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# Wireframes & Rough Prototyping





**It's a blueprint of your app that schematically shows the objects on the screen and any possible functions.**

## Communicates Idea

Efficiently outlines structures and layouts.

Give you visual materials for promotion when the project is only starting.

Makes it easy to communicate what your app is about and how it will function.

Image Sources:



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Implement changes quickly.

Insures you from unpleasant surprise.

Reduces the overall cost of the project.

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## Guides Implementation

Keeps all project partners (designer/client/developer) on the same page.

Developers can use it to get a tangible grasp of functionality and use to reference when moving on to coding.

Image Sources:



## To include ...

- UI elements
- Grayscale shading
- Content prioritization
- Frame titles
- Lo-fi details
- UX
- Possible actions
- Annotations

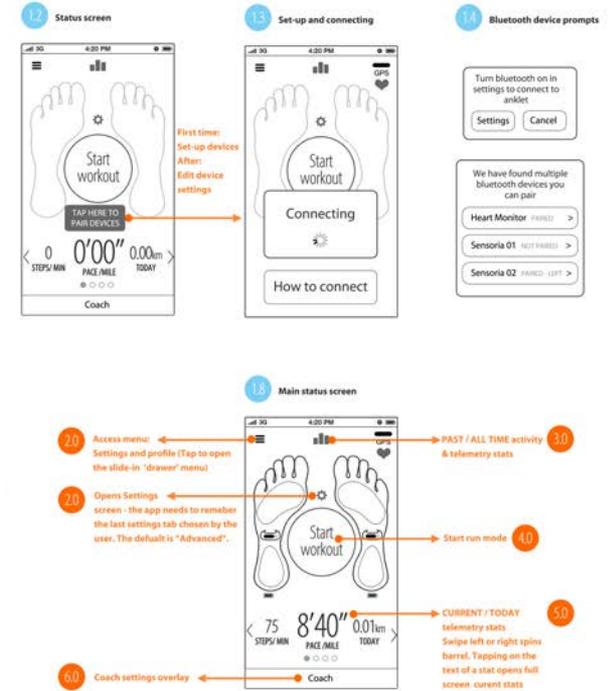
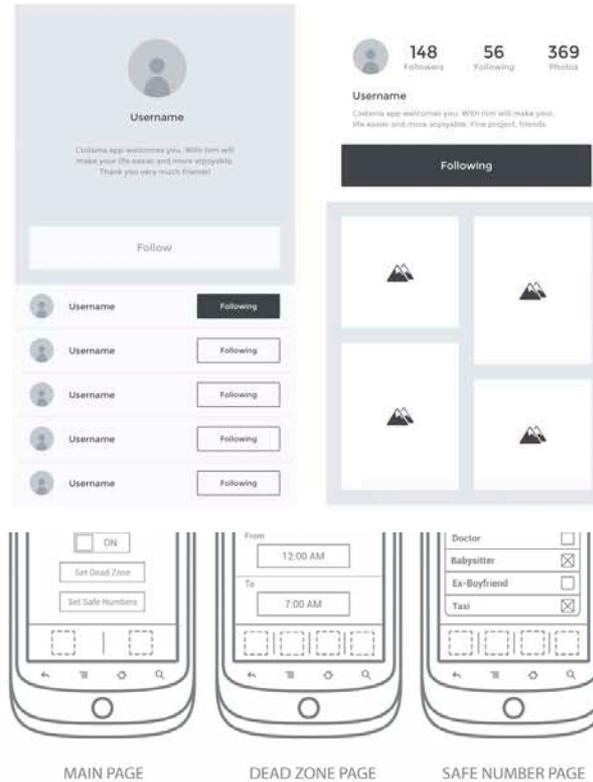


Image Sources:  
<https://themeforest.net/item/-codama-ios-wireframe-ui-kit/15475334> and [grahamtodman.co.uk/blog/](http://grahamtodman.co.uk/blog/)

