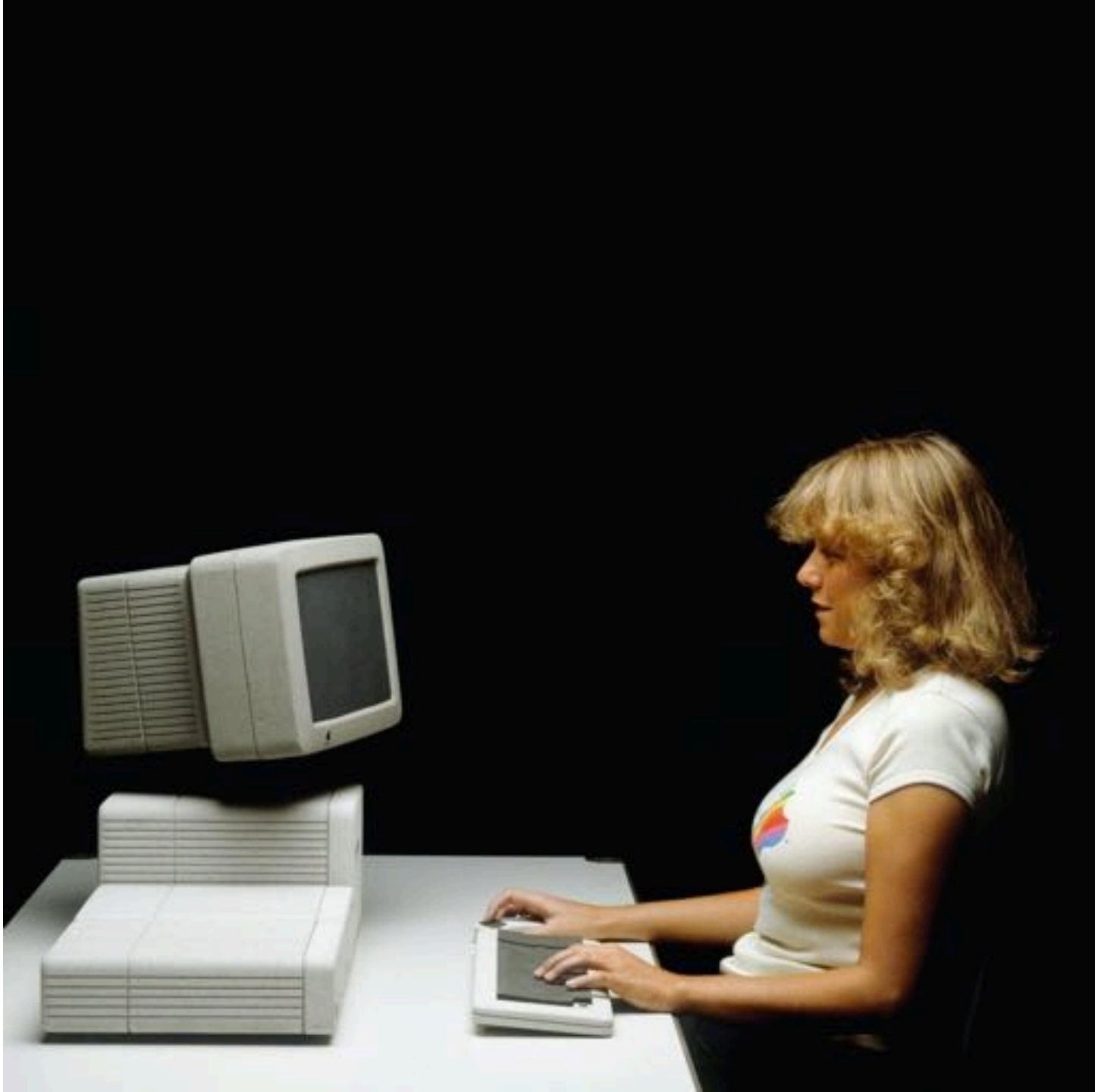
(riservato afferenti ed ospiti)
POLO SCIENTIFICO E TECNOLOGICO "FABIO FERRARI"

fail cheap.
fail quick.
fail often.
fail. fail. fail. fail.
fail. fail. fail. fail.
exactly.



