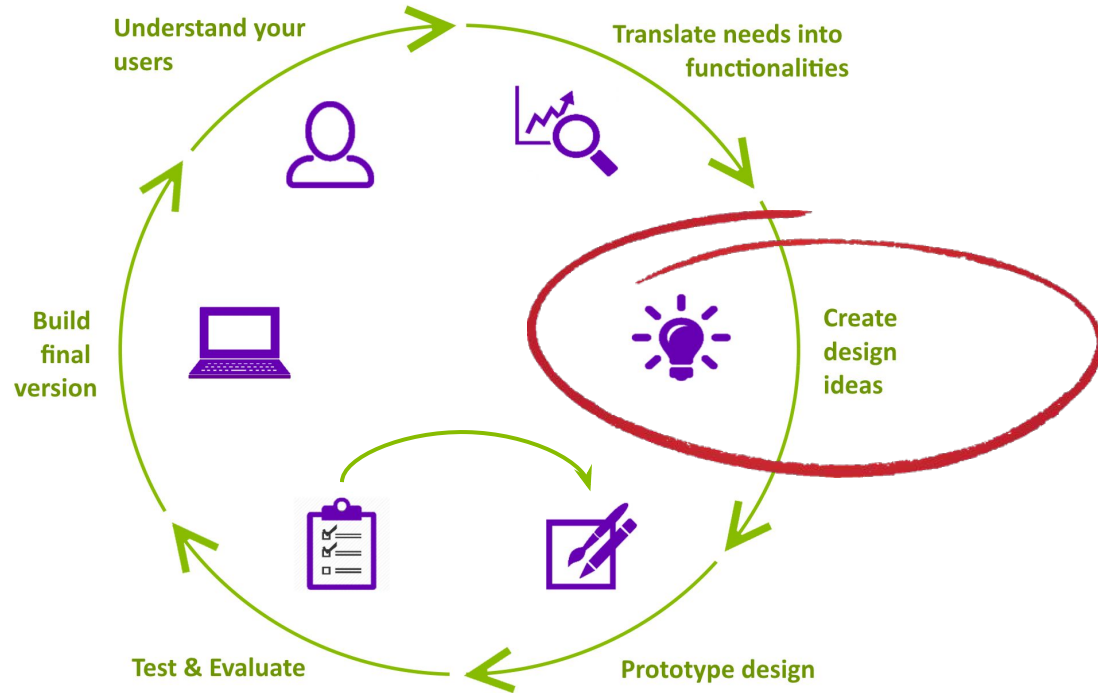


CS449/649: Human-Computer Interaction

Winter 2018

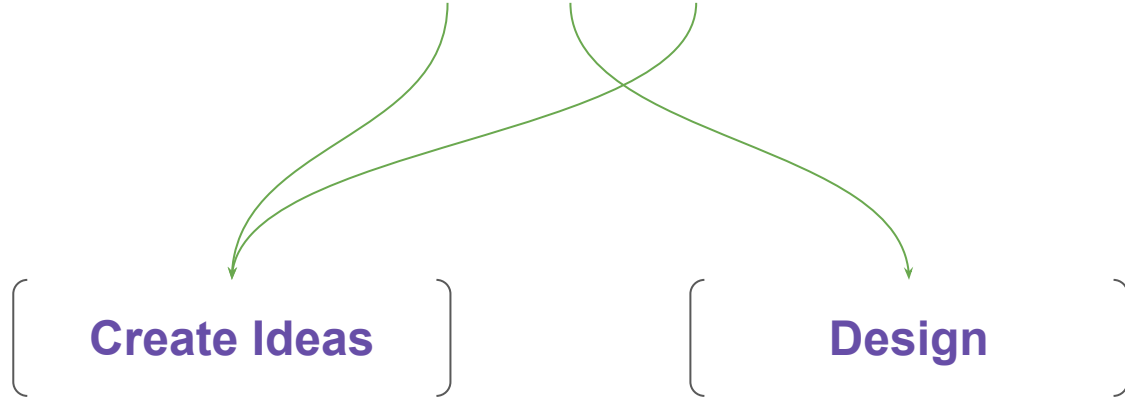
Lecture VII

Anastasia Kuzminykh



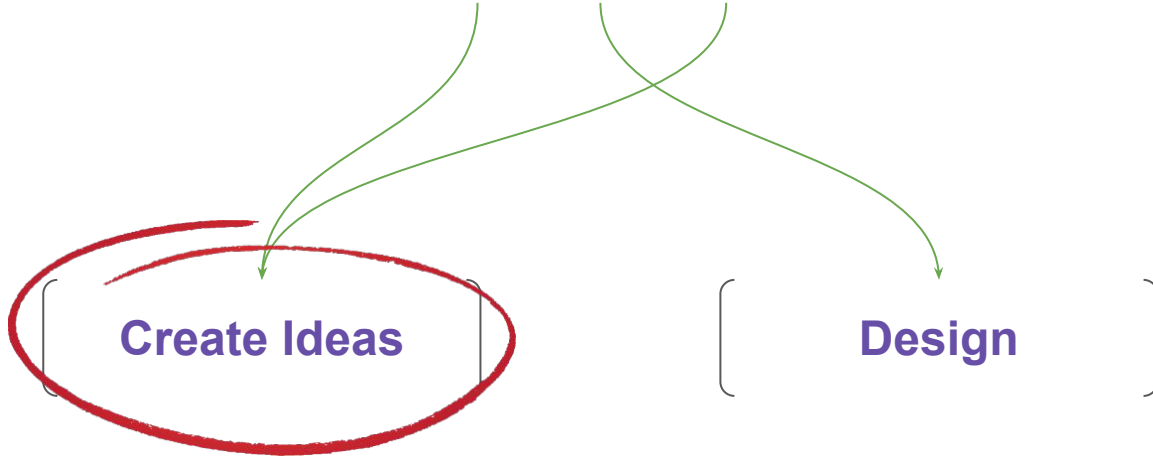


Create Design Ideas





Create Design Ideas





Create Design Ideas

Create Ideas

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



Create Design Ideas

Create Ideas

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

Nature

vs

Nurture



Create Design Ideas

Create Ideas

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

Nature

vs

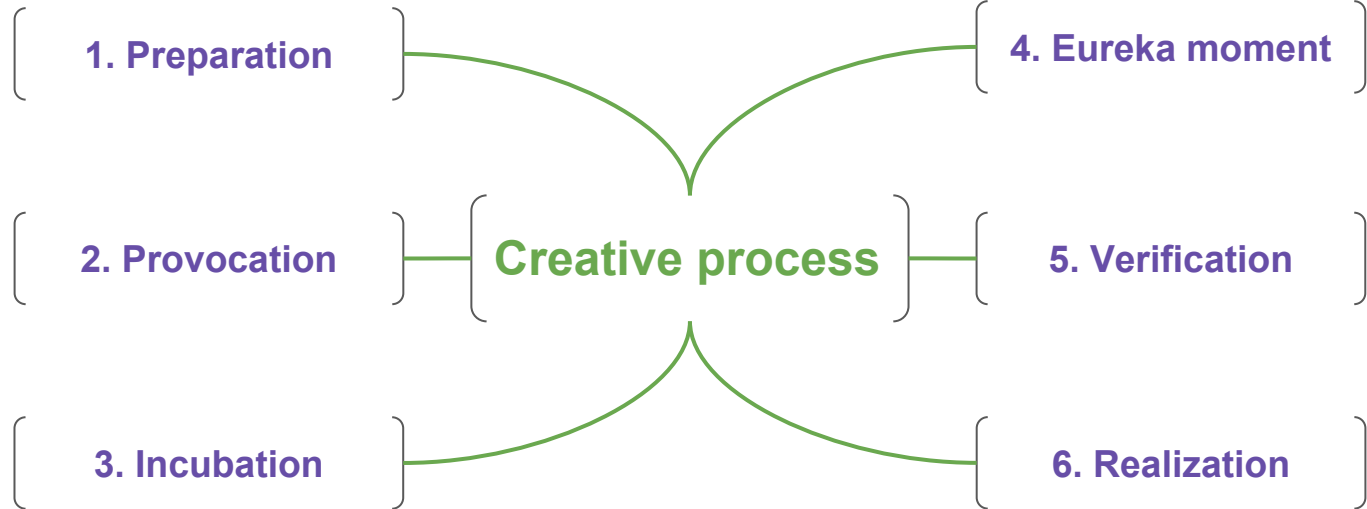
Nurture

Generating ideas: memories → ordinary → extraordinary



Create Design Ideas

Create Ideas





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

