Requirement Elicitation
First Steps

Steps …

- requirements
  - what is there and what is wanted …
- analysis
  - ordering and understanding
- design
  - what to do and how to decide
- iteration and prototyping
  - getting it right … and finding what is really needed!
- implementation and deployment
  - making it and getting it out there

user focus

who they are

what they do

where they are

(requirements)

know your user

- who are they?
- probably not like you!
- talk to them
- watch them
- use your imagination

techniques

- personas
- cultural probes and technology probes
- scenarios and context

personas

persona

description of an ‘example’ user

- not necessarily a real person

use as surrogate user

- what would Betty think

details matter

- makes her ‘real’

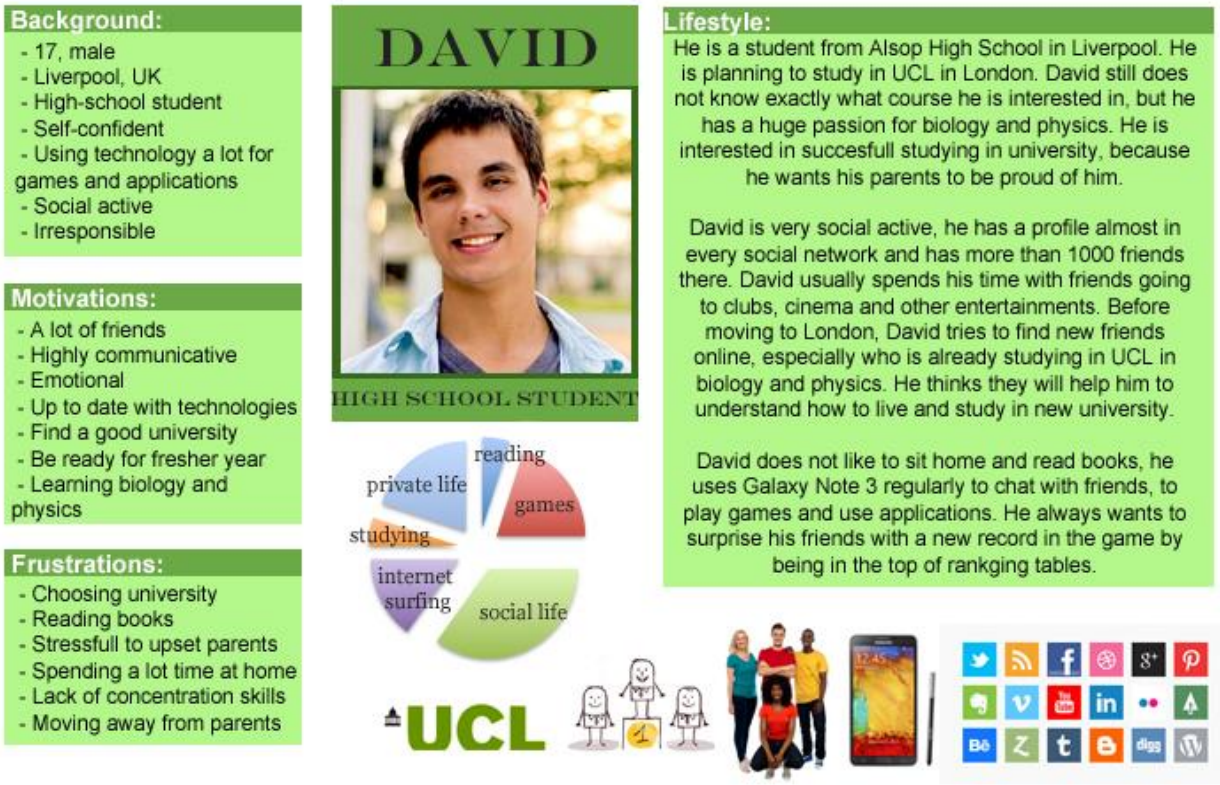
Personas

Develop a set of personas covering different types of intended users and different roles.

