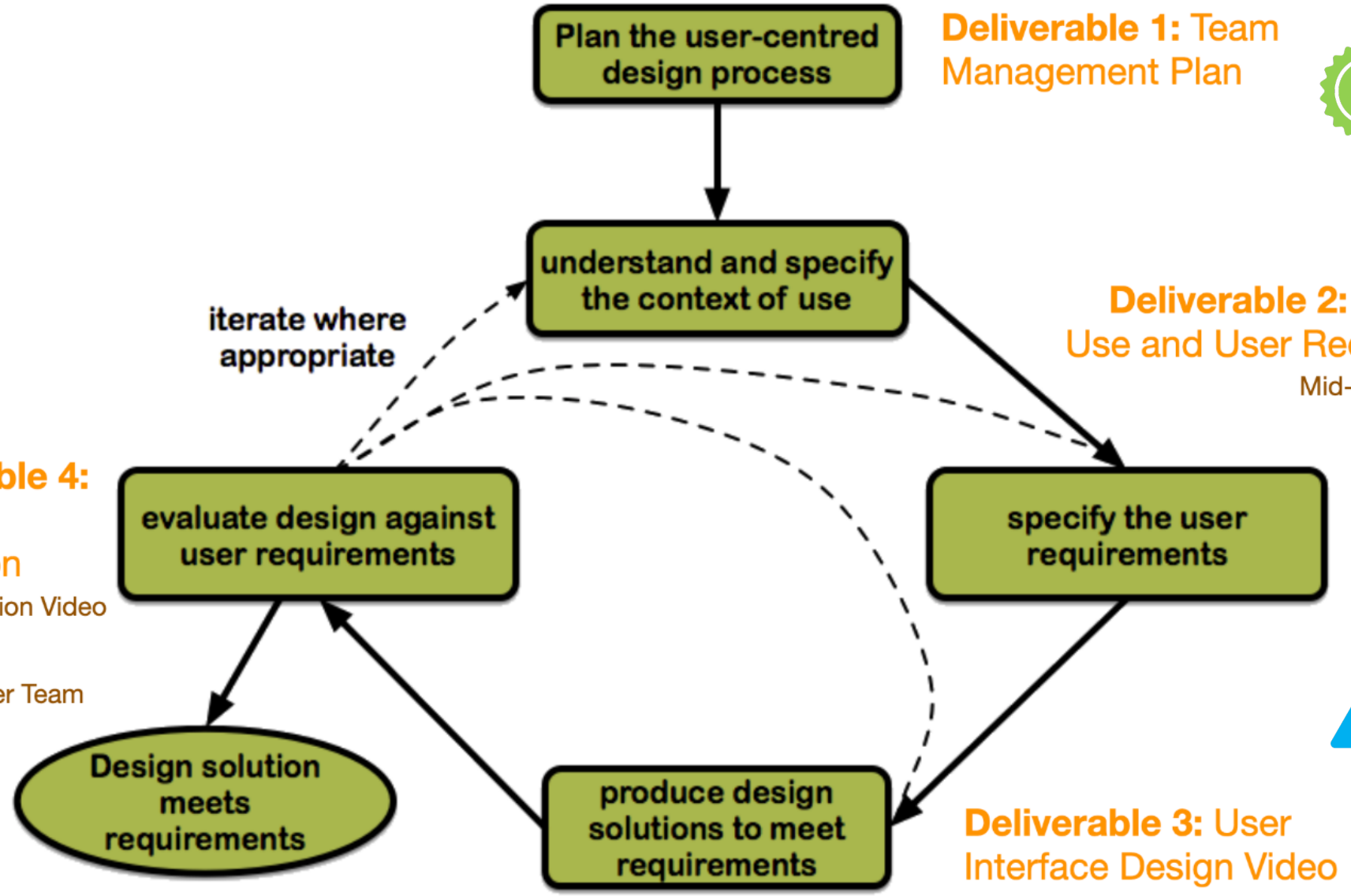
User-Centred Design

Tutorial 6: Prototyping

Agenda

- Questions since last week
- Team stand-ups
- User Interface Design
    - Get feedback on your conceptual design
    - Start prototyping user interface design

UCD Process



Deliverable 1: Team Management Plan

Deliverable 2: Context of Use and User Requirements

Mid-semester Team Reflection

Deliverable 3: User Interface Design Video

Deliverable 4: Usability Evaluation

User Evaluation Video

Ethics Quiz

End-semester Team Reflection

Bring interactive prototype class in Week 7 for bonus marks

Wandering Detection App

UCD 3: User Interface Design Video (due W9)

