

# CS449/649: Human-Computer Interaction

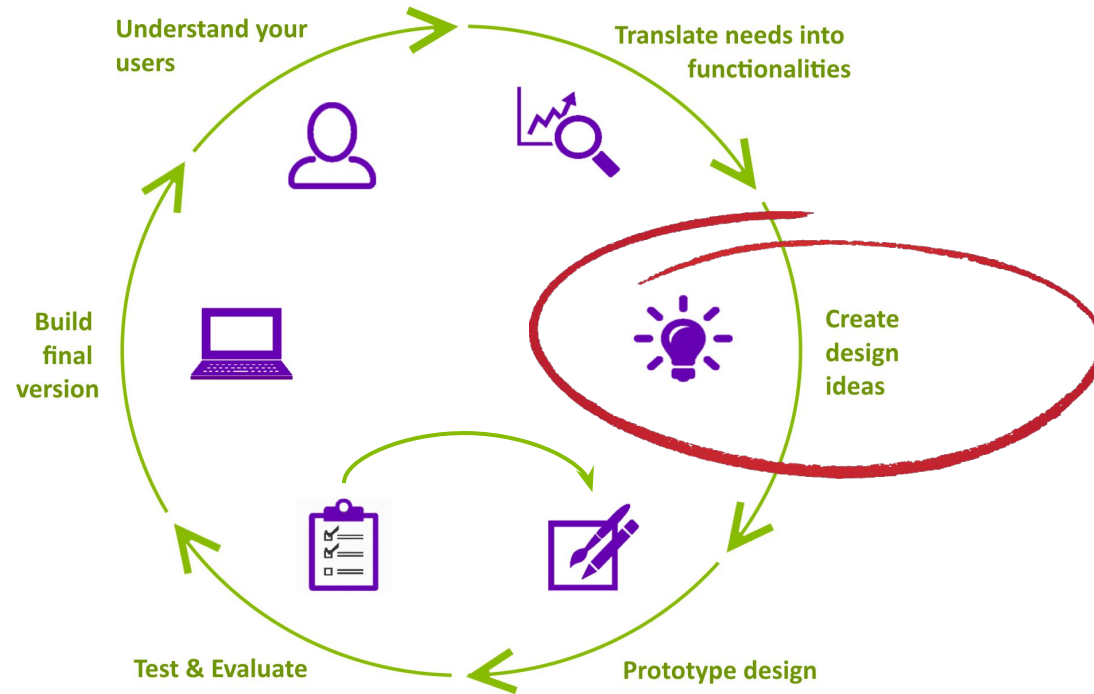
Spring 2019

**Please sit with your team**

Lecture XII

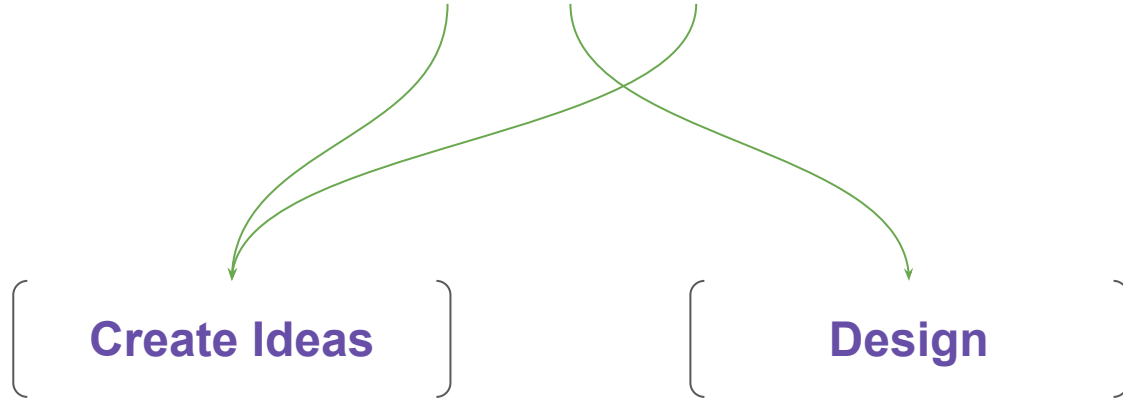
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Anastasia Kuzminykh and Edward Lank