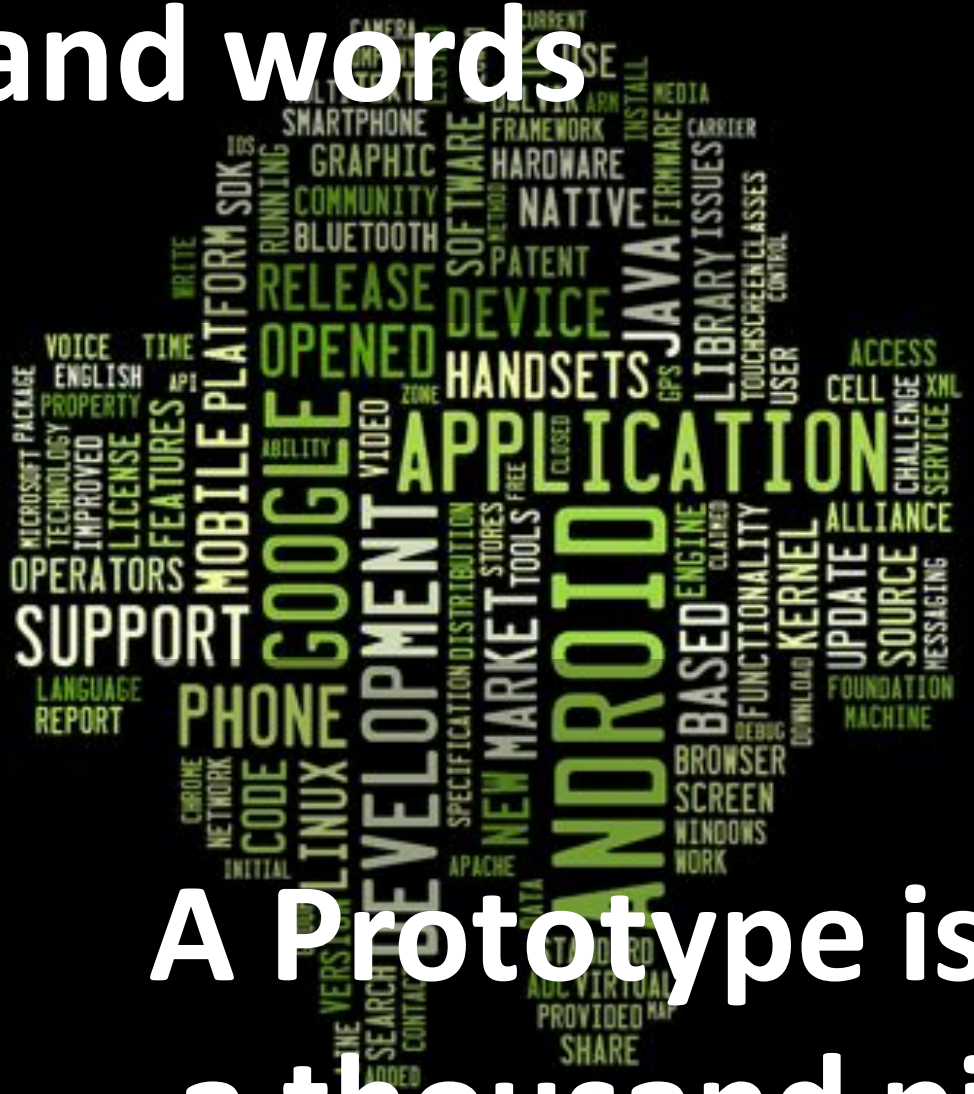
@gapingvoid

Prototype before you Build



http://www.businessinsider.com/photos-early-apple-prototypes-2014-6?op=1&IR=T

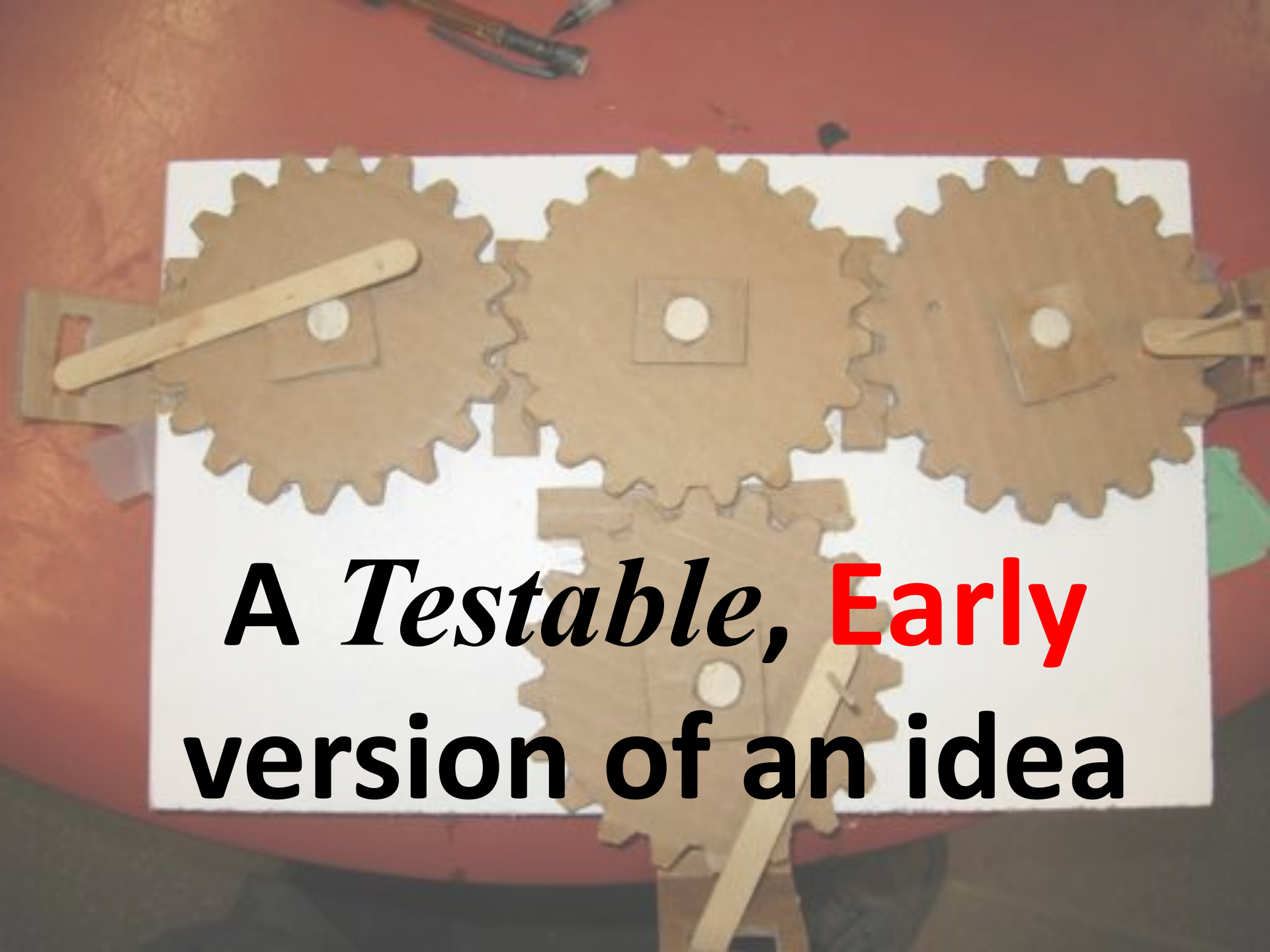
A Picture is worth a thousand words



A Prototype is worth a thousand pictures

3D printed future car prototype

What is a Prototype?


A *Testable*, Early
version of an idea

Nasa said the Z-2 spacesuit was only a prototype, but elements of it would be incorporated into the suit worn by the first humans to reach the Red Planet.

The suit is being tested in Nasa's pools used to teach astronauts to spacewalk

http://www.bbc.com/news/technology-27238452

Architecture

How many bedrooms do you need?
1 2 3 4 5+

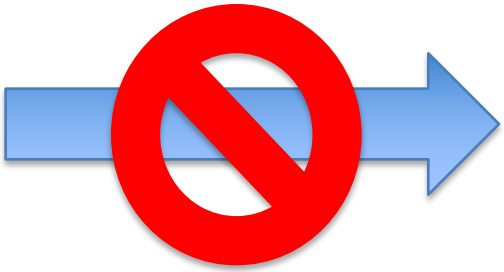
How about bathrooms?
1 2 3 4 5+

How many stories?
1 2 3+

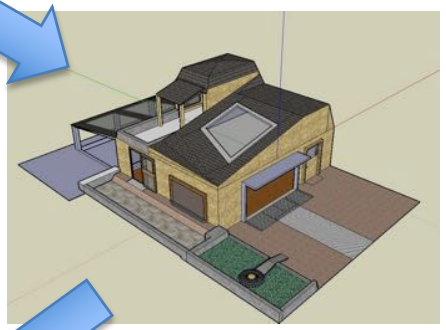
Do you want garage bays?
0 1 2 3+

Do you have a style you like?
Select a style

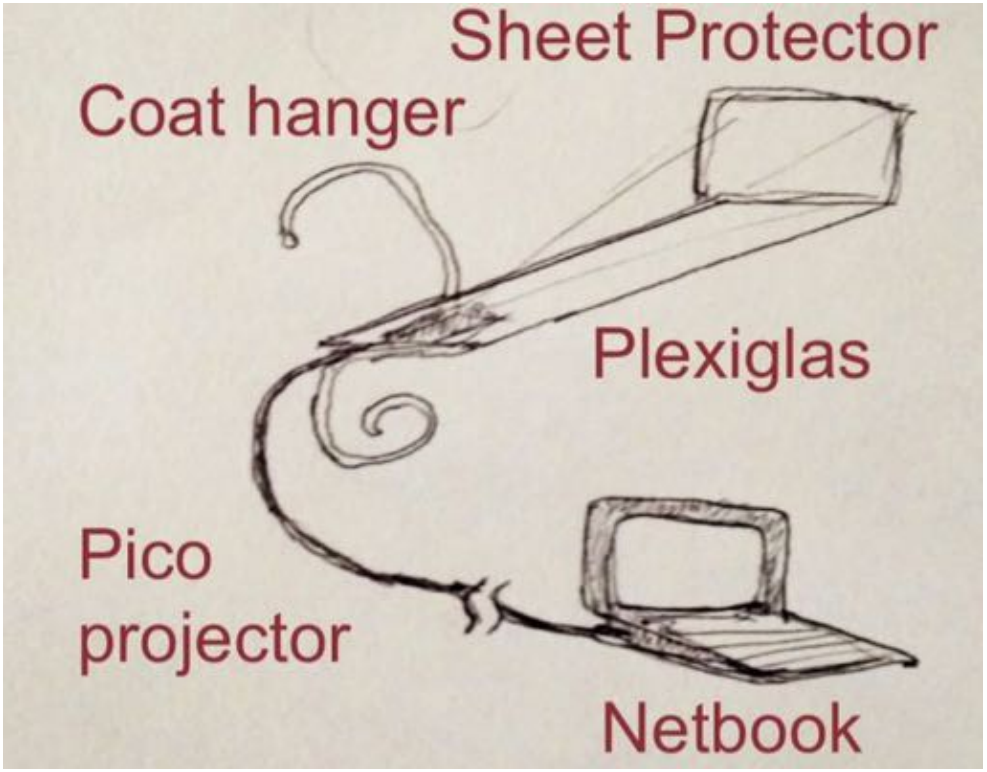
Square Footage:
0 - 15318 Sq. ft.



Architecture



Google Glass



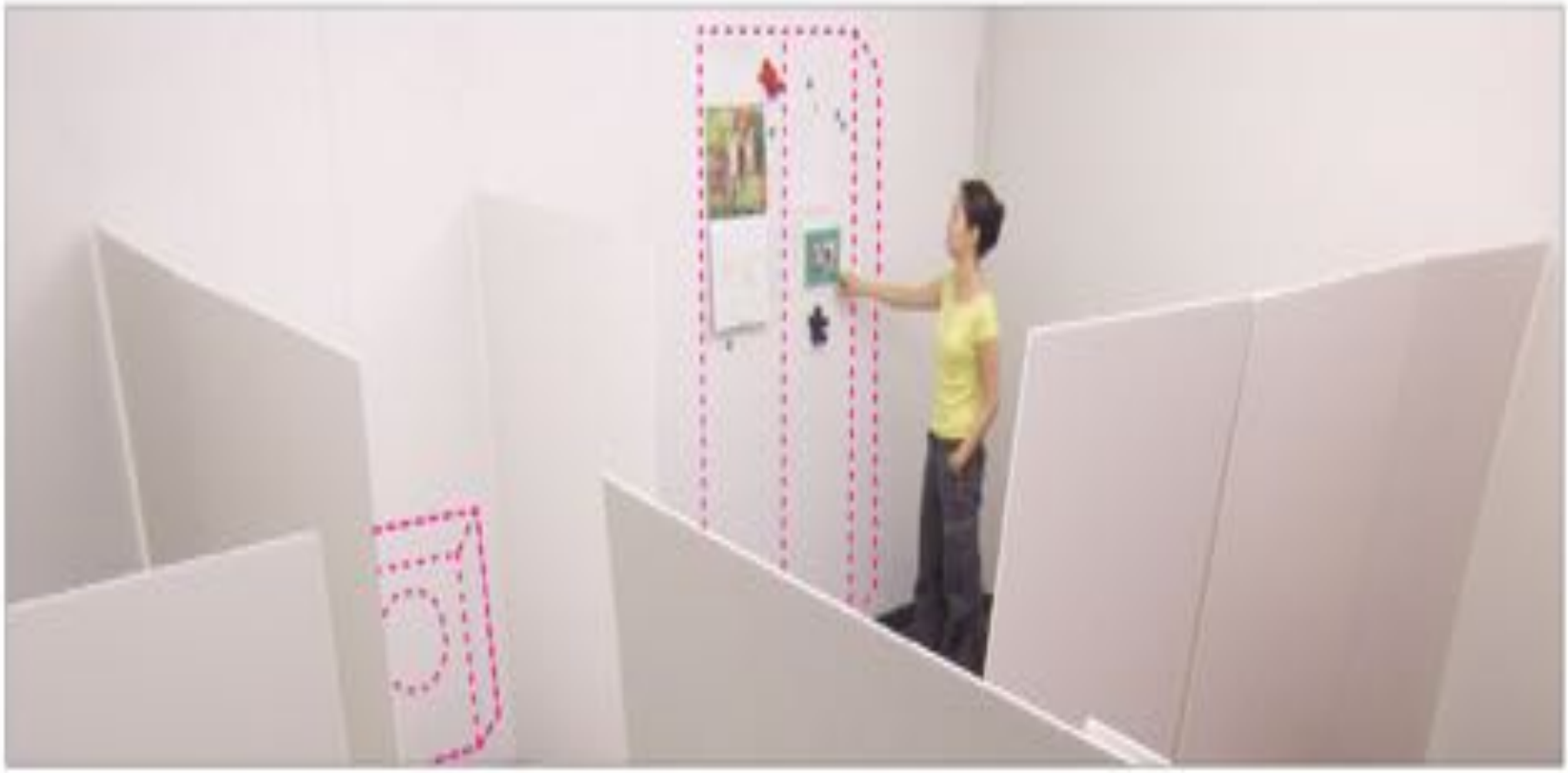
http://youtu.be/d5_h1VuwD6g?t=34s

What about Prototypes for Software?