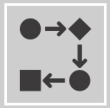
- Design and build prototype app for Wandering Detection App
- Present design and design process as video
  - 10 min
- Include demo of prototype

- Need to present to get marks
- Name and face must be on video when talking

UCD 3: User Interface Design Video

Background (as per UCD Project 2)

Conceptual design



Iteration

Prototype walkthrough

Limitations and future work

New skills to learn:

- how to use prototyping software
- how to make video

Time consuming tasks:

- generating design concept*
- making prototype**
- making video*

Case Study: Low Water Warner

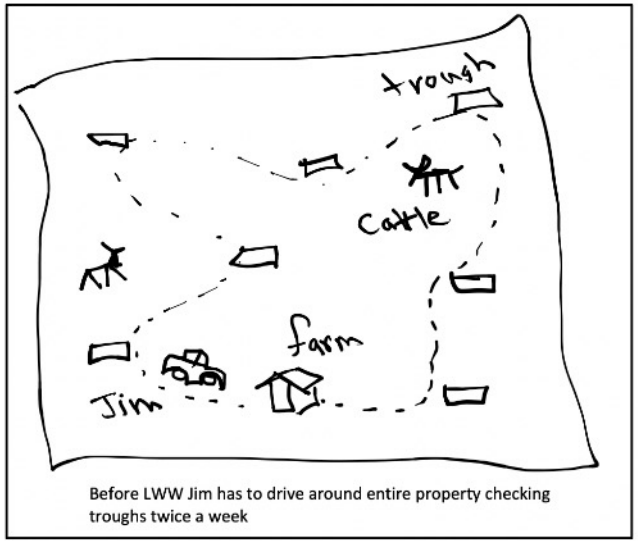
Farmers on large Australian cattle farms may have to travel 100’s of kilometres to check the water supplies for their cattle.

The aim of Low Water Warner is to remotely monitor water troughs and tanks and reduce the need for them to check them manually.

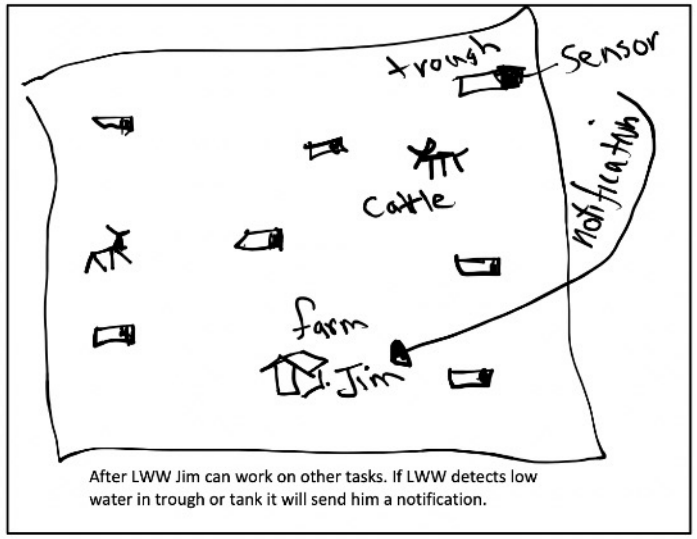
Conceptual Design: Design Scenario

Bill and Leanne's outback NSW cattle farm is 8,000 square km. The majority of their cattle are watered by troughs supplied by bore water pumps. Making sure these are working properly is critical. In the past it took Bill an entire day to check all the troughs are working and between checks he was always worrying about them. However, the installation of Low Water Warner (LWW) has largely removed unnecessary trips to check troughs and the constant worry. Water level sensors wirelessly connected to LWW are installed in all his troughs and the tanks suppling them. If a tank or trough runs low LWW sends him an immediate notification so he can go out and check it. He can also check tank levels for all his troughs and the rate at which cattle are drinking the water. This helps him see seasonal variations and identify if he needs more/less troughs in an area.