**Create Design Ideas**





Create Design Ideas





## Create Design Ideas

### Design

**Interface** - a surface/place where two independent systems, bodies or spaces meet / form a common boundary, and communicate with each other

**Interface** - a communication channel

**Communication** - exchanging of information



## Create Design Ideas

### Design

**Signifier** - indicators of any type that communicate the action needed so the affordance can take place

**Affordance** - the possible use for an object when interacting with it

**Constraints** - restrictions that limit the possible actions available with an object

**Feedback** - conveys effects of user's actions

**Discoverability** - whether it's possible to figure out how to use an object by interacting with it

**Mapping** - indication of the relationship between objects

**Conceptual Model** - user's understanding of how the system works communicated through the design



**Create Design Ideas**





## Create Design Ideas

### Create Ideas

**Creativity** - process of producing a new idea which has value to someone

**Nature**

vs

**Nurture**

**Generating ideas:** memories → ordinary → extraordinary





## Create Design Ideas

Create Ideas

1. Preparation

4. Eureka moment

2. Provocation

Creative process

5. Verification

3. Incubation

6. Realization



## Create Design Ideas

### Create Ideas

#### 1. Preparation

Define the constraints: goals, parameters of the challenge, resources, time

Knowledge and understanding around the challenge: both academic and casual

Challenge all the assumptions



## Create Design Ideas

Create Ideas

2. Provocation

Overcoming associative limitations

Design Fixation

Force of habits

Framing and reframing problems



## Create Design Ideas

### Create Ideas

### 2. Provocation

Overcoming associative limitations

Design Fixation

Force of habits

Framing and reframing problems

Practice true randomness

Connect and combine

Change the routine



## Create Design Ideas

Create Ideas

3. Incubation

Mindful procrastination can sometimes be helpful



## Create Design Ideas

Create Ideas

4. Eureka moment

Always write it down in the moment no matter what



## Create Design Ideas

### Create Ideas

All ideas are rough when they are first visualized - get through the criticism

Be optimistic, give your crazy ideas a chance

No right answers, only working solutions

### 5. Verification



## Create Design Ideas

Create Ideas

1. Preparation

4. Eureka moment

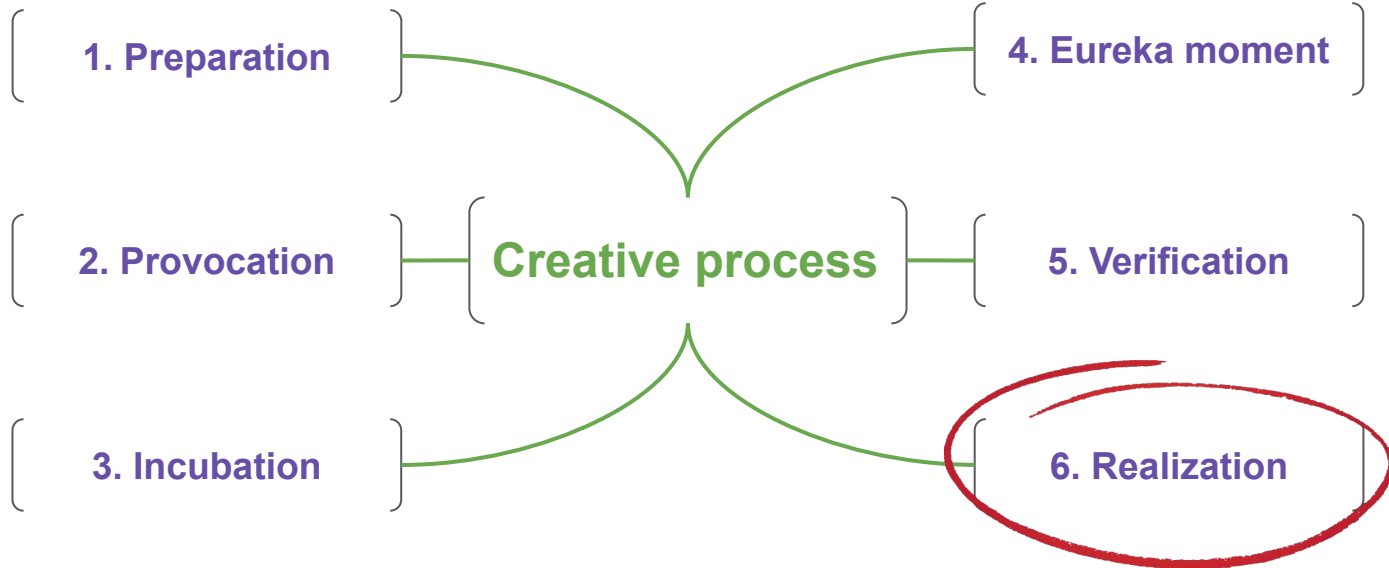
2. Provocation

Creative process

5. Verification

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6. Realization







## Create Design Ideas

**Sketches**

**User stories**

**Wireframes**



## Create Design Ideas

Supports  
brainstorming

Fast and  
simple

Speeds up your  
work

### Sketches

- illustration of how the basic  
concept works

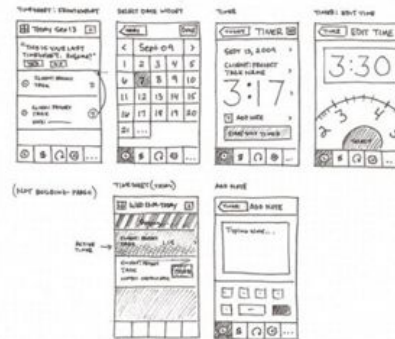
Doesn't have to  
look good

Supports  
communication

Tells a story



Idea: An app  
that makes time  
tracking easy.



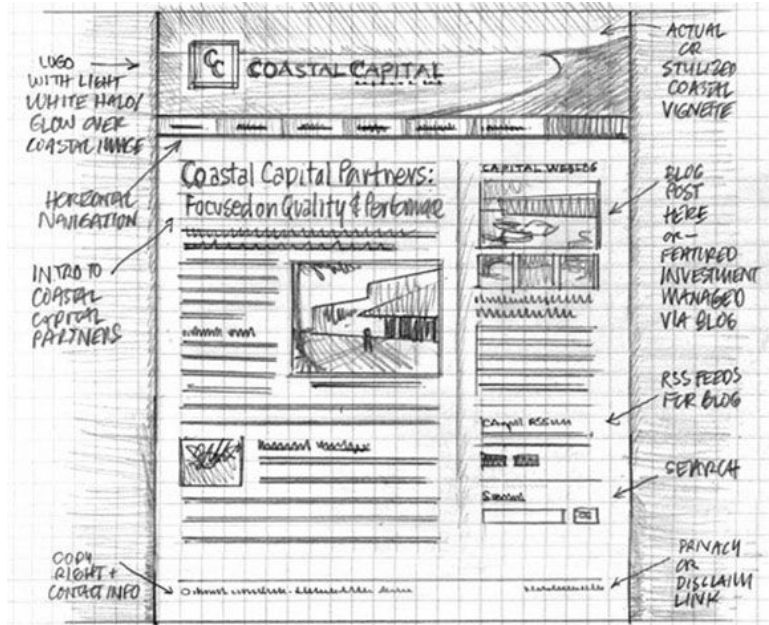
The idea translated into user interface form.

Image:

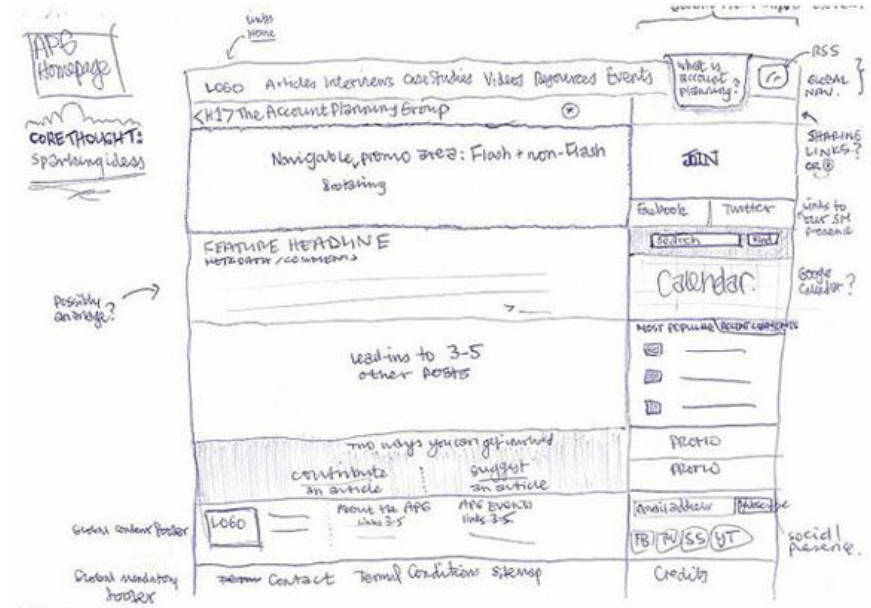
<http://uxmovement.com/wireframes/why-its-important-to-sketch-before-you-wireframe/>