Before Building an app

Build a Prototype

Smart Fridge



Smart Watch

Pebble Time - Awesome Smartwatch, No Compromises

by Pebble Technology

37,866
backers

$8,035,231
pledged of $500,000 goal

30
days to go

Back This Project

★ Remind me

12:00 PM
slide to unlock
15:00 PM
slide to unlock

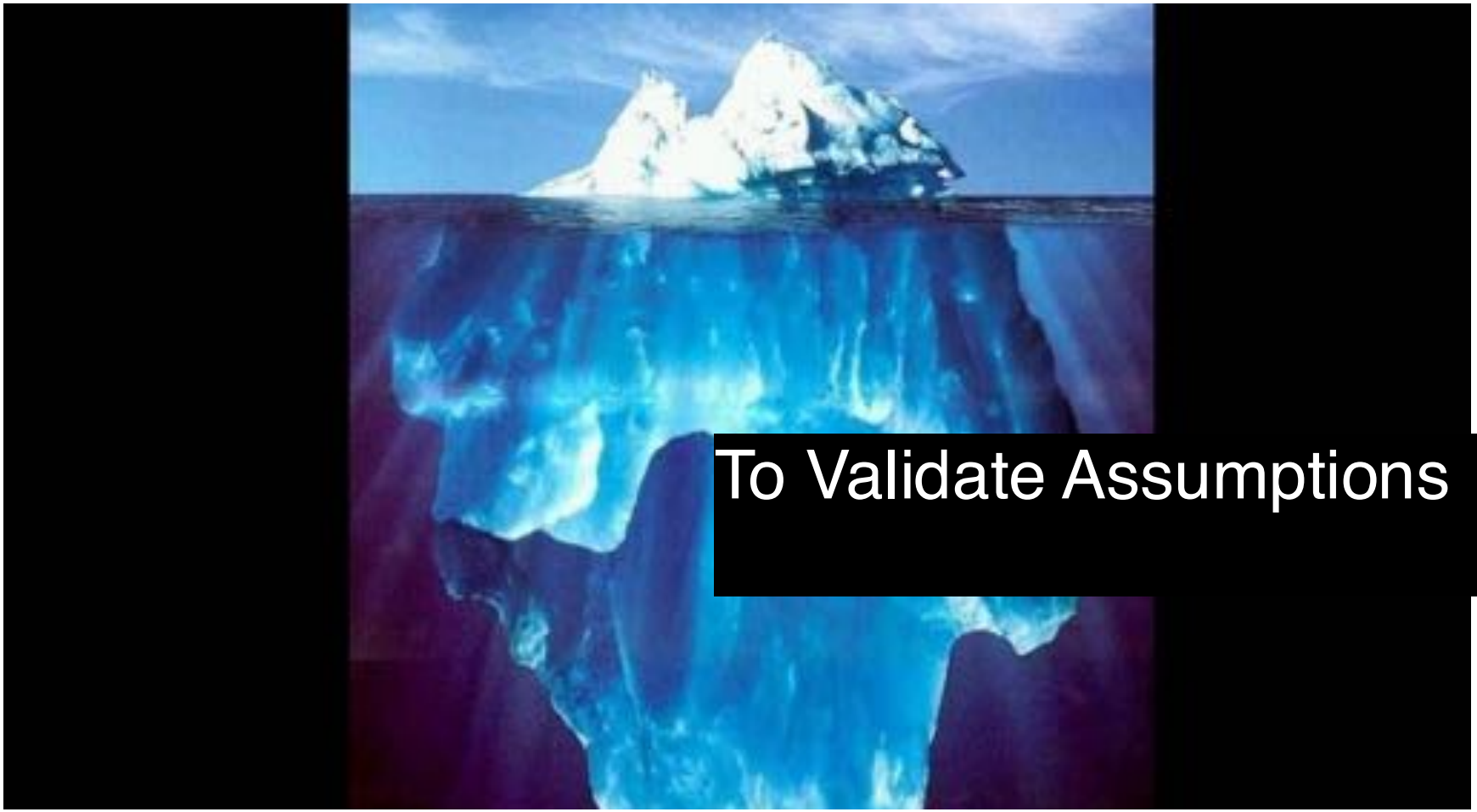
https://blog.getpebble.com/2012/08/10/user-interface-preview-updates/

Why Prototype?

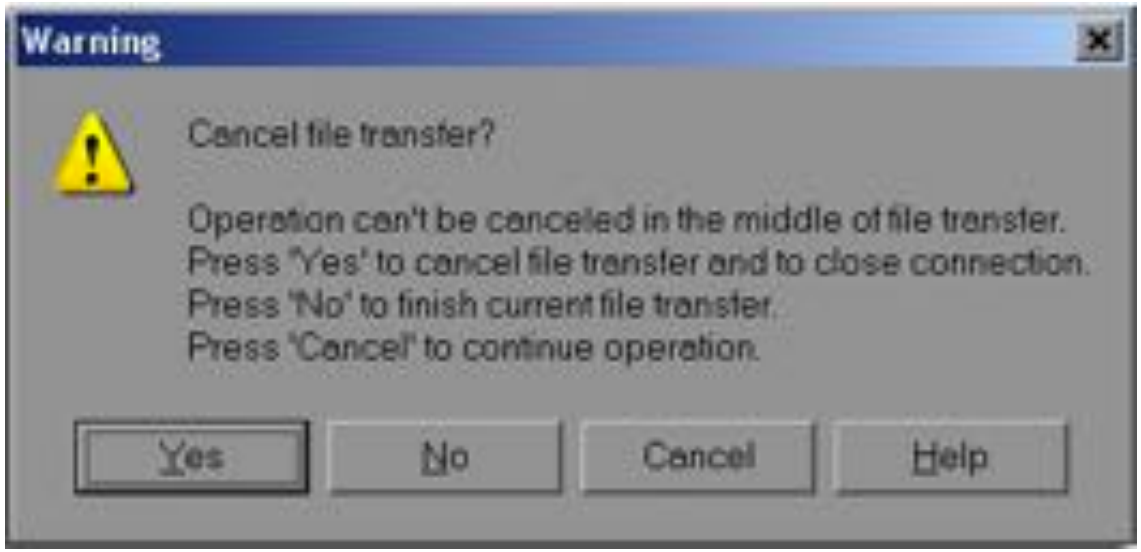
To Communicate an Idea or Experience

We want to build the next cool gadget…

But …. What do people think about it?
Lets show them a video


To Validate Assumptions

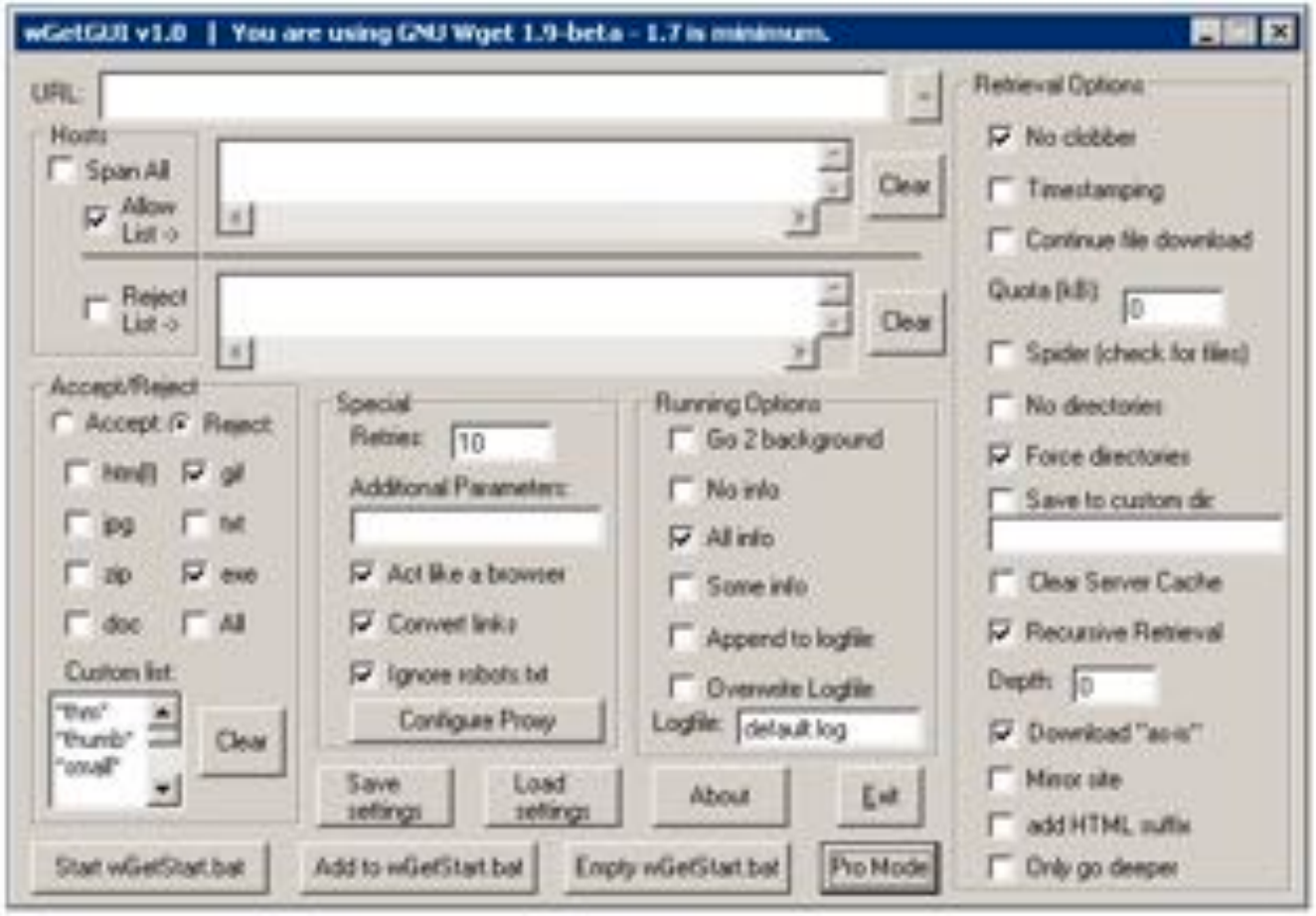
Does the User Understand you?



Press *Yes* to Cancel" – "Press *Cancel* to Continue ????