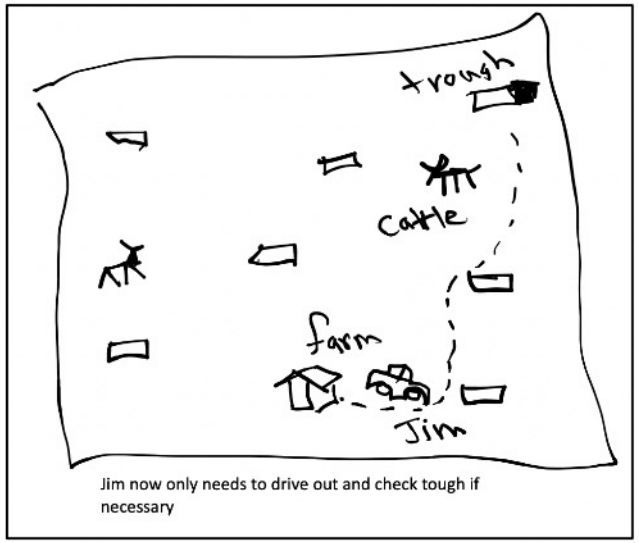
Conceptual Design: Storyboard



Before LWW Jim has to drive around entire property checking troughs twice a week



After LWW Jim can work on other tasks. If LWW detects low water in trough or tank it will send him a notification.

