MENDELU
Faculty
of Business
and Economics

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How to design a great app

or at least not screw the whole thing up

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What you will (hopefully) learn

How to design applications that are comfortable and intuitive for users.

Why is it necessary?

- Software applications and devices are used by amateurs.
- Good user experience is for many customers more important than the number of features.
  How many Photoshop functions do you use?
  How many buttons on TV remote?
- Good design sells – see Apple.[1]
- You cannot just copy!
  Porter: *Competitive Strategy: Techniques for Analyzing Industries and Competitors* – You must define your difference from the competitors.[2] You cannot be just cheaper, more efficient.

[1] There is a difference between beauty and usability.
[2] Wii vs Xbox and Playstation

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How to make a good design

- It's a great challenge. . .
- We can start with analysis of the reasons why people are (not) using some applications.
- HCI is in fact about seeking the right questions and eventually about finding some reasonable answers.
- **The ultimate goal is to understand the user.**

Why is a manager using an email?[3]

- To read the messages!
- Surely, but why is reading and writing the messages?
- To communicate with other people.
- Why is (s)he not using the text messages, calls. . . ?
- There are obviously some reasons . . .
  - privacy,
  - history of the conversation,
  - speed,
  - price,
  - social limitation,
  - custom?

[3] Jenifer Tidwell: Designing Interfaces

Why doesn't my mum want to buy a plane ticket on-line?

- She can buy it using the phone, personally, on-line. . .
- Is she afraid of card payment?
- Is the web page too complex?
- Is she seeking some human support/confirmation?

To understand the behavior, we must analyze few things

1. What is the goal of the application usage.
2. What tasks must be carried out to fulfill the goal.
3. What are the skills and limitations of the user.
4. His/her standpoint to your (current) application[4] or alternatives.
5. How much time (s)he wants to spend with application learning[5].

[4] If there is such a thing.
[5] Photoshop vs mobile app for photo adjustments

Every person is unique

(S)he is not like you![6]

[6] Usually

Take away: Initial steps

- Bad: We will create a Java application for photo organization. There will be preview window, some buttons...
- Better: We will create an application for investigative journalists. They have problem with collecting information about on-line sources. This application will help them to save the link on the source and. . .

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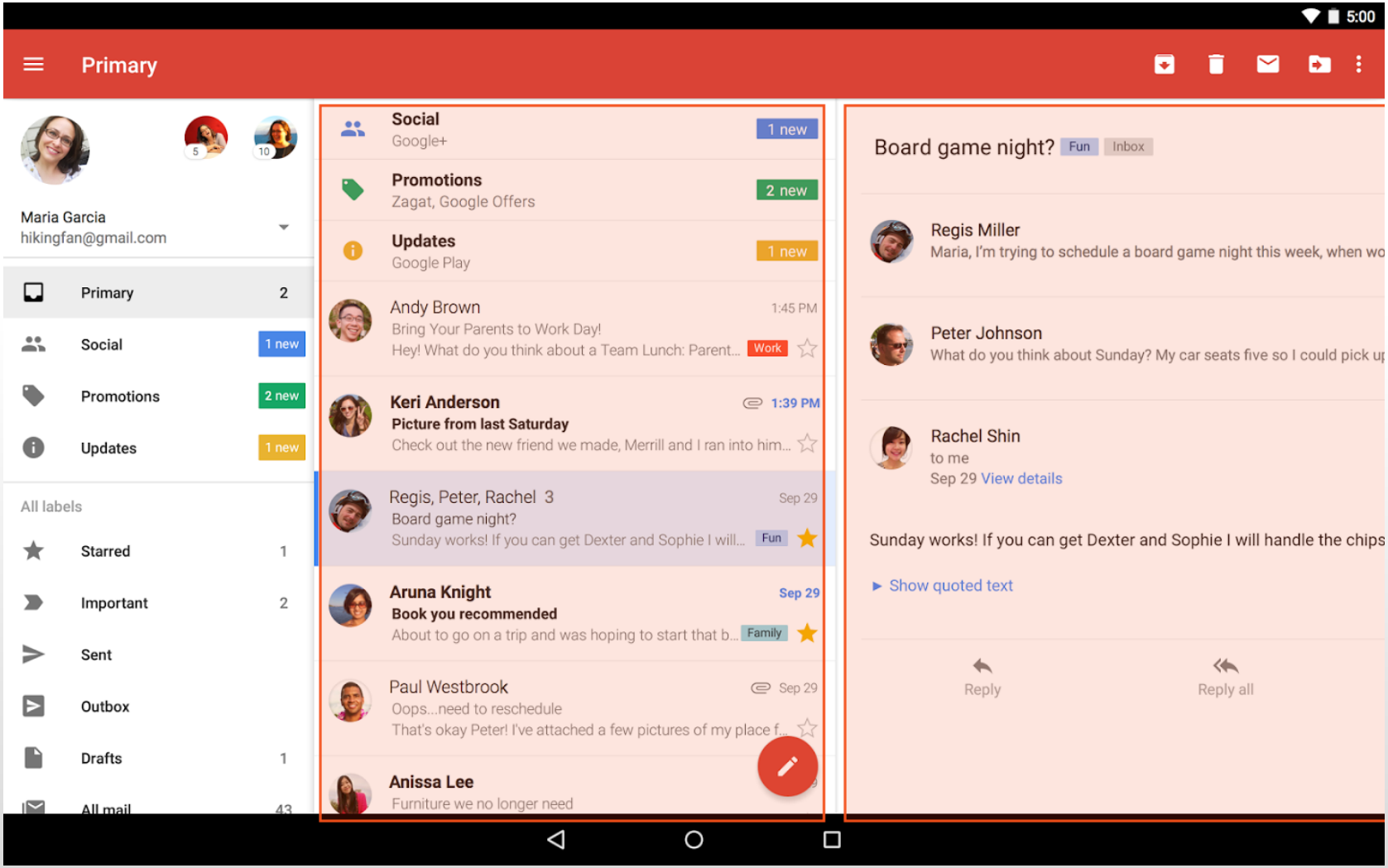
What now?