This Is What Happens When You Let Developers Create UI

Deep down inside every software developer, **there's a budding graphic designer waiting to get out.** And if you let that happen, you're in trouble. Or at least your users will be, anyway:



Spiral Staircase - Good Idea?

Still a good idea?

Facebook Sign-in Only?

What if your users don’t trust your app?

To compare alternatives

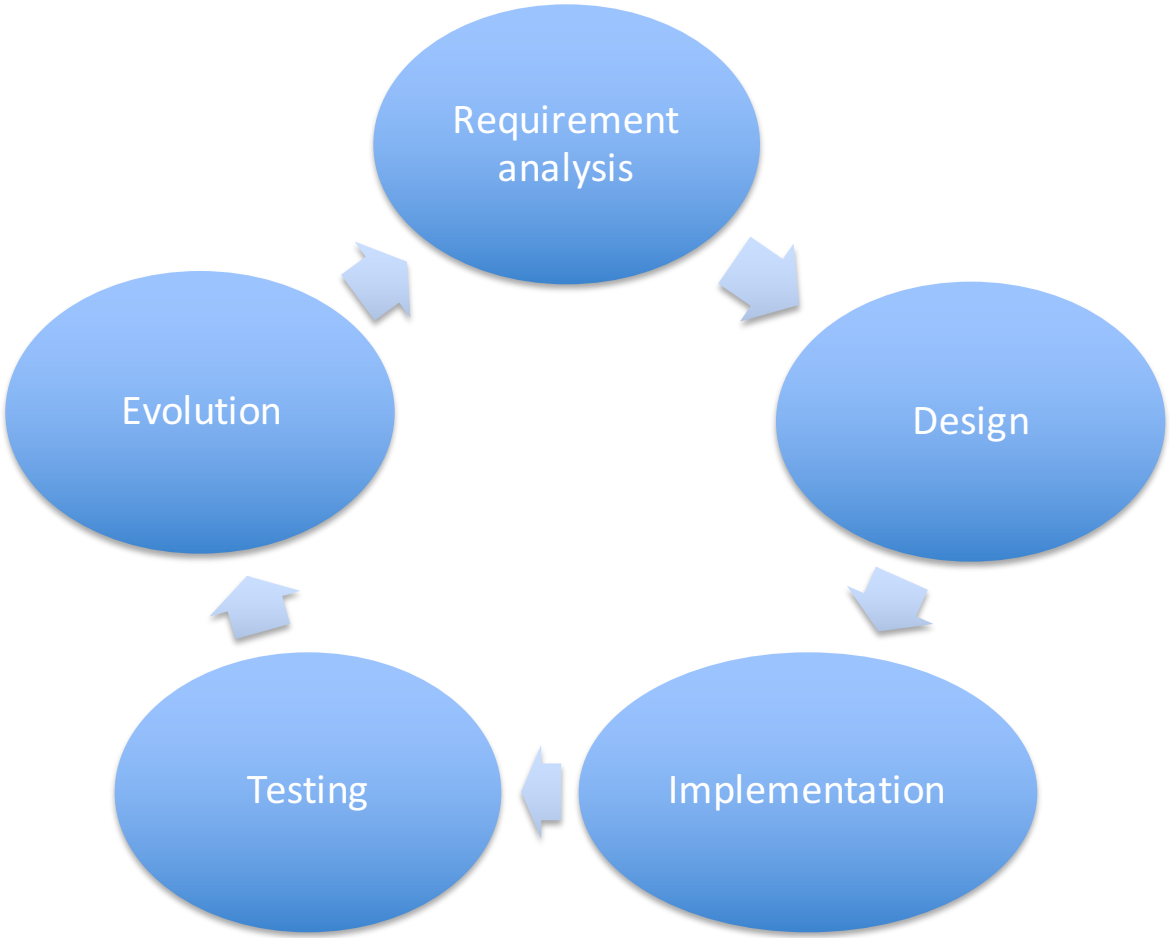
Stylus or Touch Screen ?

Fail early to avoid disasters

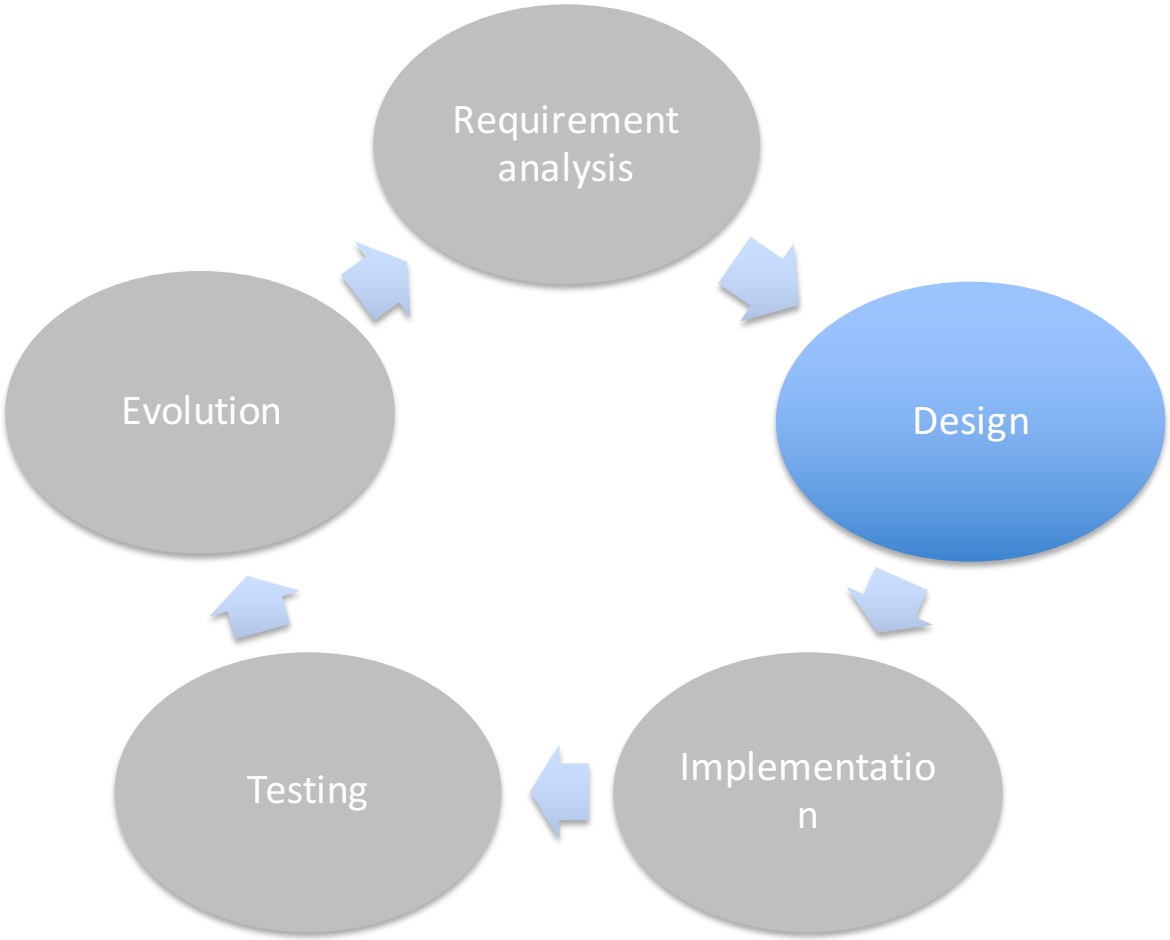
Get Feedback Early

- Design the concept before you build it.
- Get Feedback.
- Redesign.
- Keep it fast and simple.
- Review Early.

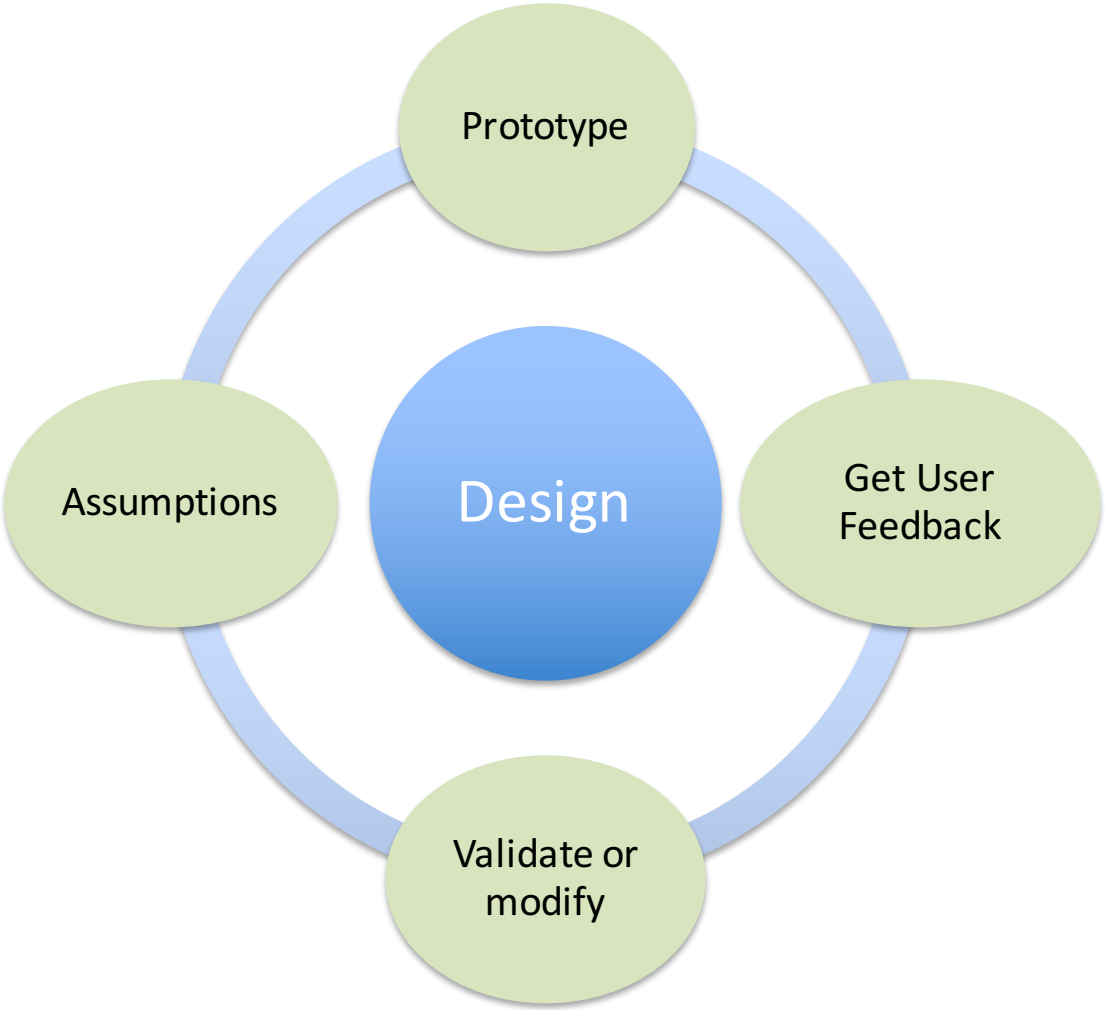
Ideal Software Engineering Life Cycle



Where does prototyping come in?