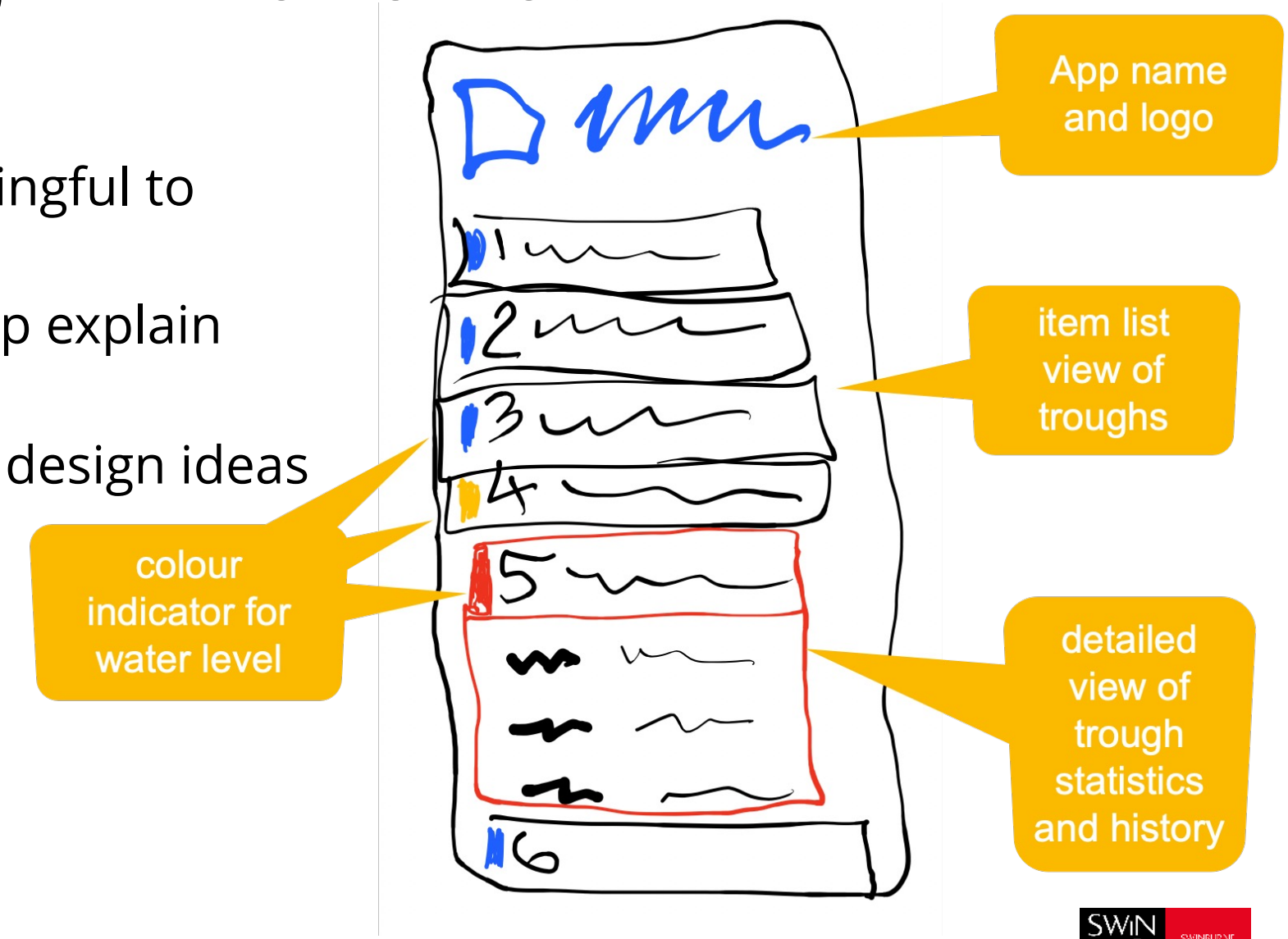


Jim now only needs to drive out and check tough if necessary

Jim and Leanne now have more time to relax and enjoy their property together.

Conceptual Design: Wireframes

- Keep level of detail low
- Only include color if meaningful to design
- provide annotations to help explain design features
- include at least 2 different design ideas

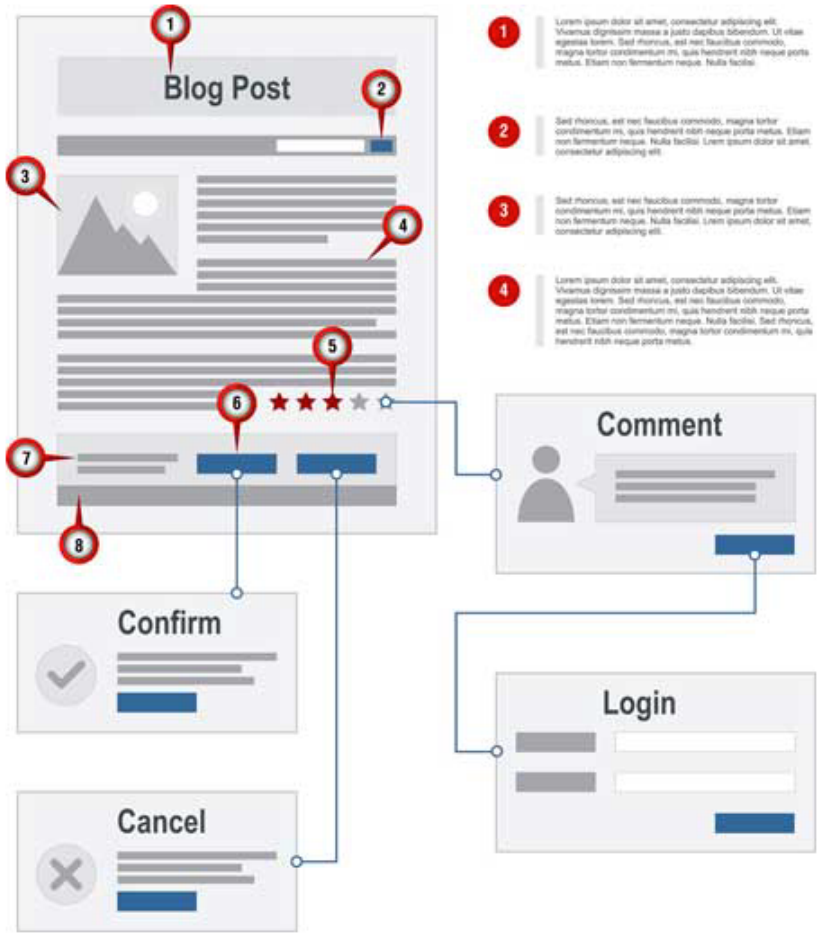


Conceptual Design: Wireframes

Key Project Deliverable: User Interface Prototype

Interactive prototype

- Series of screens linked together with interactive hot spots
- Explore and test design ideas
- Get feedback on design
- Do not require programming!