Define the personas, with details such as:

- name
- age
- job title
- picture/photo
- physical characteristics
- background
- goals
- etc

Can be Narrative or Otherwise [*example*>]



warehouse managers: demographics

Age: <35: 13% 35-50: 39% >50: 48%

Sex: male: 63% female: 37%

Education:

school: 57% college: 36% univ: 7%

Children at home:

yes: 37% no: 63%

Disability:

none: 75% minor 17% major 8%

Betty Wilcox: user profile

Age: 37

Sex: female

Education: college

Children at home: yes (age 7 and 15)

Disability: minor (left hand)

Example 2 persona

Betty is 37 years old, She has been Warehouse Manager for five years and worked for Simpkins Brothers Engineering for twelve years. She didn't go to university, but has studied in her evenings for a business diploma. She has two children aged 15 and 7 and does not like to work late. She did part of an introductory in-house computer course some years ago, but it was interrupted when she was promoted and could no longer afford to take the time. Her vision is perfect, but her left-hand movement is slightly restricted following an industrial accident 3 years ago. She is enthusiastic about her work and is happy to delegate responsibility and take suggestions from her staff. However, she does feel threatened by the introduction of yet another new computer system (the third in her time at SBE).

probes

cultural probes

- direct observation
  - sometimes hard
    - in the home
    - psychiatric patients, …
- probe packs
  - items to prompt responses
    - e.g. glass to listen at wall, camera, postcard
  - given to people to open in their own environment they record what is meaningful *to them*
- used to …
  - inform interviews, prompt ideas, enculture designers

technology probes

hard for users to envisage radically new technology
=> use early prototypes as prompts

not “what it will be like”
more exposing potential

e.g. Hermes office door displays

scenarios

scenarios

- stories for design
  - communicate with others
  - validate other models
  - understand dynamics
- linearity
  - time is linear - our lives are linear
  - but don't show alternatives

scenarios …

- what will users want to do?
- step-by-step walkthrough
  - what can they see (sketches, screen shots)
  - what do they do (keyboard, mouse etc.)
  - what are they thinking?
- use and reuse throughout design

the late consignment

It's been a tough morning already. Betty's younger child had had nightmares and had woken her at 2am and then again at 3am. The new stock had arrived late, so everything else was delayed. Tony, one of her staff had called her over as he was having a problem in the new consignment. She went to fetch one of the parts from the consignment and is at the computer screen balancing an awkwardly shaped gear part between her hip and the bench while she types in the part code. The stock part page appears, but the terms are all different than in the old system and suddenly the training she'd had just a few days ago feels like the distant past. Happily Emma, who works on the night shift, has typed up a crib sheet listing options from the old system together with photos of what they correspond to in the new system that Emma had taken with her phone. "I'd like to be able to make this kind of thing", Betty thinks, and that evening she signs up for a new online IT course.

Money Withdrawl

It is Friday afternoon and Peter is flying out of Rome to Milan. He does not have enough money for a taxi to the airport, and he is running late. He goes to the local ATM and identifies himself. He specifies that he wants 150 Euro from his savings account. He would prefer to have the money in 20 Euro notes so that he can give the taxi driver the correct change. He does not want a printed receipt because he does not bother keeping track of transactions in his savings account.

… explore the depths

- explore interaction
  - what happens when
- explore cognition
  - what are the users thinking
- explore architecture
  - what is happening inside

use scenarios to ..

- communicate with others
  - designers, clients, users
- validate other models
  - ‘play’ it against other models
- express dynamics
  - screenshots – appearance
  - scenario – behaviour

Scenarios

- Help us to identify:
  - *characteristics* of the user that may impact the design and *tasks and context* that the system needs to support.
  - Scenarios force us to think about the design in detail and notice potential problems before they happen; we can therefore verify whether the design would make sense to the user and whether the proposed implementation architectures would work.
- Be used to communicate with others (e.g. designers, clients, users)
  - it is easy to misunderstand one another whilst discussing abstract and technical ideas; scenarios being concrete/practical are thus easier to share.
- Be used to validate other models
  - a detailed scenario can be 'played' against other models e.g. task and dialog models.
- Be used to express dynamics
  - mere screenshots and pictures primarily give a sense of the appearance of the system; a scenario can give a sense of the behavior of the system.

linearity

Scenarios – one linear path through system

Pros:

- life and time are linear
- easy to understand (stories and narrative are natural)
- concrete (errors less likely)