Prototyping Life Cycle



What could go wrong with a login screen?

They forgot the “FORGOT PASSWORD” button!!!

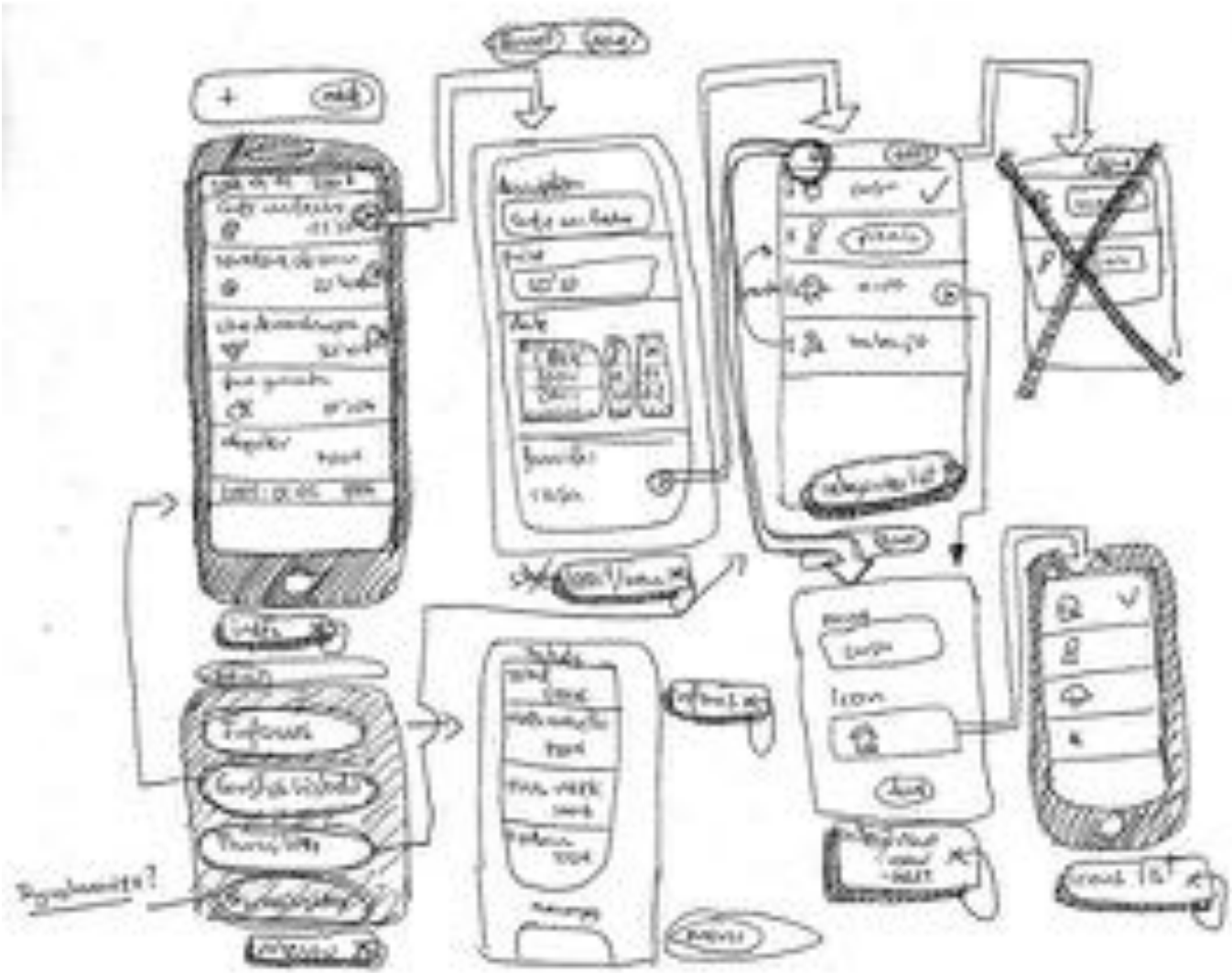
Common techniques

- Paper prototyping
- Wireframes and page schematics
- HTML wireframes
- Interactive prototypes

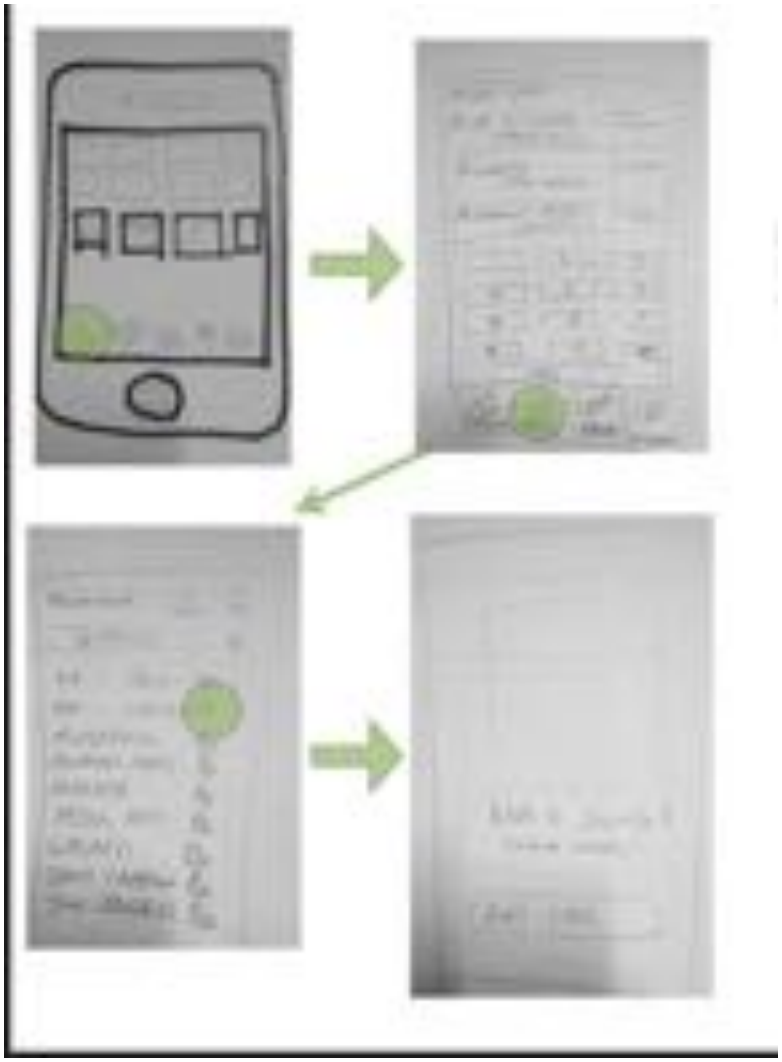
What is Paper Prototyping?

- Paper: materials of paper-and-pencil alike.
- Prototyping: The design and evaluation of the concept.
- Low-fidelity visual representation
- Test Usability.
- Representative users perform real tasks by interacting with a paper version of the interface.

Example Paper Prototypes



Example Paper Prototypes



Advantages

- Quick to build/refine, thus enabling rapid design interactions.
- Requires minimal resources and materials.
- People are willing to give you more feedback when they know you have invested little.

Disadvantages

- Its paper not a real app/webpage

Wireframes

- **Wireframes** – *basic illustrations* of the *structure and components* of a web page or Mobile Application
  - Real Proportions
  - Includes basic page/screen layout
  - Includes navigation
  - May include:
    - headers, footers, content areas, sidebars
    - dynamic widgets, search box, graphics, links

Wireframing examples

HTML Wireframes

Advantages

- Better than paper prototypes
  - Feels real
  - Things happen when you click

Disadvantages

- Just a skeleton
  - Not really how the real interfaces looks
  - Not really how the real interface behaves

Interactive Prototyping

Importance of transitions and movements

How did this?

…become this?

How did this?

…become this?

Optimus Prime

How did you go from this?

...to this?