- Some designers starts with drawing the wireframes.
- IMHO that not a good idea. It tights you.
- You are frequently stuck in a stereotype.
- Inconvenient for multi-modal applications.
- It's better to use abstract terms. You can decide the implementation later (similar to OOP).

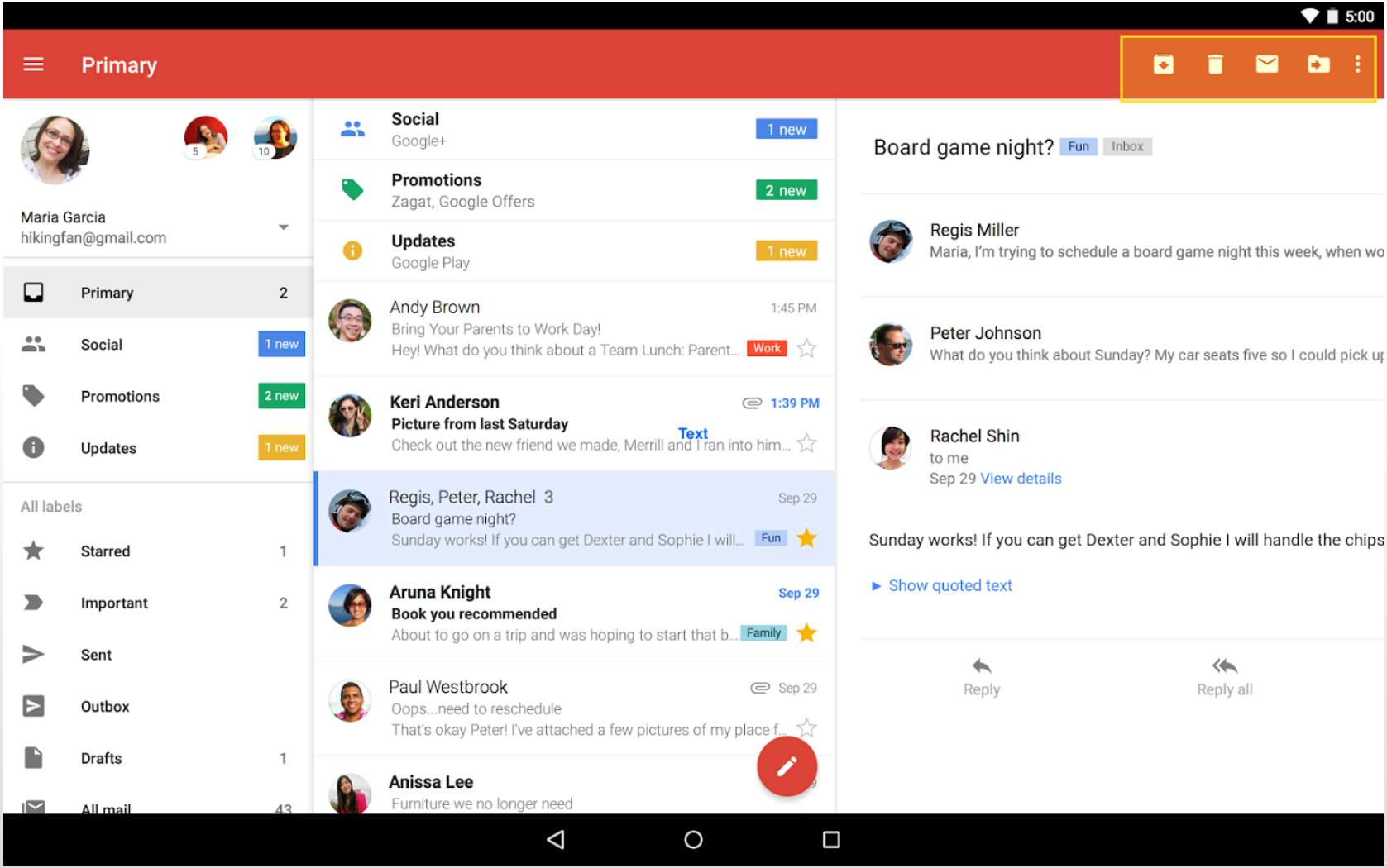
Application components

- Vast majority of applications are composed of:
  1. list of tools – calendar, email client...
  2. list of categories – inbox, send, spam...
  3. list of objects – email(s), todo(s)...
  4. list of actions – delete, rename...
- Although these objects clearly define some functionality, they have no particular visual representation.
- Visual representation is (right now) a burden. It is limited by hardware limitations etc.