## Create Design Ideas



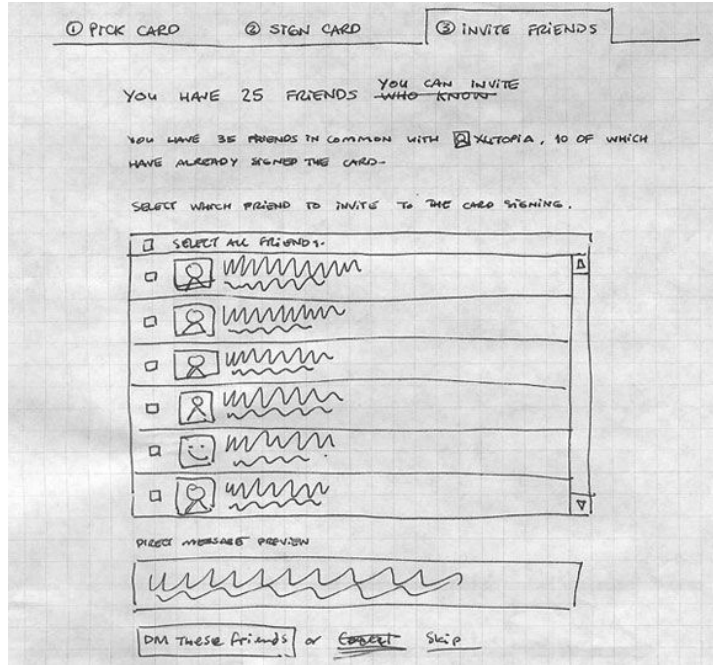
Sketched Wireframes 5



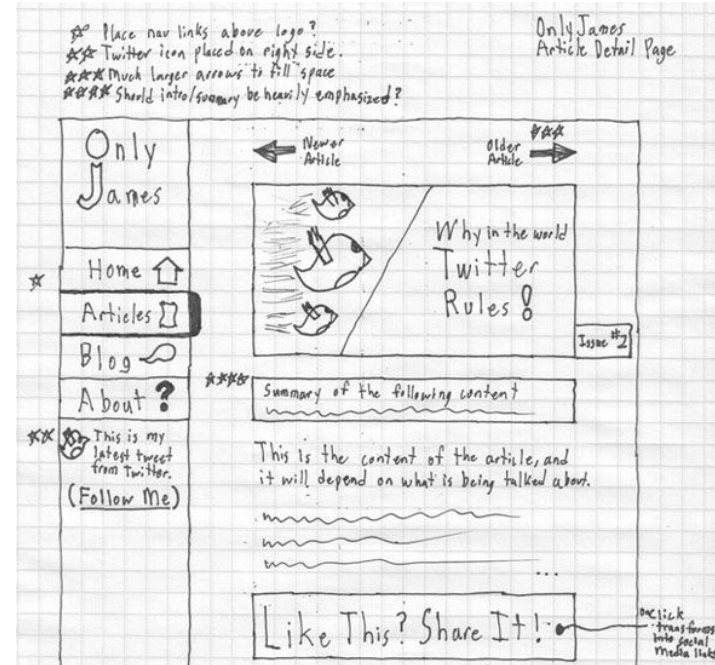
APG Website



## Create Design Ideas



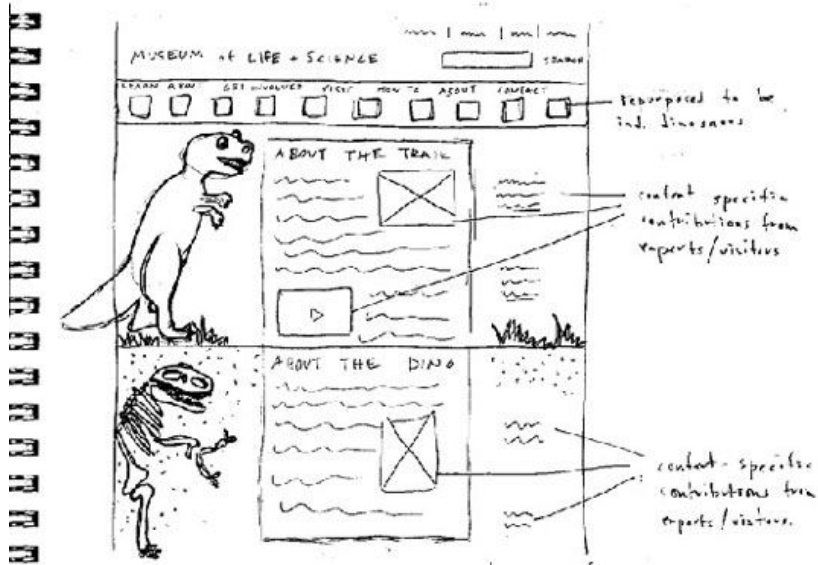
Hashlove Friends Invite



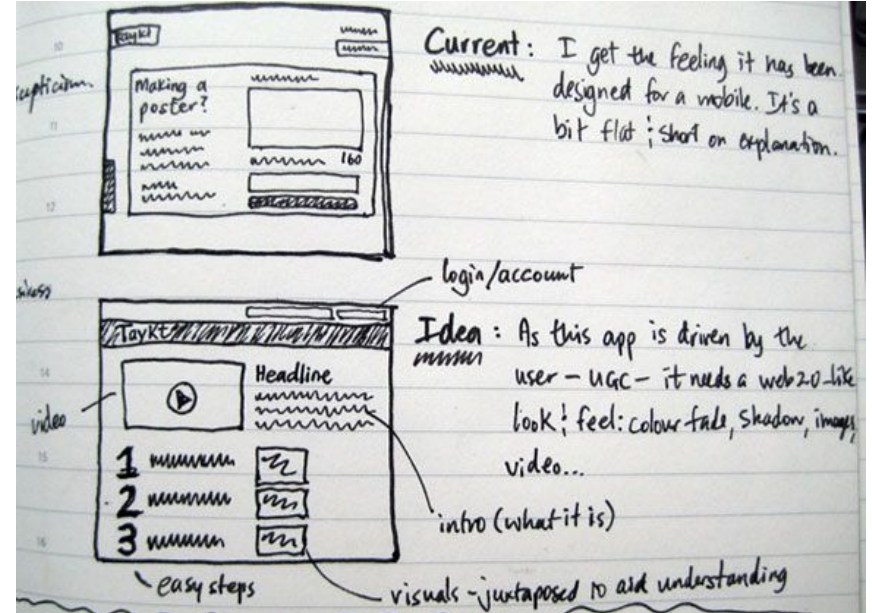
OnlyJames Wireframe Sketch



## Create Design Ideas



Dinosaurs



Taykt Wireframe



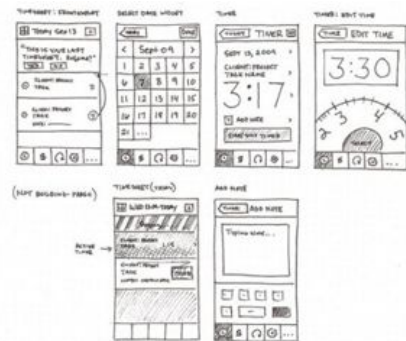
## Create Design Ideas

### Sketches

- illustration of how the basic concept works

### User stories

### Wireframes



The idea translated into user interface form.