Interactive Prototyping tools

Works both as a Firefox plugin and standalone installation on windows, mac, and Linux

http://pencil.evolus.vn/Downloads.html

Completely in your browser

https://proto.io/

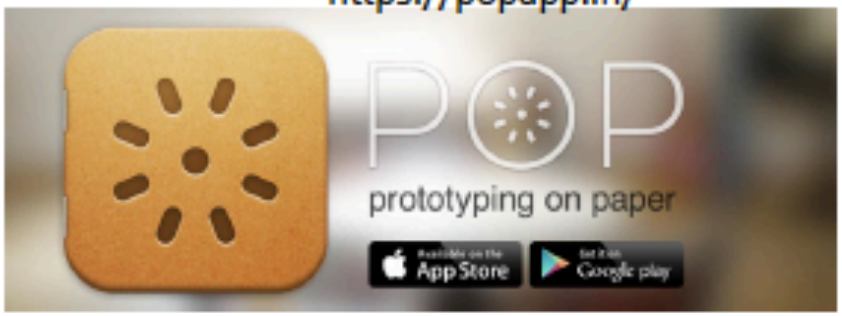
https://marvelapp.com/

Standalone installation on windows, and mac

http://www.justinmind.com/download

More tools

https://popapp.in/



https://mockingbot.com/

http://www.invisionapp.com/tour

http://www.pixate.com/

Justinmind Prototyper

Features

- **No programming required.** Justinmind Prototyper is an intuitive tool. Just drag the components or interactions that you need from the palettes to the work area.
- **Instant Simulations.** See your application's prototype in action by simply clicking the Simulate button. No waiting required.
- **Exportable to HTML.** Export to HTML effortlessly, so that your clients or users can see it work online and give you their opinion.