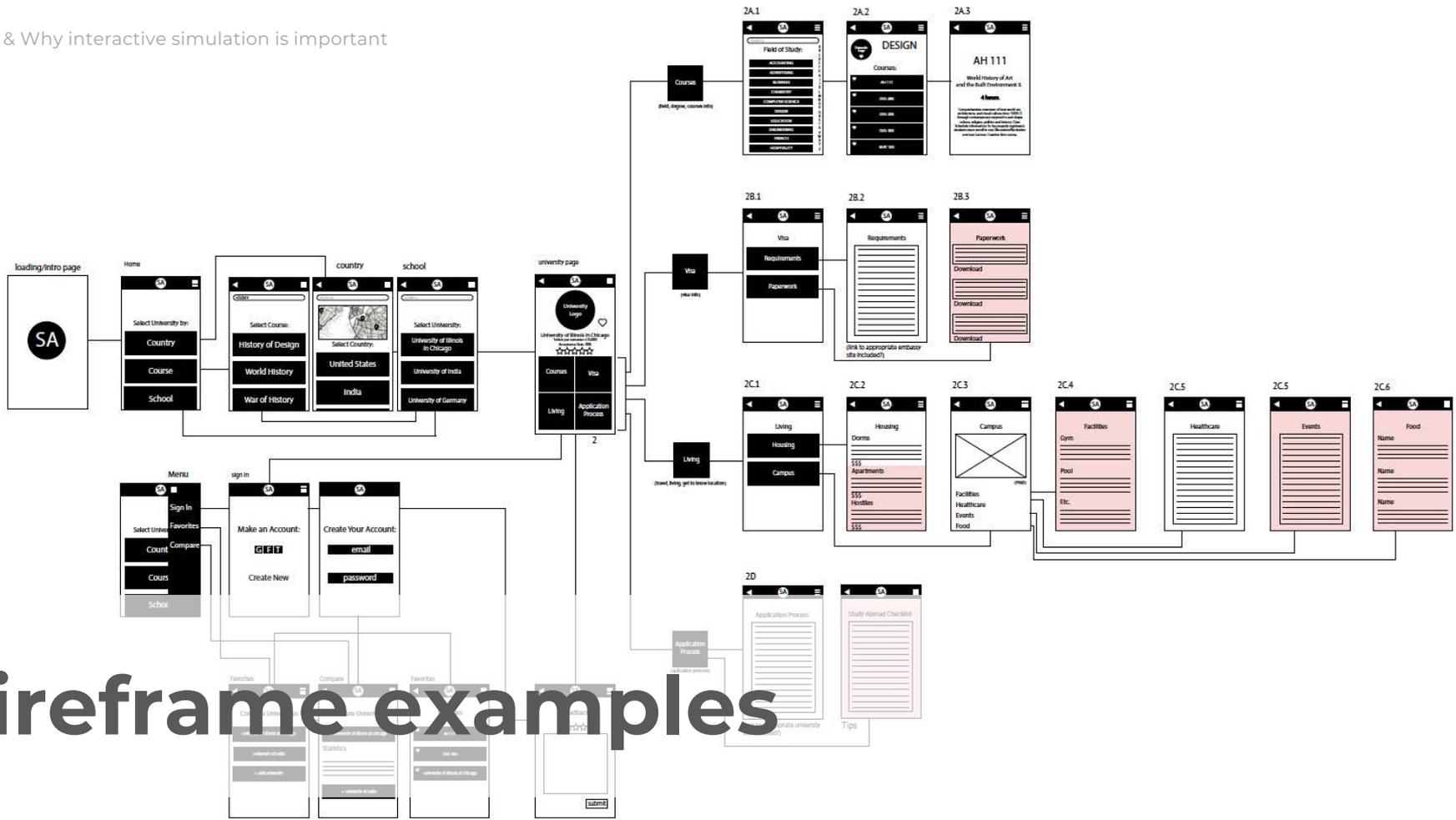
## ... NOT to include

- Design elements
- Colors
- Actual images
- Fonts / typefaces
- Logos / icons /
- Hi-Fi elements