Concept of *po* by Edward de Bono

Force of habits

Framing and reframing problems



Create Design Ideas

Create Ideas

2. Provocation

Overcoming associative limitations

Design Fixation

Concept of *po* by Edward de Bono

Force of habits

Framing and reframing problems

Practice true randomness

Connect and combine

Change the routine



Create Design Ideas

Create Ideas

Mindful procrastination can sometimes be helpful

Different aspects of creativity require different brain activity

3. Incubation

Most ideas are formed subconsciously



Create Design Ideas

Create Ideas

An idea that might solve the challenge is pushed to the conscious level

Usually difficult to explain how you came up with this idea

Always write it down in the moment no matter what

4. Eureka moment



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

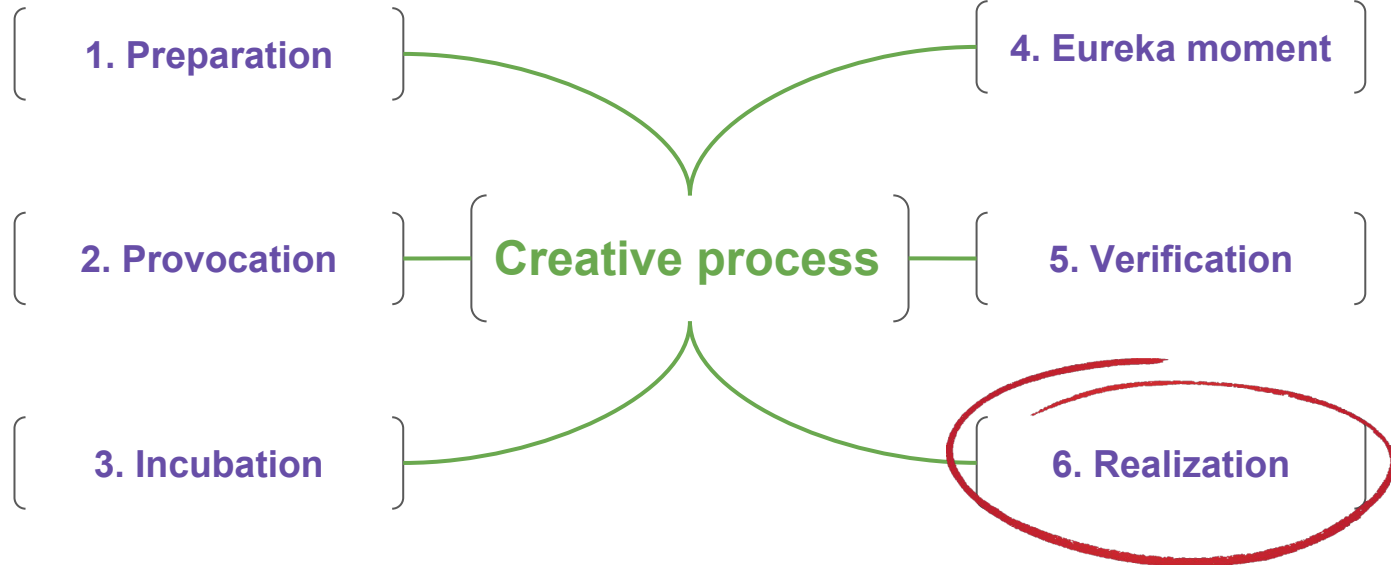
No right answers, only working solutions

5. Verification



Create Design Ideas

Create Ideas





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

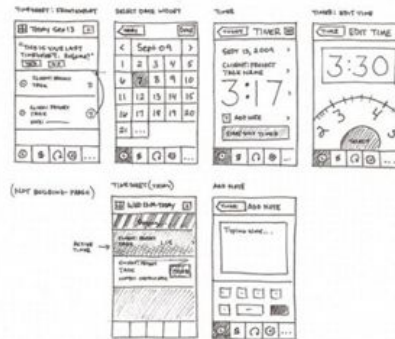
Doesn't have to
look good

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/>



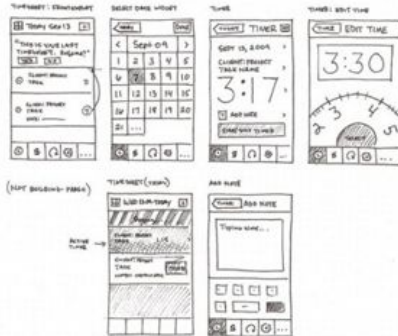
Create Design Ideas

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

User stories

- description of a feature from
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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

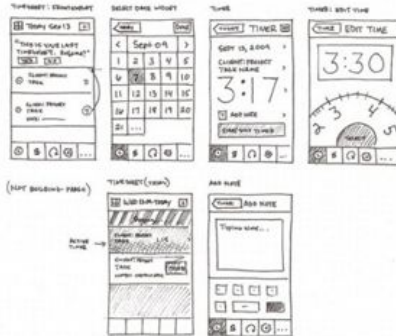
Sketches

- 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.