JUSTINMIND

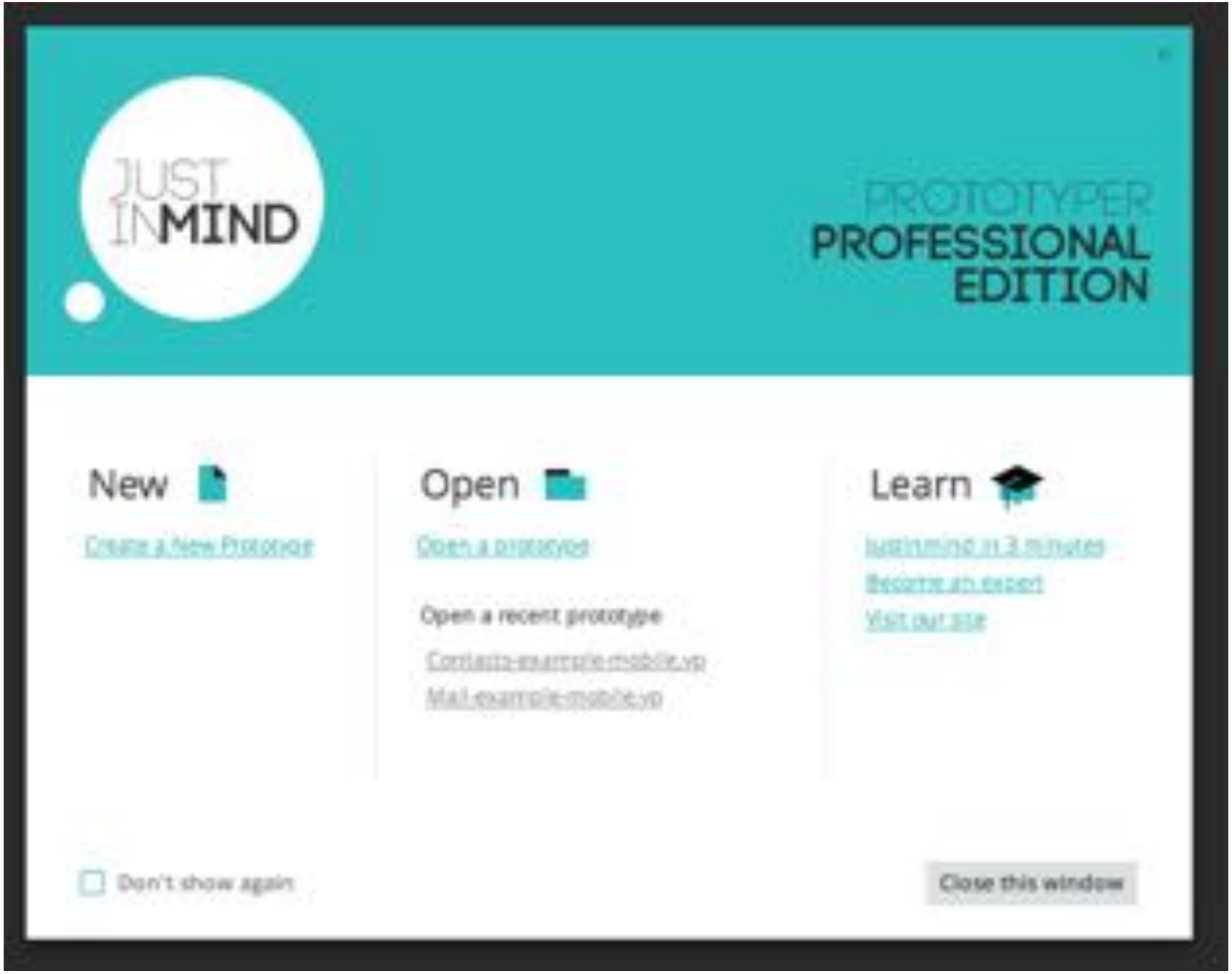
MENU

DOWNLOAD FREE

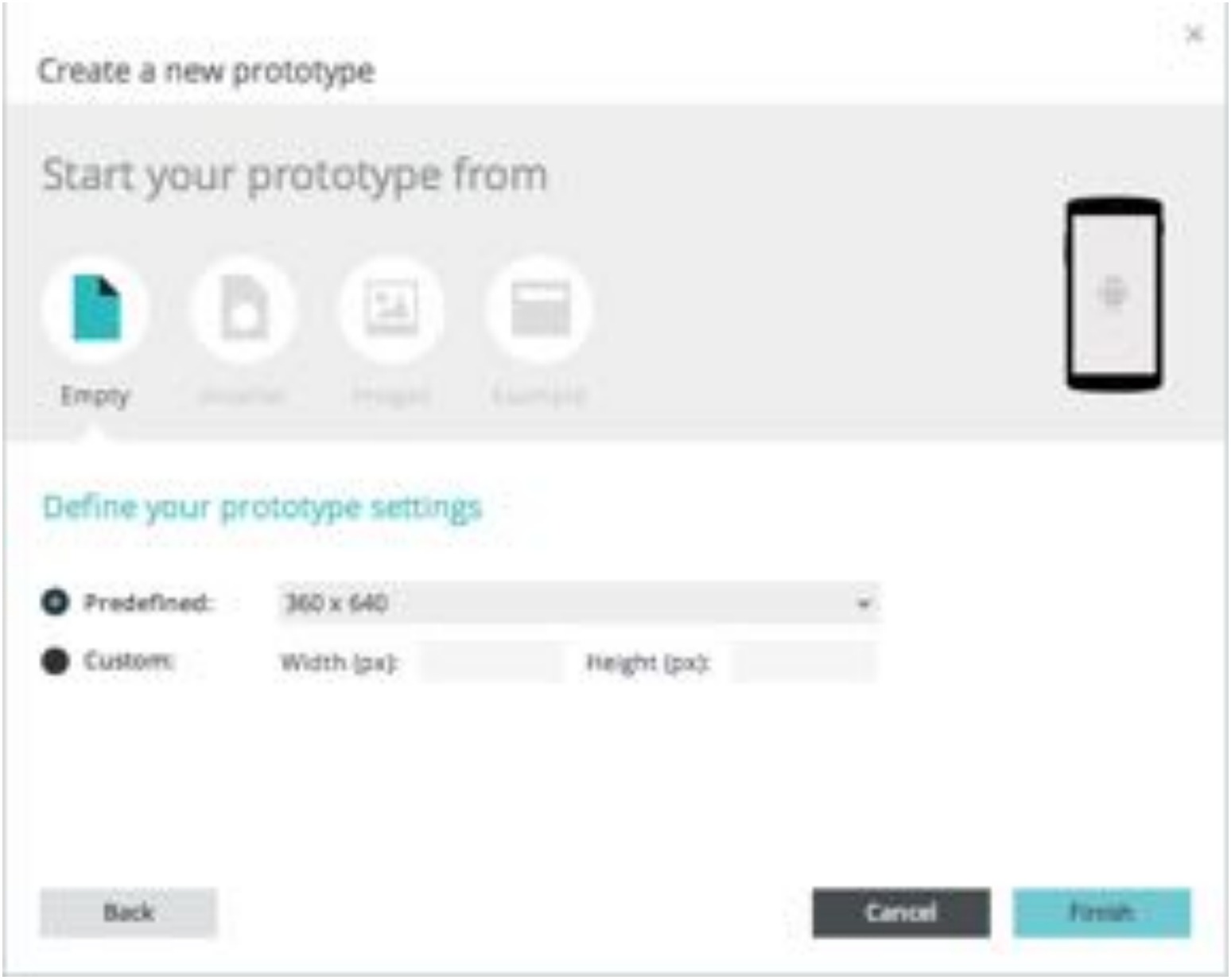
CUSTOMERS

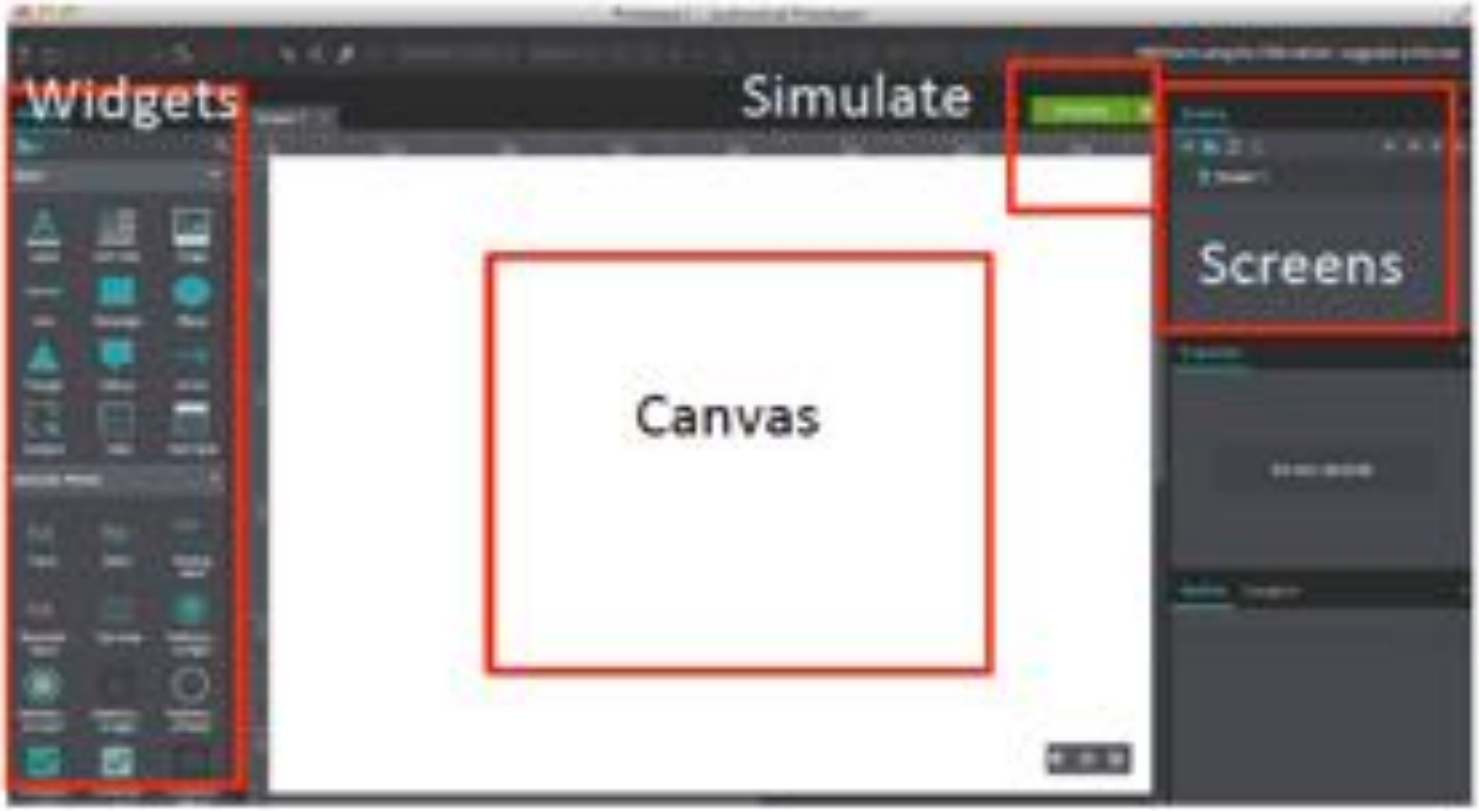
The preferred prototyping tool for thousands of companies

600,000+ other Justinminders in 180 countries. Join them!


JUST IN MIND
PROTOTYPER
PROFESSIONAL EDITION
New
Create a New Prototype
Open
Open a prototype
Open a recent prototype
Contacts-example-mobile.vp
Mail-example-mobile.vp
Learn
Justinmind in 3 minutes
Become an expert
Visit our site
Don't show again
Close this window

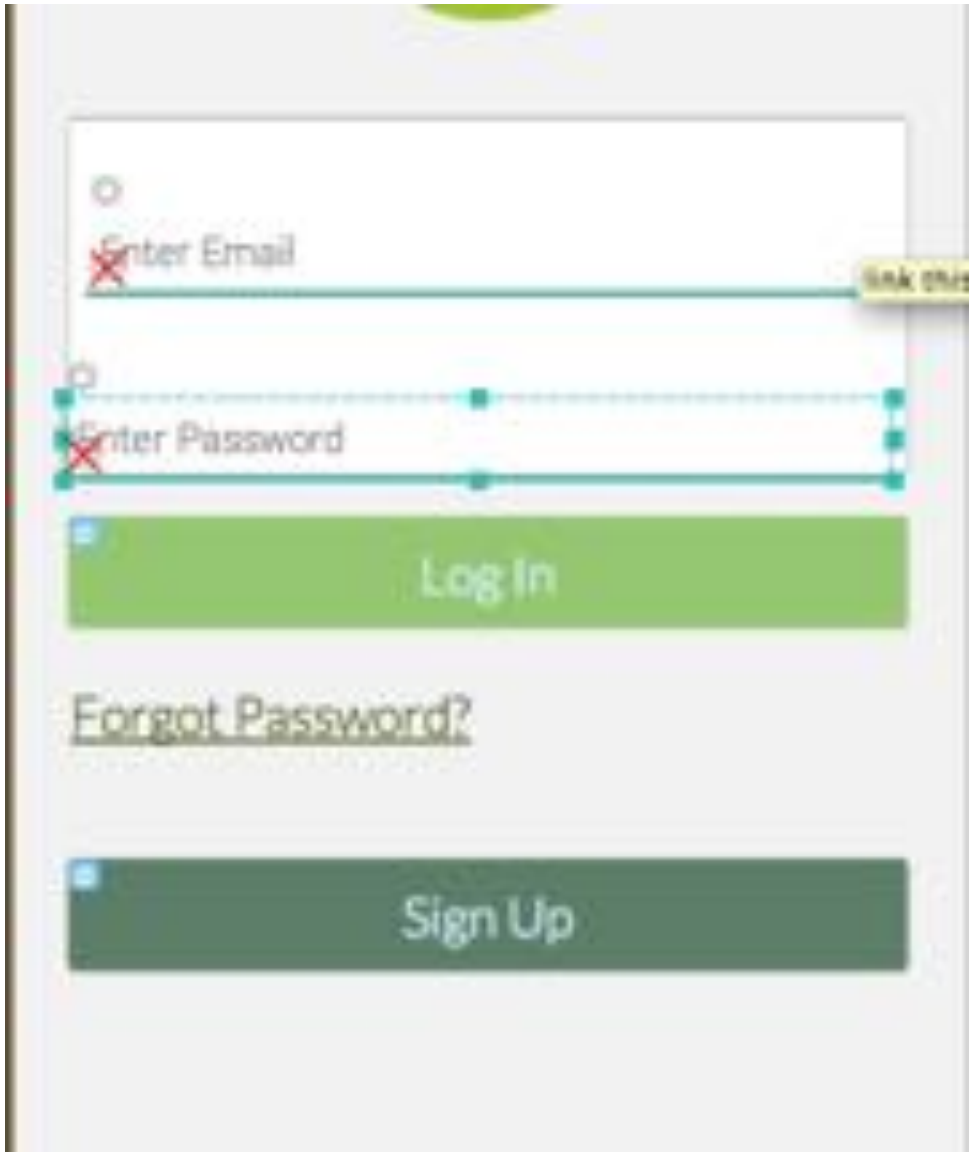
Create a new prototype
Select a device
Android
Cancel

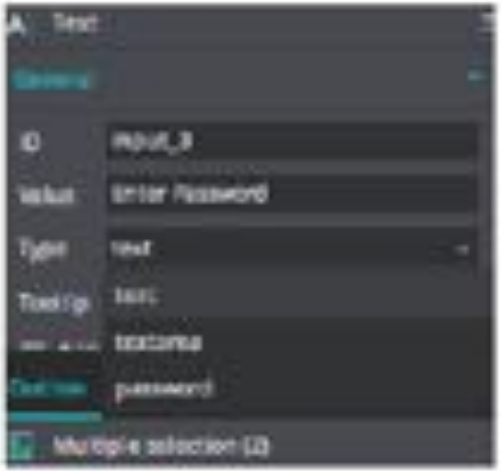

Create a new prototype
Start your prototype from
Empty
Define your prototype settings
Predefined:
360 x 640
Custom:
Width (px):
Height (px):
Back
Cancel
Finish


Widgets
Simulate
Screens
Canvas

Add New Widgets from Library

Adding TextBoxes


Enter Email
Enter Password
Log In
Forgot Password?
Sign Up


Text
ID
input_3
Value
Enter Password
Type
text
Tooltip
text
textarea
password
Multiple selection (2)