## Create Design Ideas

### User stories

- description of a feature from  
an end-user perspective

As a user / <persona> ,  
I want / need <action>  
so that I can <user goal>.

Keep it simple

Keep breaking  
them down

Have  
acceptance  
criteria

A  
communication  
tool

Keep them  
visible

Prevent  
dead-ends





## Create Design Ideas

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**“As a user I want to send an email.”**

**“As a user I need to type in an email address”**

**“As a user I want to type in an email subject”**

**“As a user I want to type in an email text”**





## Create Design Ideas

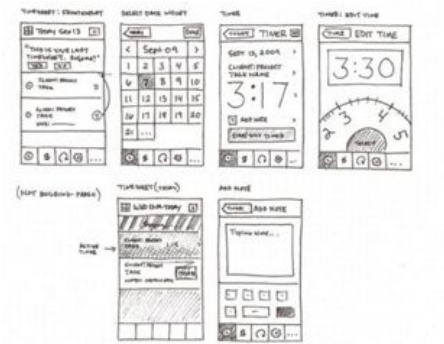
### Sketches

- illustration of how the basic concept works

### User stories

- description of a feature from an end-user perspective

### Wireframes



The idea translated into user interface form.

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I want / need <action>  
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## Create Design Ideas

### Wireframes

- static representation of the UI layout and user flow

Quick, cheap  
and easy

Used as the  
documentation

Using  
pixelated  
widgets

Main groups of  
content

Structure of  
content

Only basic  
visualization

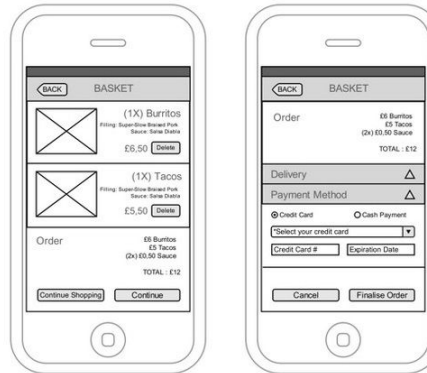
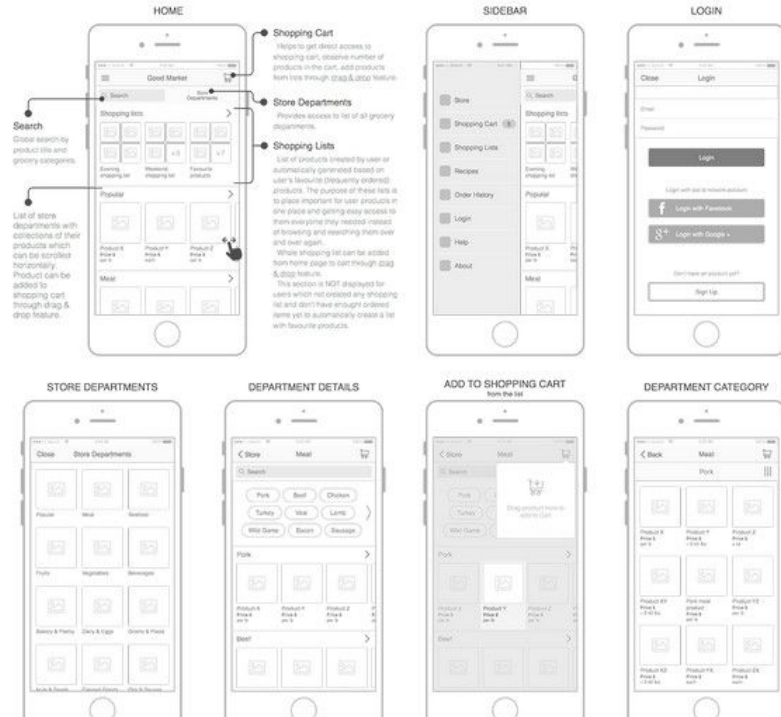