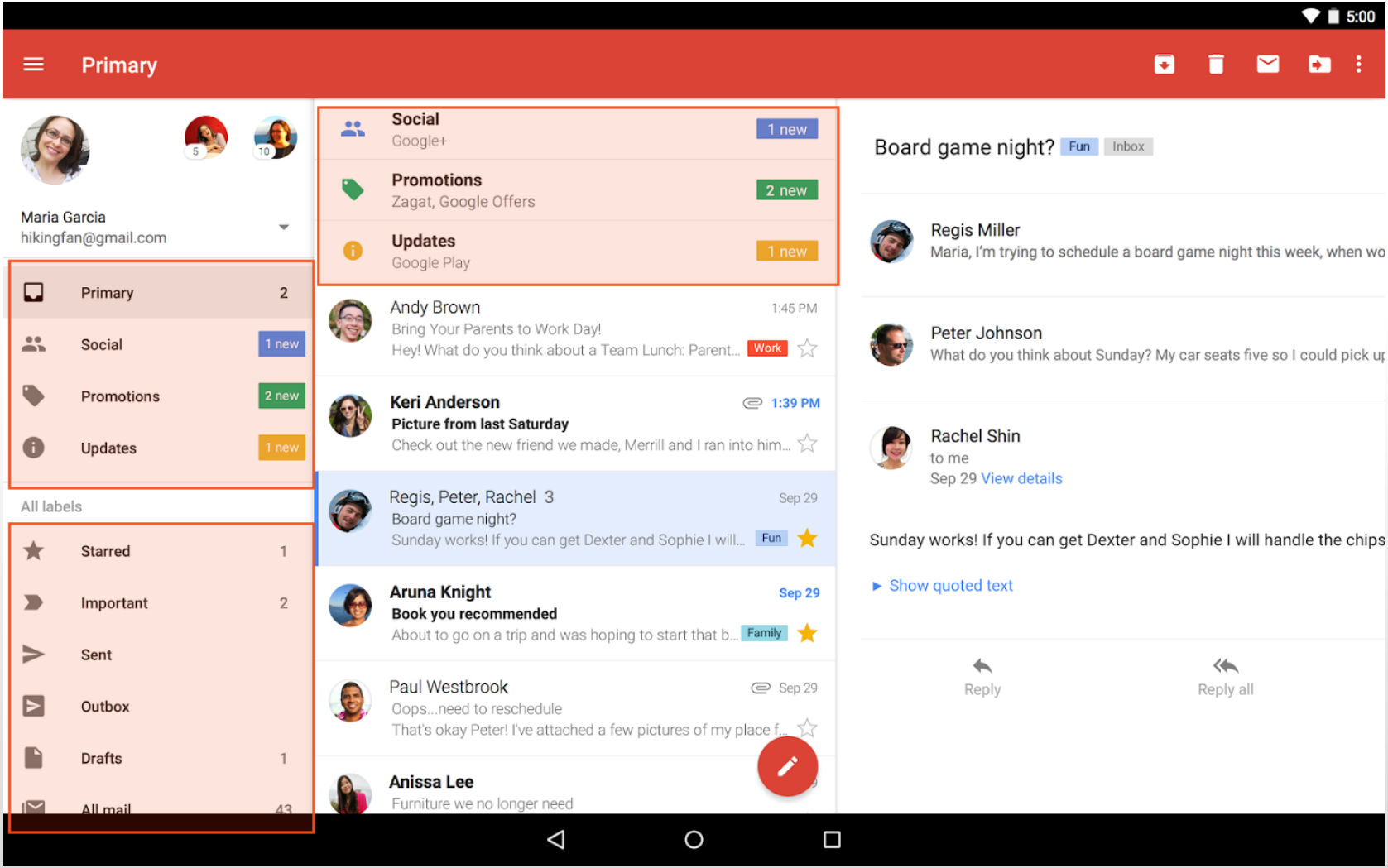
List of objects



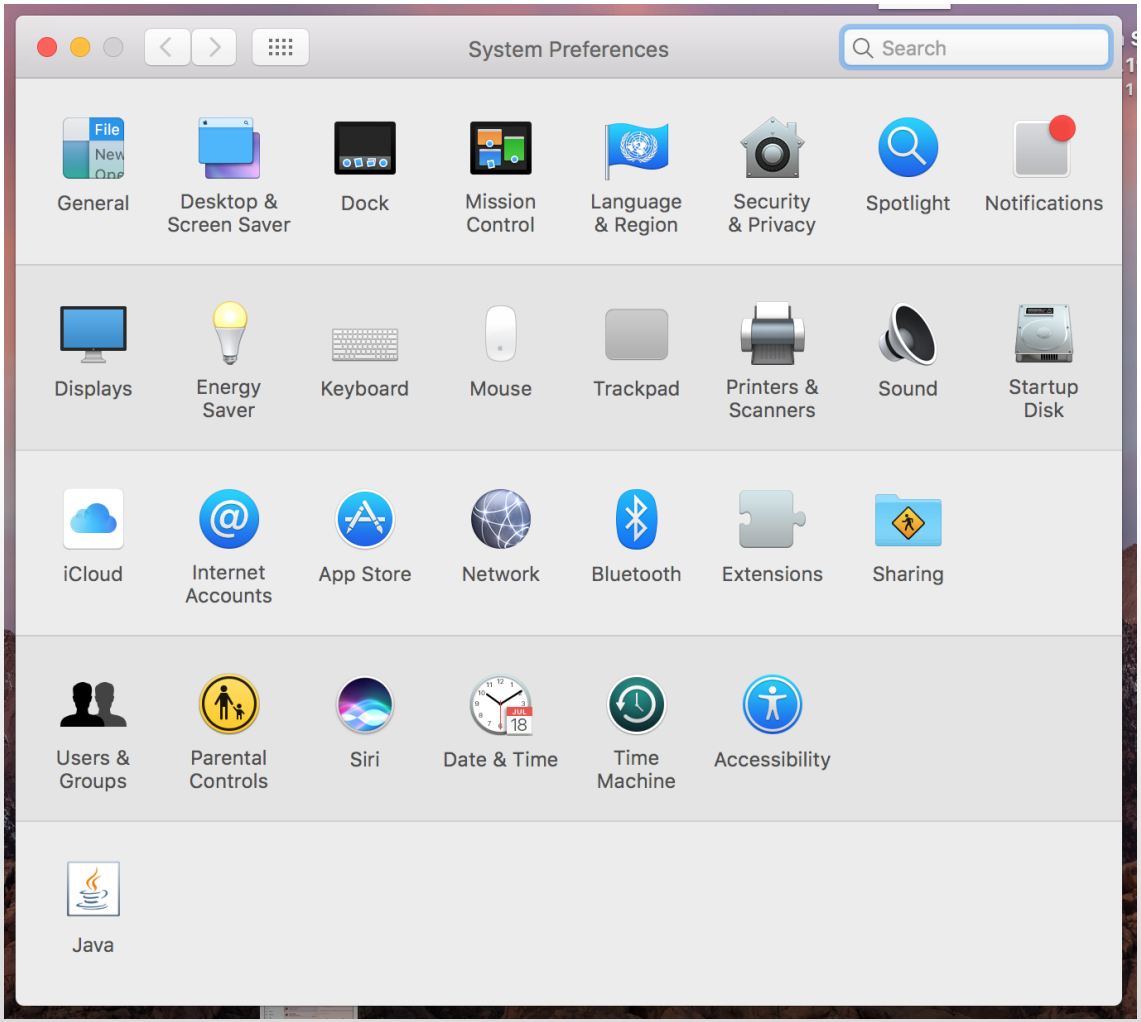
List of actions



List of categories



List of tools



Mind map

Let’s draw a mind map!

Wireframe

Let’s draw an interactive wireframe!

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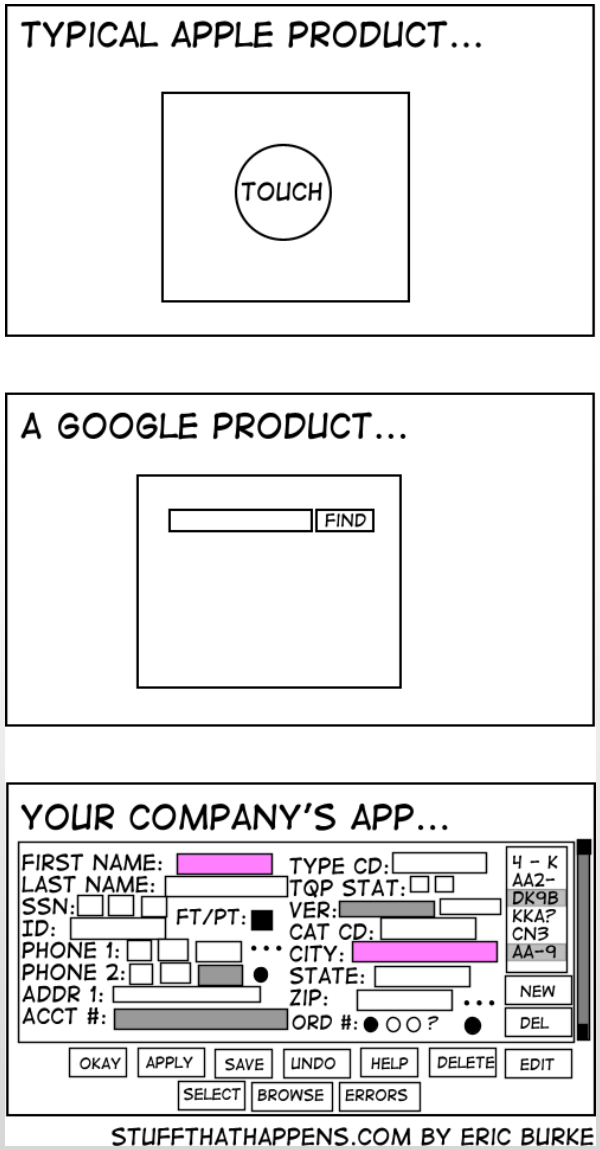
Take away

1. To design a good application, we must define its purpose and specific functions.
2. Before you start with wireframe design, you should create a structural model of your application.
3. Then you are (maybe) prepared for a graphical design.
4. Further reading:
   - J. Tidwell: Designing Interfaces: `http://designinginterfaces.com`
   - Material Design Guidelines: `https://material.io`
   - Apple Human Interface Guidelines: `https://developer.apple.com/design/`

XKCD


TYPICAL APPLE PRODUCT...
TOUCH
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FIND
YOUR COMPANY'S APP...
FIRST NAME:
LAST NAME:
SSN:
ID:
PHONE 1:
PHONE 2:
ADDR 1:
ACCT #:
FT/PT:
TYPE CD:
TQP STAT:
VER:
CAT CD:
CITY:
STATE:
ZIP:
ORD #:
4 - K
AA2-
DK9B
KKA?
CN3
AA-9
NEW
DEL
OKAY
APPLY
SAVE
UNDO
HELP
DELETE
EDIT
SELECT
BROWSE
ERRORS
STUFFTHATHAPPENS.COM BY ERIC BURKE

Thanks for your attention!

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