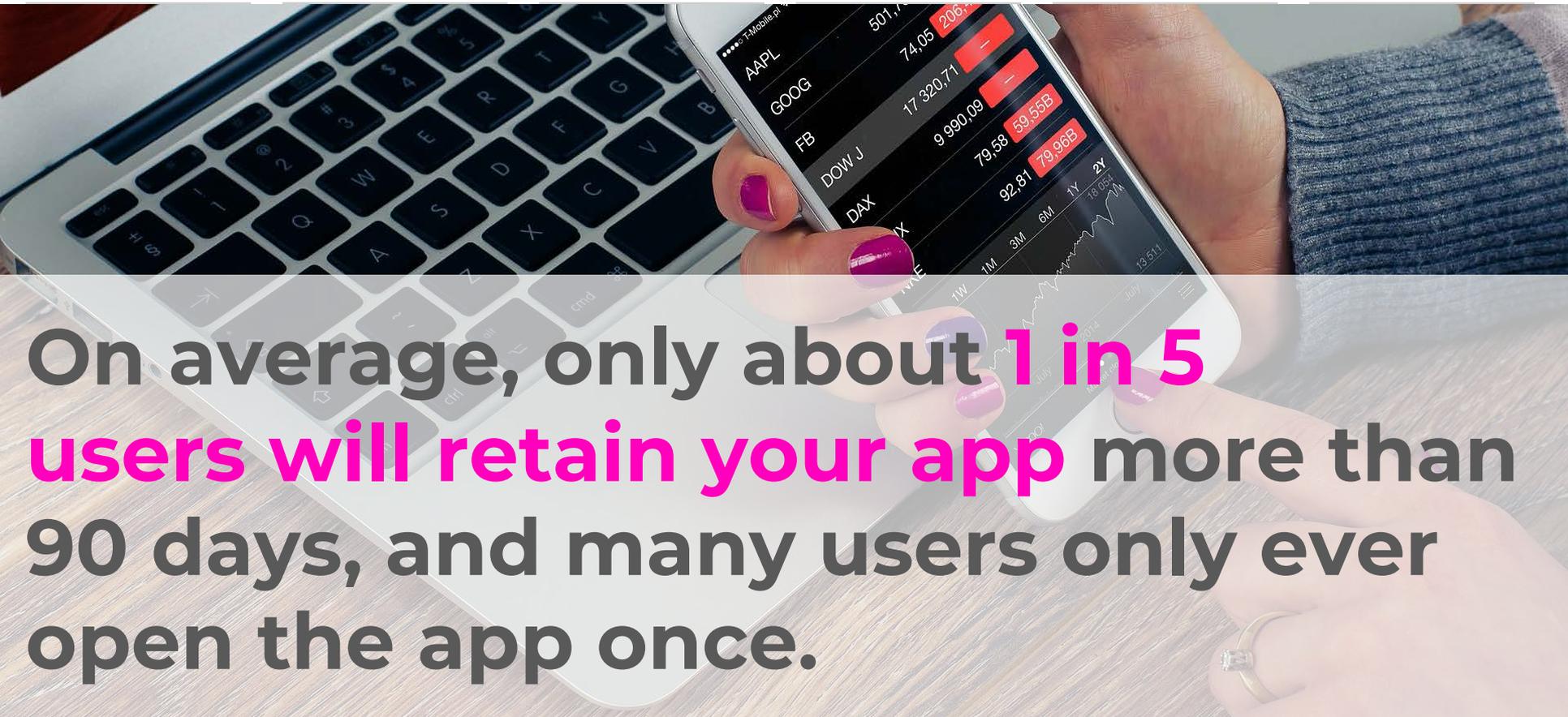


Image Sources:

<https://creativemarket.com/blog/how-to-mock-up-your-dream-app-in-20-minutes>



Wireframe examples



On average, only about **1 in 5** users will retain your app more than 90 days, and many users only ever open the app once.

## Testing and Validation

Running initial design ideas past users so any potential (or anticipated) issues with UX can be addressed when it's easier to make design adjustments

## Design and UX Lockout Date

Prevents endless rounds of revisions;

Prevents costly late changes in design/development;

Expedites scheduling;

Boosts development efficiency.