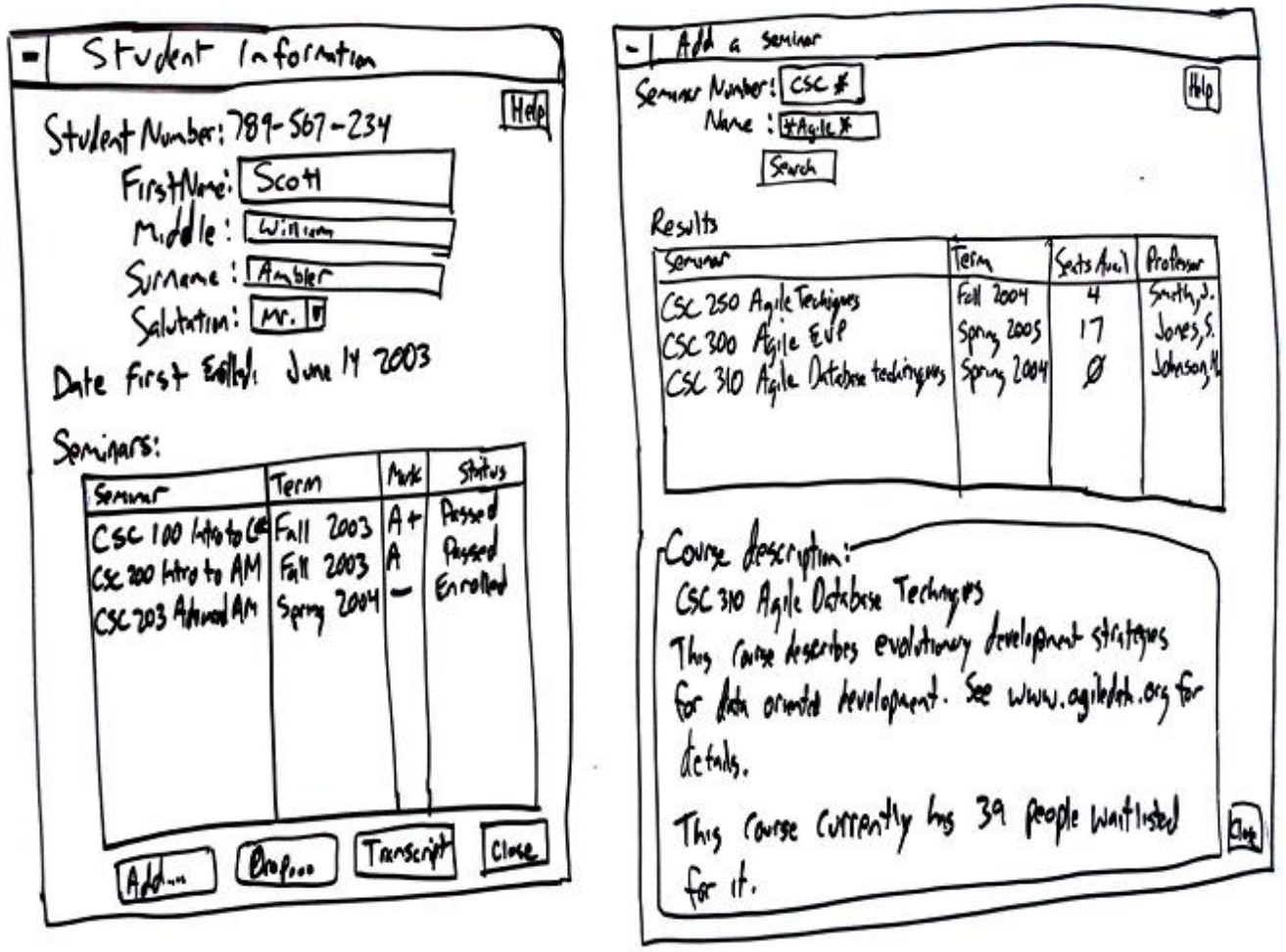


http://mediaprojects.biz/services/implementation/ui-prototyping/

Low Fidelity User Interface Prototype

Start with low fidelity prototypes

Generate ideas without fussing about exact placement, colour etc



http://agilemodeling.com/artifacts/uiPrototype.htm

Prototyping tools

Figma

Adobe XD

PowerPoint

...plus many more.

