Design Requirements

DESN 24427 Design Strategy & Computation

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After writing context scenarios, how do you know what to put in wireframes?

Design Requirements

The what of the interaction

- Design requirements **formally describe the what** of an interaction (e.g. inputs/outputs)
  - **Requirements:** describe a need from the PoV of the user
    (ex. They take a photo of the recipe so they can refer to it later)
- We begin by remaining focused on the '**information** and **capabilities** our personas **require**'
- We do this **before defining** 'how the product looks, behaves, operates, and feels'
- We need to **resist the temptation to jump to solutioning** at this phase

Cooper, Alan. *About Face: The Essentials of Interaction Design*. John Wiley and Sons, Incorporated, Indianapolis, Indiana, 2014.

Solutioning too early leads to…

- Endless iteration
- Disagreements on subjective issues
- Not knowing what the exact problem is
- **Why is this bad?**

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Project requirement documents

Other documentation you may see in industry during a project

- In **industry**, you may encounter documents like:
  - Marketing Requirements Documents (MRDs)
  - Project Requirements Documents (PRDs)
- These are **not design documents**, they:
  - **Are not** based on research and personas
  - **May not** define the actual goals and/or problems to solve
  - Often **presuppose** inappropriate solutions

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Design Requirements are not features

- They define what your product will do **before** you design how the product will do it
- We are defining the **needs our product must satisfy** and the **benefits sought**
- They are **often confused** because they are very similar, but the key **differentiator** is the **language** used
  - **Requirements:** describe a need from the PoV of the user
    (ex. They take a photo of the recipe so they can refer to it later)
  - **Features:** describe a specific functionality of the product/device
    (ex. A photo is taken with the built-in camera and stored in Google Photos)

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Are the following features or requirements?

1. Feature or Requirement?

Uses Google maps to find your location.

Feature: set of related requirements to satisfy customer need

Requirement: capability to satisfy customer need

2. Feature or Requirement?

Knows where you are located when you open the app.

Feature: set of related requirements to satisfy customer need

Requirement: capability to satisfy customer need

3. Feature or Requirement?

Allows you to save your information in an account

Feature: set of related requirements to satisfy customer need

Requirement: capability to satisfy customer need

4. Feature or Requirement?

Sign in to the application with your Google account

Feature: set of related requirements to satisfy customer need

Requirement: capability to satisfy customer need

Phrasing our requirements this way is important because it **makes sure we put the focus on creating the best possible experience for our personas,** rather than assuming an existing function will work.

How to we generate our design requirements?

Pull features from context scenario

Step 1

- Refer back to your **context scenario**
- Go through them and **highlight** every instance where you listed a **feature** instead of a **requirement**
- **Revise the wording** to make sure it describes a feature
- Make a **list** of all of your '**requirement phrases**'

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A sample context scenario

The following is the first iteration of a context scenario for a primary persona for a personal digital assistant (PDA) type phone, including both the device and its service. Our persona is Vivien Strong, a real-estate agent in Indianapolis, whose goals are to balance work and home life, close the deal, and make each client feel like he or she is her *only* client.

Here is Vivien's context scenario:

1. While getting ready in the morning, Vivien uses her phone to check her e-mail. Because it has a relatively large screen and quick connection time, it's more convenient than booting up a computer as she rushes to make her daughter, Alice, a sandwich for school.

2. Vivien sees an e-mail from her newest client, Frank, who wants to look at a house this afternoon. The device has his contact info, so she can call him with a simple action right from the e-mail.

3 While on the phone with Frank, Vivien switches to speakerphone so she can view the screen while talking. She looks at her appointments to see when she's free. When she creates a new appointment, the phone automatically makes it an appointment with Frank, because it knows with whom she is talking. She quickly enters the address of the property into the appointment as she finishes her conversation.

4 After sending Alice to school, Vivien heads into the real-estate office to gather some papers for another appointment. Her phone has already updated her Outlook appointments, so the rest of the office knows where she'll be in the afternoon.

5 The day goes by quickly, and eventually Vivien is running a bit late. As she heads toward the property she'll be showing Frank, the phone alerts her that her appointment is in 15 minutes. When she flips open the phone, she sees not only the appointment, but also a list of all documents related to Frank, including e-mails, memos, phone messages, and call logs to Frank's number. Vivien initiates a call, and the phone automatically connects to Frank because it knows her appointment with him is soon. She lets him know she'll be there in 20 minutes.

Break the requirement into components

Step 2

- Design requirements can be broken into **three parts**:
  - **Objects**: people, products, attributes
  - **Actions**: the “doing” of an activity by an **object** to another object
  - **Contexts**: the situation in which the **action** is taking place
- These parts also help us create a **mental model for coding**
- Take **one item** from your list of requirements
- **Highlight** the objects, actions, and contexts **in different colours**
- Capture this information in a **table** (see next slide for example)

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Design Requirements	**Object** (and properties)	**Action**	**Context**
Take from your list	*List the name and properties required for each object.*	*Describe what the objects need to do.*	*Describe how/where objects or actions must be able to interaction*
Alok calls their **spouse directly from the text conversation**	**Alok:** • Cell # • IMEI # • Sim # • Location **Spouse:** • Name • Cell # • Office # • Email • WhatsApp • Age • Birthday • Location • Photo • Anniversary • Relationship to Norm	**Call:** create a connection between the user's mobile device and another **contact** to transmit real-time audio over a cellular network. The devices are connected using the '**phone number**' property	**directly from the text conversation:** user must be able to access a **contact**' '**phone number**' property within a text message thread

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Let’s break down some examples as a class in Mural:

To learn more

Check out these resources

- **About Face, 4th Ed.** (book)
  - eBook available thru library here: https://tinyurl.com/y6a6cf47