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



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

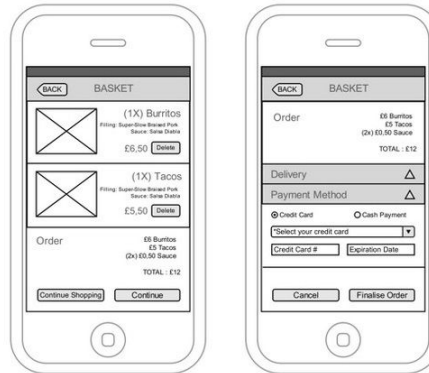


Image:
<https://www.behance.net/gallery/13421913/Wireframes-Restaurant-App>



Create Design Ideas

Sketches

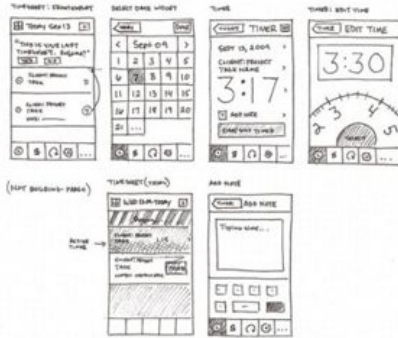
- illustration of how the basic concept works

User stories

- description of a feature from an end-user perspective

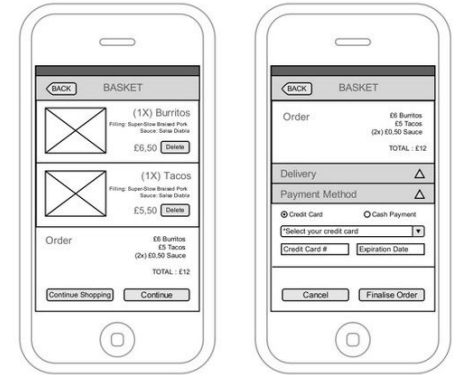
Wireframes

- static representation of the UI layout and user flow



The idea translated into user interface form.

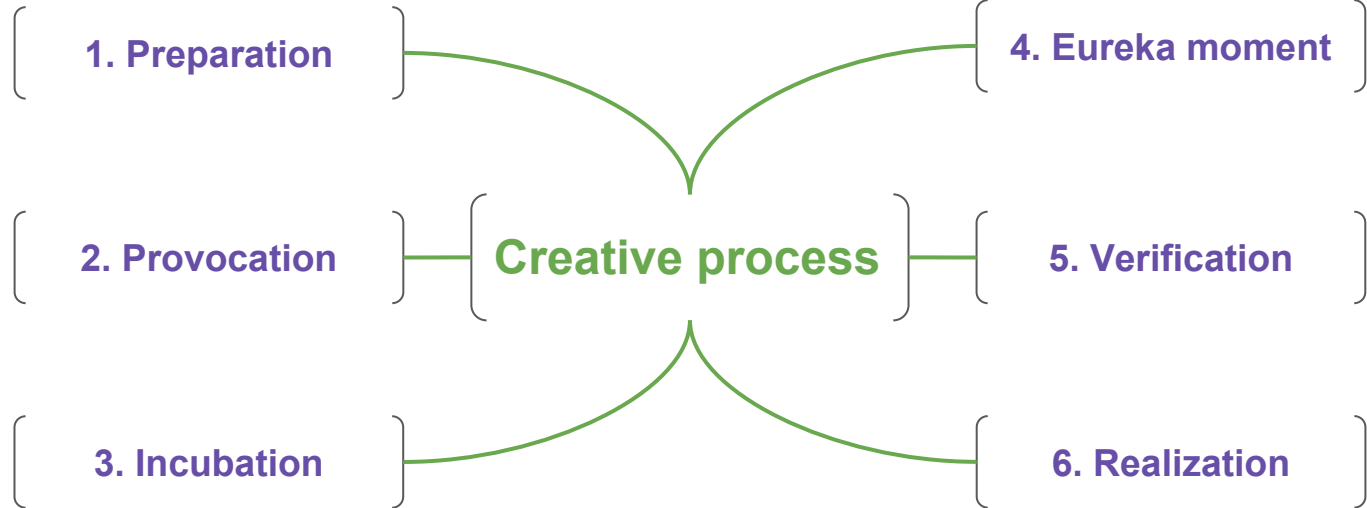
As a user / <persona> ,
I want / need <action>
so that I can <user goal>.