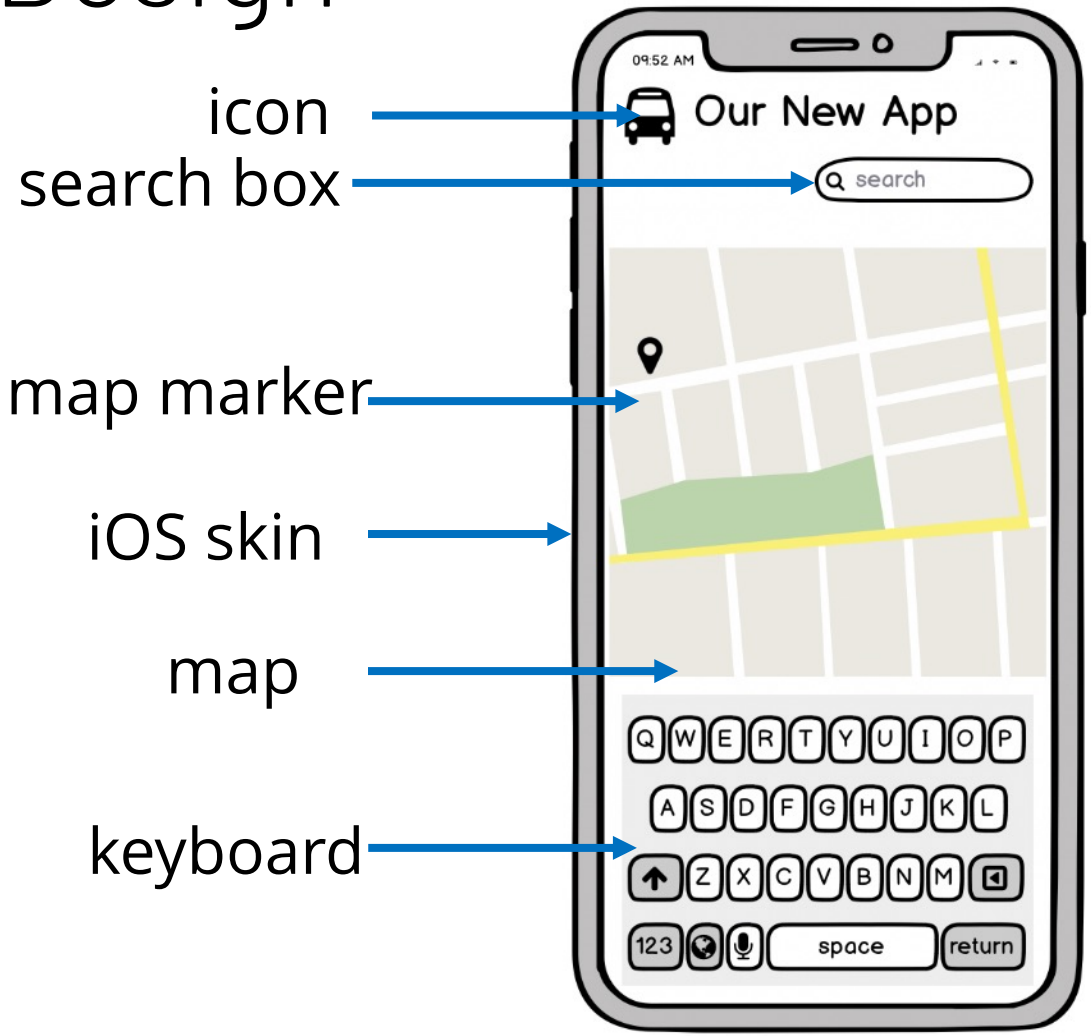
When choosing a tool:

- ease of use
- utility (linking, UI libraries, masters)
- skill development

Start Prototyping: ASAP!

UCD 3: User Interface Design

Use templates for common user interface (UI) elements



Balsamiq

UCD 3: User Interface Design Prototype

Tip 1: Regularly save new versions of prototype or take screenshots before and after major revisions (for Iteration section)

Tip 2: Try to build enough to keep your user occupied for approximately 5 min.

UCD 3: User Interface Design Prototype

Tip 3: Build prototype around specified tasks
(not all options need to be prototyped)

Example: Task 1: What is the water level in Trough 4?
Task 2: What triggered the alert on Trough 5?

With these tasks you only need to prototype water level on 4 and alert on 5.

Tip 4: Make use of ‘sorry this has not been prototyped yet’ message.

Before next week

Build prototype

Prepare prototype for Week 7 ‘expert’ evaluation (i.e., where your prototype will be evaluated by other teams)

* Watch Heuristic video’s to prepare for Heuristic evaluation (week 7/8)

COS70004 UCD Submit UCD Report THIS Sunday

Bibliography

Brinks, B, Stenekes, N, Kruger, H & Kancans, R 2018, *Snapshot of Australia's Agricultural Workforce*, ABARES Insights 3, Canberra, CC BY 4.0. DOI: 10.25814/5c09cefb3fec5.

Hooper, S, Martin, P, Love, G & Fisher B S 2002, *Farm size and productivity, where are the trends taking us?* Australian Commodities vol 9 (3) p 495-500.

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