Image Sources:





# Empirical Research based on Qualitative and Quantitative research methods

**Empirical research** is research using empirical evidence (the record of one's direct observations or experiences) that can be analyzed **quantitatively** or **qualitatively**.

### **Design should be...**

- Inspired by data
- Grounded in real-world observations

**In brainstorming, no idea is a bad idea**

Image Sources:



## Qualitative and Quantitative Research Methods for development projects

Both are important for gaining different kinds of knowledge.

### Qualitative methods

*deal with words and meanings*

#### Interviews

#### Focus groups discussions

(Collaboration with CS524  
Empirical research methods  
F2018-19)

You need at least 2 people  
to conduct a focus group

**Prototype testing** (with friends,  
family members)

in person  
virtual sessions

### Quantitative methods

*deal with numbers and statistics*

#### Survey instruments

#### Review of public records

#### Market review data

Image Sources:



## Inspiration for design

Investigating the interaction between people and mobile computing devices

Learning from people

Grounding design in real-world behavior

Ensure interaction flows for a user

Increasing fidelity with quick tests along the way

From paper to working in the world

Image Sources:

## What to watch for...

What do people enjoy...what part of a task makes them smile?

Where do they get hung up/frustrated?

What is currently easy/hard for them to do?

How does their environment appear to play into their use?

## ...keep them talking

**Quickly check and validate concept — does your design make sense to someone not familiar with the project?**

**Discover flow issues, holes, inconsistencies and bugs.**

This saves time and money in the long run.