Create Design Ideas

Create 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



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

Semiotics - the study of signs and symbols

Sign -
anything that
communicates a
meaning

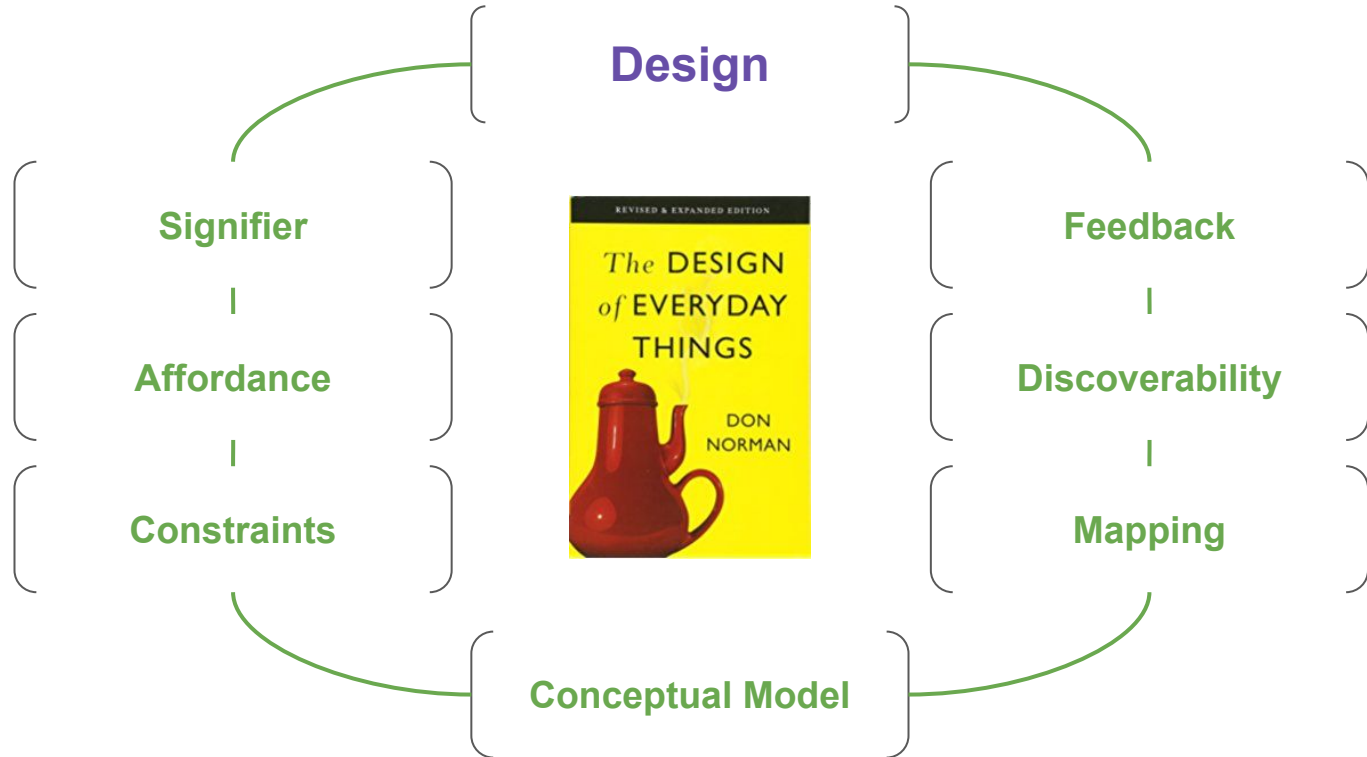
Representamen (signifier) -
the form of the sign

Interpretant -
what people make of the sign

Object (signified) -
the actual reference of the sign



Create Design Ideas





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



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



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

Physical - caused by physical features

Cultural - based on what is culturally accepted

Semantic - based on the meaning of the situation

Logical - use reasoning to determine the alternatives



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