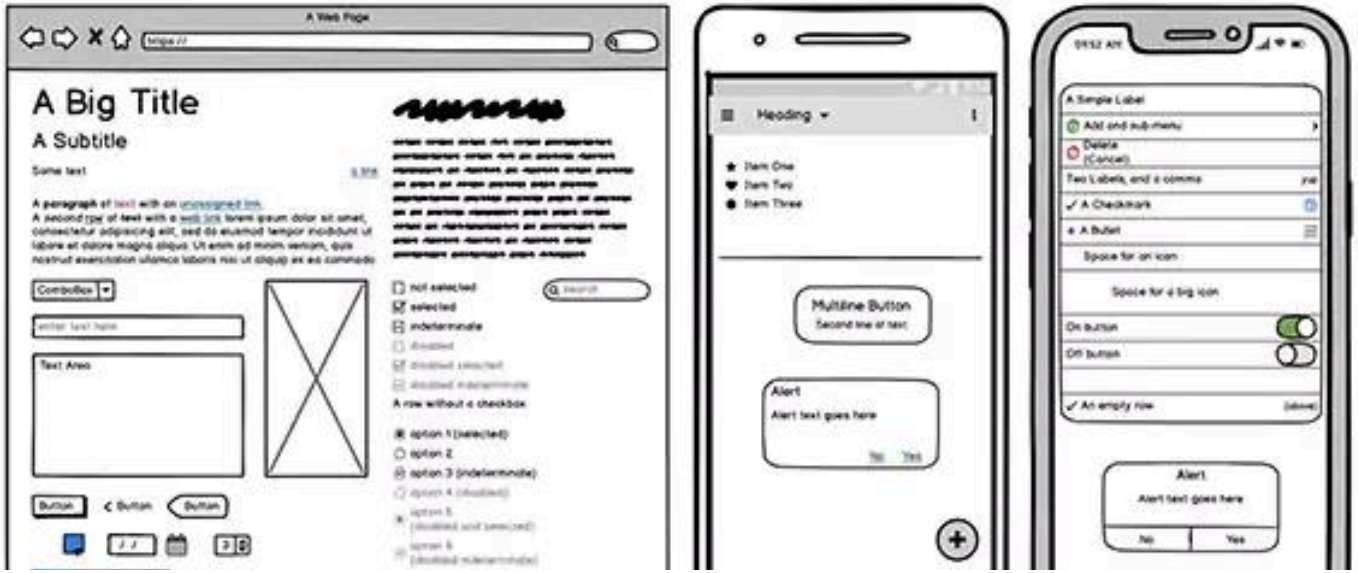
Cons:

- no choice, no branches, no special conditions
- miss the unintended

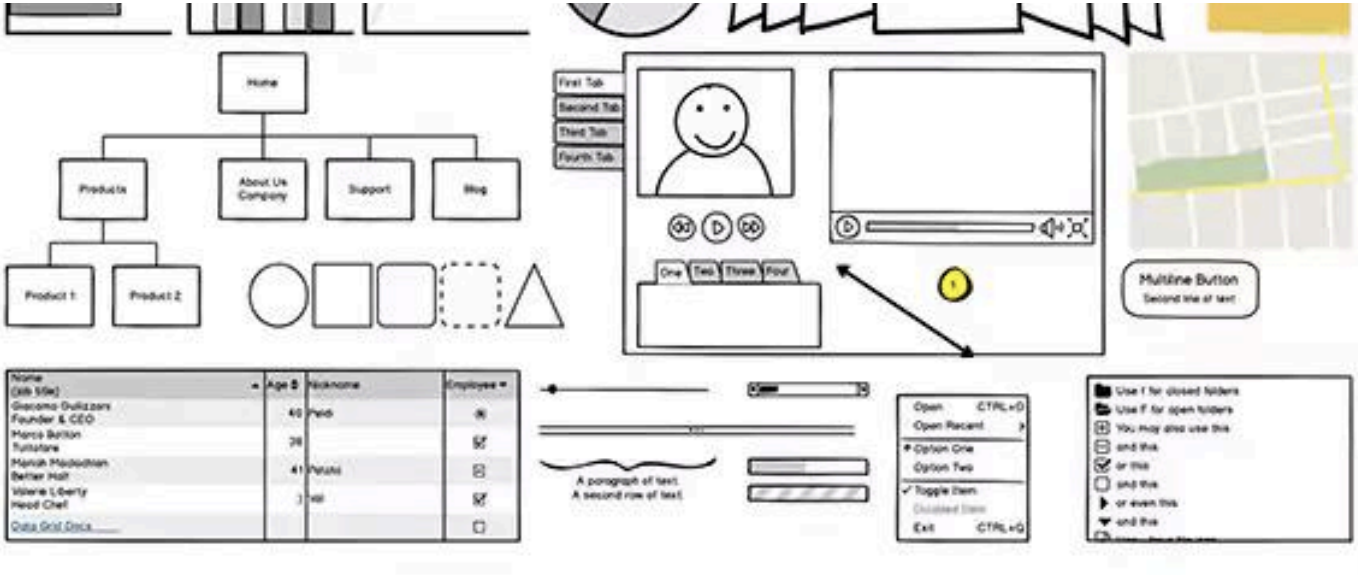
So:

- use several scenarios
- use several methods

context



not just wireframes!



context

prior events

consignment late
bad night

whole body

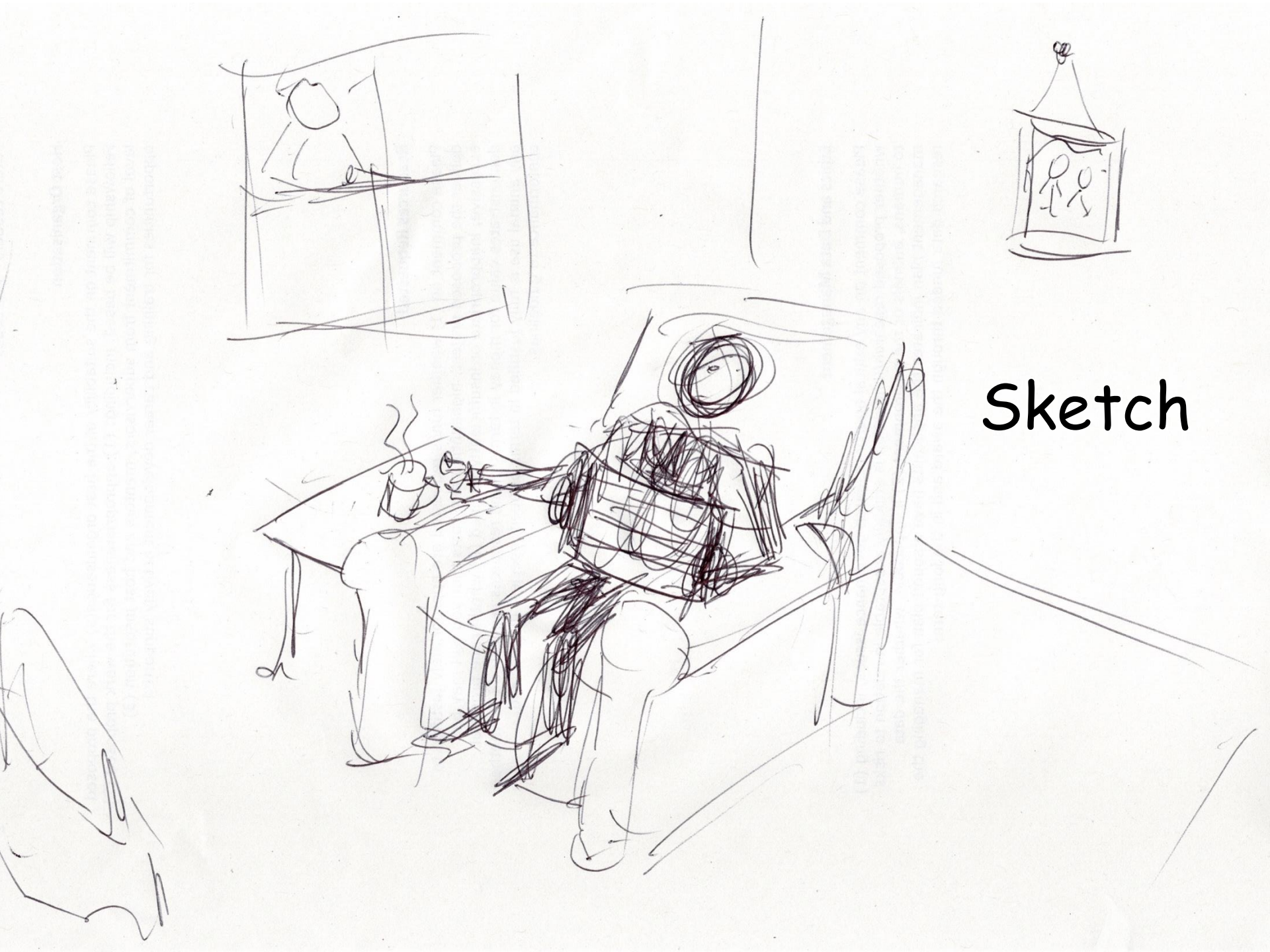
balancing part
with weak hand

other people

child, Tony, Emma

physical environment

distance to carry things
hot? Noisy?



Sketch