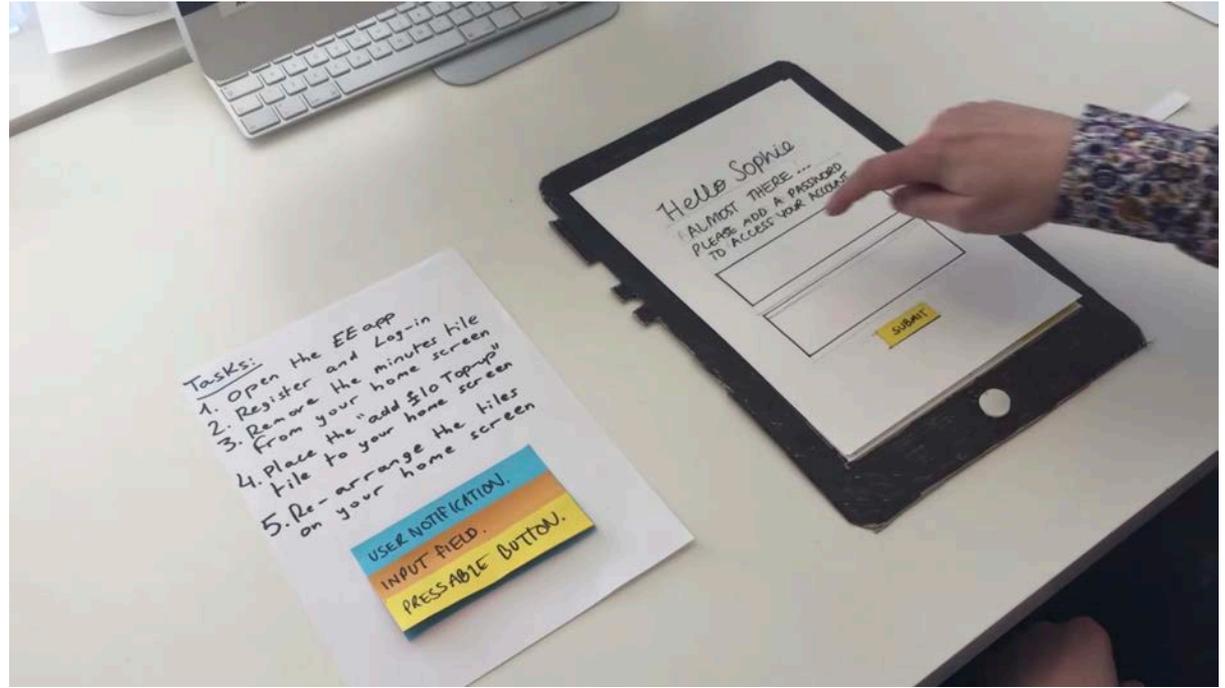
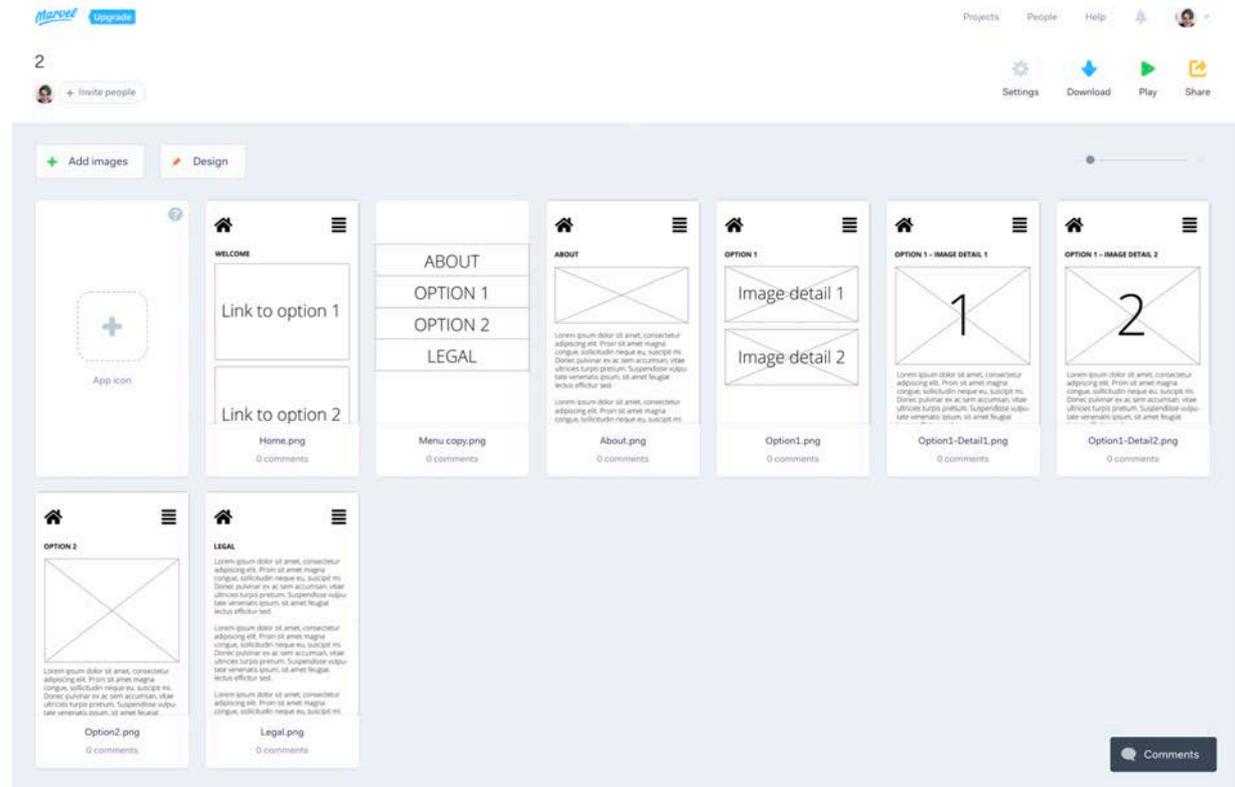


Image Sources:

## Tool: MarvelApp marvelapp.com

Among other features this offers prototyping tool for desktop and mobile.



## Testing UX — user studies

Setup user with information on what the app is about and what can be done.

Setup specific task for the user to accomplish, e.g. find out information about algae, tools, etc.



<https://www.youtube.com/watch?v=taBH5wBwZl8>

## Testing UX — user studies

Clearly state that you are not testing the user, only the software/app and that there are no wrong interaction.

Ask user to think out loud.  
Have them walk you through the process as they are doing it.



[https://www.youtube.com/watch?v=M\\_keL56xqLg](https://www.youtube.com/watch?v=M_keL56xqLg)

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# Test. Refine. Iterate.