Image:  
<https://www.behance.net/gallery/13421913/Wireframes-Restaurant-App>

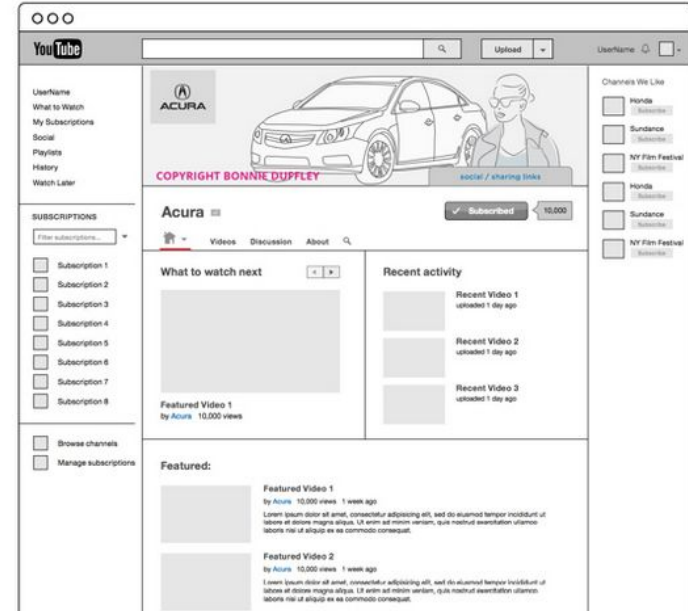


## Create Design Ideas

### Wireframes



### ACURA - YOUTUBE SUBSCRIBER



UX Wireframes for Online Grocery Shopping Mobile App

Wireframe for Acura's Subscriber page on Youtube



## Create Design Ideas

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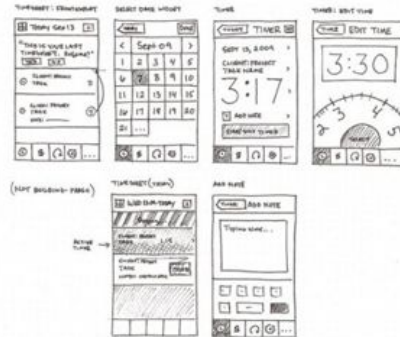
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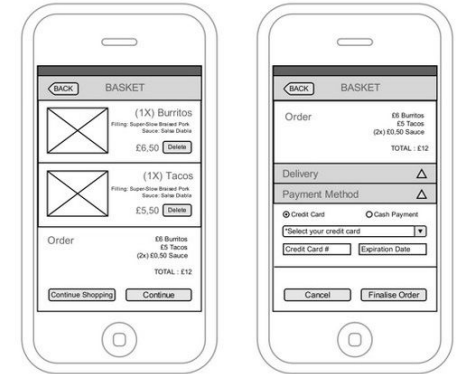
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Create Design Ideas

**Exercise:** time management



## Create Design Ideas

**Exercise:** time management application

**Step 1: individual brainstorm**



## Create Design Ideas

**Exercise:** time management application

**Step 2: team ideation and user stories**

As a user / <persona> ,  
I want / need <action>  
so that I can <user goal>.



## Create Design Ideas

**Exercise:** time management application

**Step 3: crazy eights**







## Create Design Ideas

### Site/App Flows

### User Flows

The **path** a user follows through an application. Does not have to be linear, can branch out

**Goal** - to optimize users ability to accomplish a task with the least amount of steps.  
Communicates transitions



## Create Design Ideas

### Site/App Flows

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What pages/screens are **needed**

Which pages/screens should **link** to each other

Help to design a **navigation experience**

### User Flows



## Create Design Ideas

### Site/App Flows

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What pages/screens are **needed**

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### User Flows

**Microinteractions** and **responses** to user's actions and errors

Help to analyze the **efficiency** of a task

Often attached to **personas**



## Create Design Ideas

**Exercise:** time management application

Step 4: app flows and user flows