Create Another Screen

Creating HotSpots

Menu
Add Link

Don't show again

Simulate

Simulate

Share

- **http://justinmind.com/**

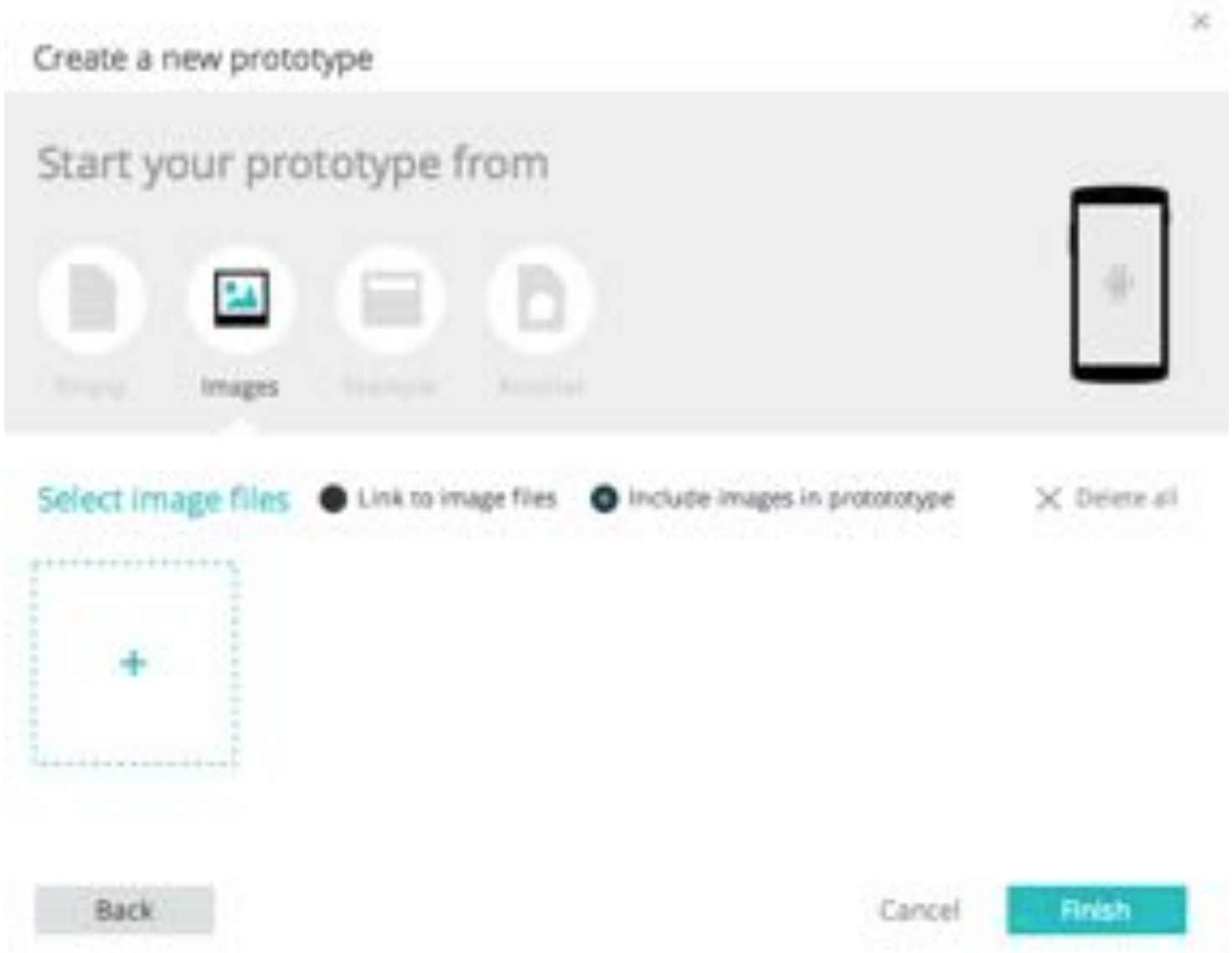
Upload the prototype

Invite Reviewers

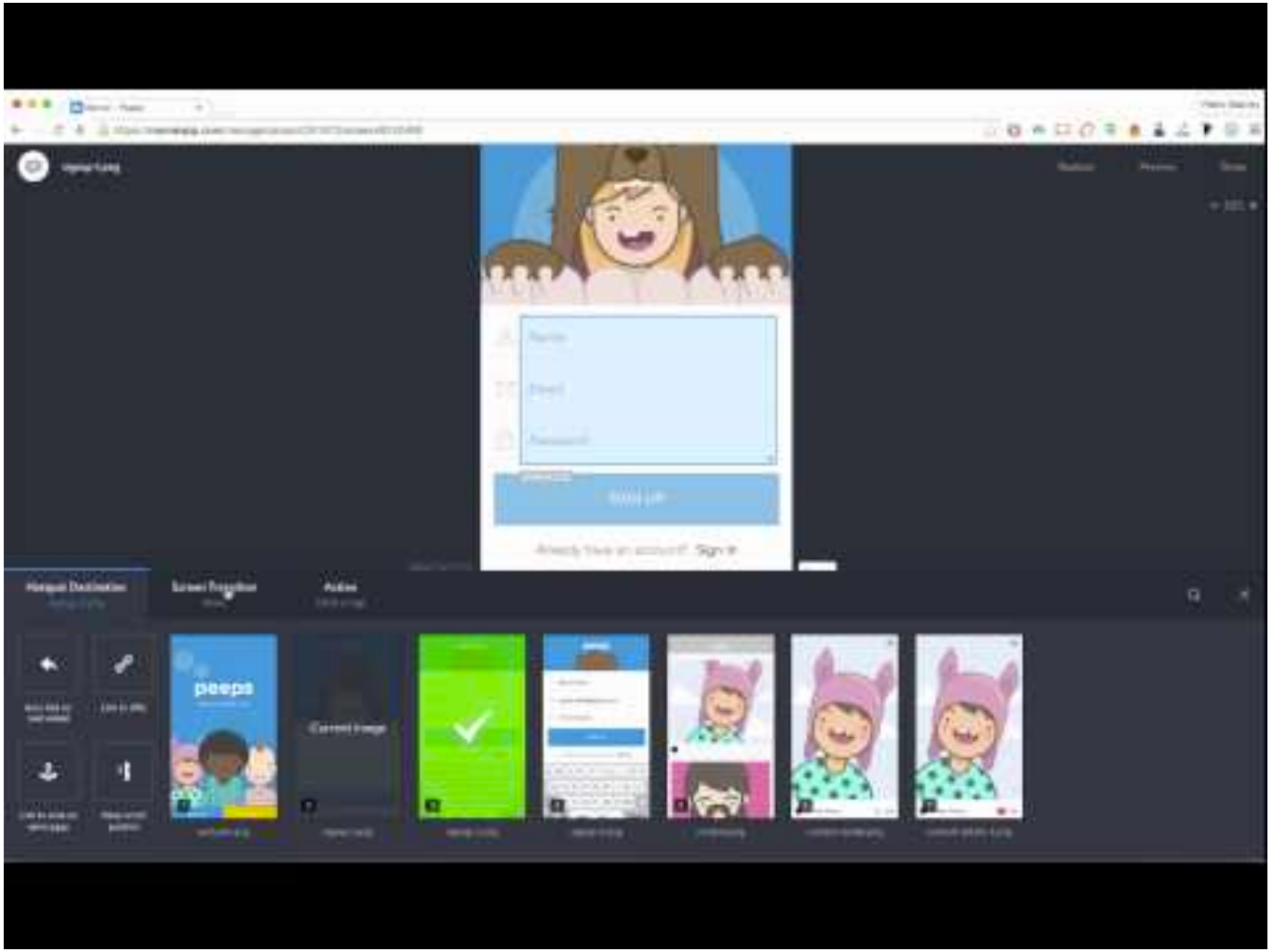
Using Predesigned Asset Files

- Designed in Adobe PS/Sketch
- Import into Prototyping Tool

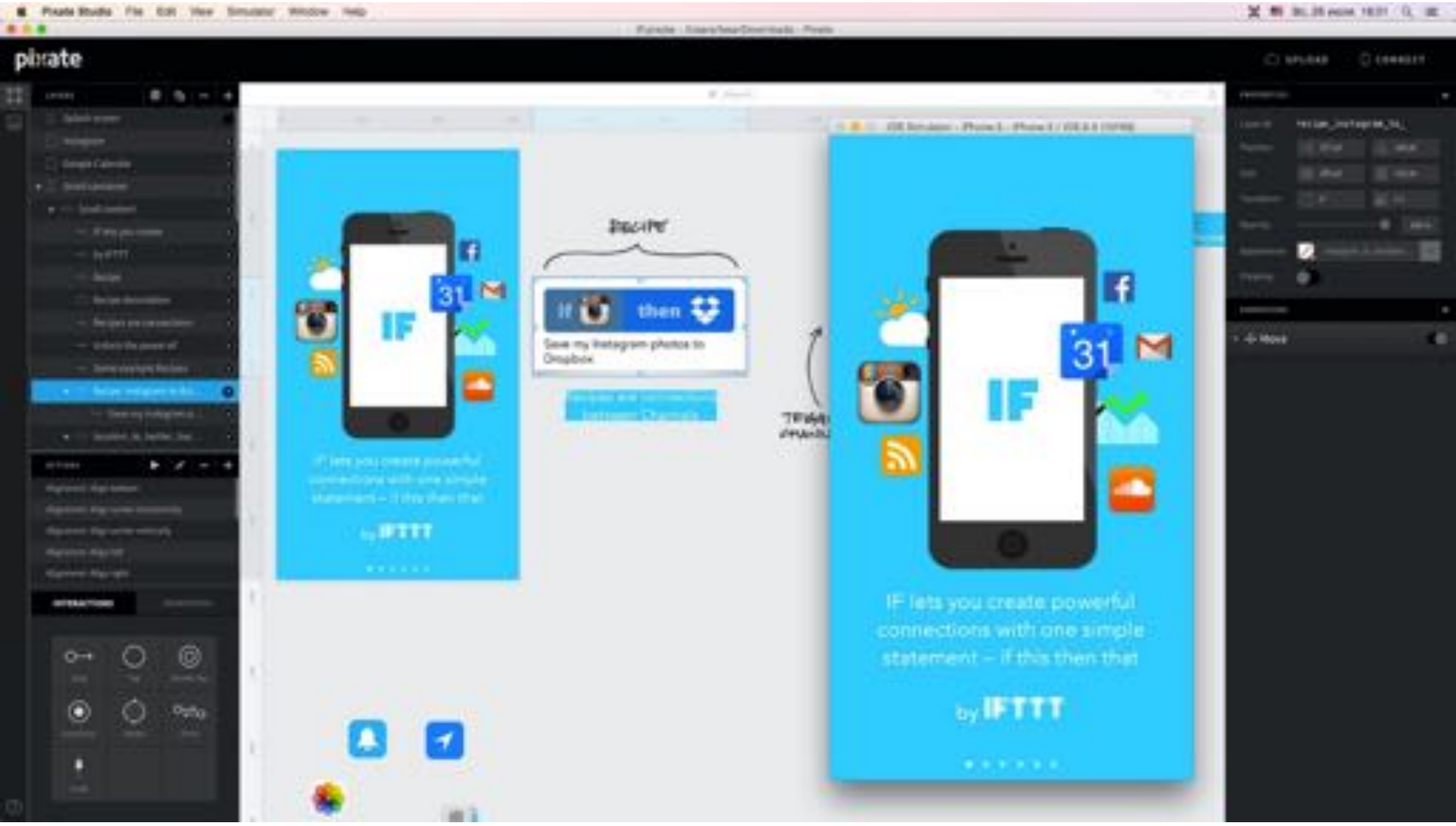
In Justinmind



Marvel App



Pixate


pixate
IF
31
if
then
Save my Instagram photos to Dropbox
IF lets you create powerful connections with one simple statement – if this then that
by IFTTT

Pop

- Leveraging the simplicity of paper prototyping

Design on paper

Simulate and Test

Take Pictures

Simulate clicks

Homework

- Mobile Shopping Cart App
- Help People shop for Groceries

- What features should a shopping cart app have
- Look at existing shopping apps
- What features would you want to add/remove
- Next class YOU will *build the* prototype