

# Assignment 7

## 1: Preparing user test & simulations

### Step 1: Determine which aspect(s) you need to test

#### My Design Challenge:

(copy from week 4)

I want parents to stop worrying about the noise they make around their newborn because part of their ritual is prolonged or eliminated to keep the baby asleep.

#### What to test?

- Human Factors  
(ergonomics, can the user understand and operate your product)
- Aesthetics  
(does the user like the design of your product)
- Technology  
(does the solution work)
- Business  
(how much would the product cost, where will it be sold)

#### Why do you want to test this?

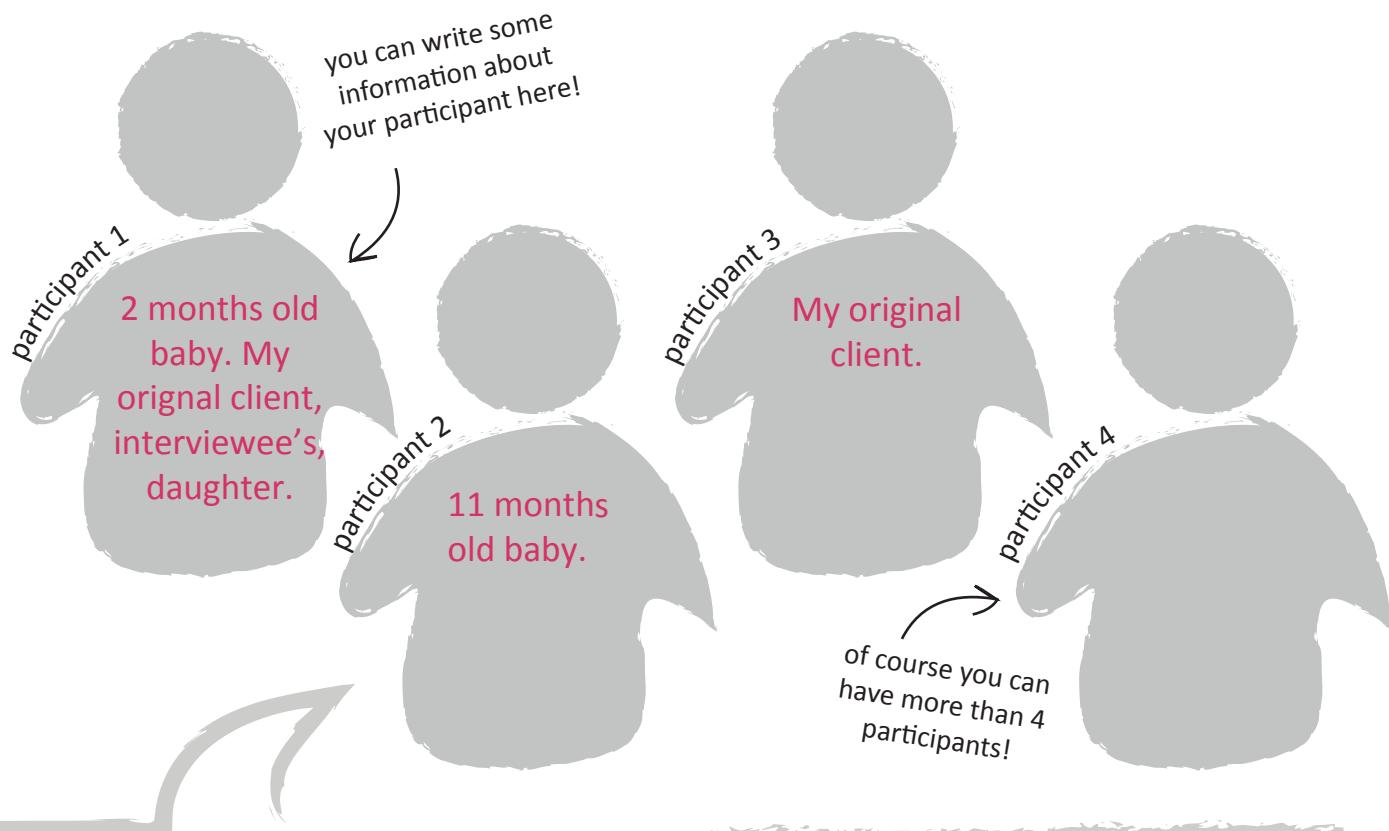
It would have been great to test all four aspects, but aesthetics and technology are readily testable with my resources and time constraint.

#### Formulate each aspect you want to test as a question:

- Is it easy to handle?
- Which materials are easy to shape?
- How to color the prototype?
- Should the prototype include software?
- What are the electric components required?

# 1: Preparing user test & simulations

## Step 2: Determine how you want to perform your test



I'm going to perform my test in the following way:

### Aesthetics

Parents will give their baby the prototype when she wakes up from sleep. Also, the baby will be provided with the prototype along with other toys or similar to compare and observe the interaction.

### Technology

I will perform a limited test that proves how easy it's to implement the electric part of the product. I will use one RGB LED that changes color randomly. Additionally, I will create simple sounds by feeding pulses to a speaker. The speed of color change and type of sound will vary by press of a button.

# EXTRA: Prototyping

## Step E.1: Make a step-by-step plan for building your prototype

• Blade

• Pen

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**TOOLS**

• Soap

• Oil color

• Wires

• RGB LED

• Speaker

• Microprocessor

• Resistors

• Push button

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**MATERIALS**



1. Carve soap to a curved 1x4x8 cm solid

2. Sketch the outline

3. Color the soap

4. Draw circuit diagram

5. Test on software

6. Upload source code on microprocessor

7. Connect components on breadboard

8.

9.

10.

**STEP-BY-STEP PLAN**

## 2: Testing

### Step 1: Plan your test

#### Questions to ask during test

##### 1: Form

- What did you like of the design?
- How could the design be improved?

##### 2: Baby

- How long did the baby interact?
- What was the effect on baby?

##### 3: Parents

- Did the product distract/engage the baby?
- Did it save you time?
- How much of a help do you see regarding an awoken baby?

##### 4:

##### 5:

#### Instructions for my participants:

- When your baby wakes up provide with the prototype.
- Play music from smartphone.
- Make sure the baby doesn't put it in her mouth.

#### Tips for the structure of your test

##### General

- > Capture the feedback and insights you get by taking pictures and notes.

##### Observing

- > Try not to interrupt your participant unless they can't continue using the product without you intervening.

- > Ask your participants to elaborate and to clarify interesting things you saw during your observation.

##### Interviewing

- > Try to ask general questions first and gradually become more specific.

- > Ask open-ended questions and try to avoid simple yes-or-no answers.

## 2: Testing

### Step 3: Write down your conclusions

#### What worked well?

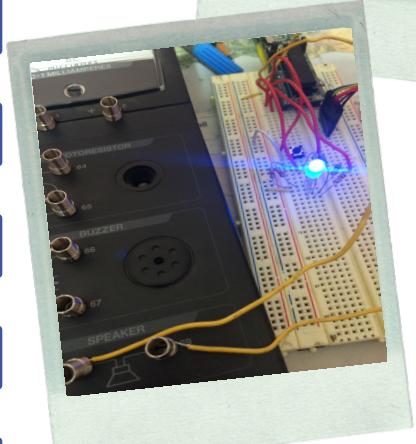
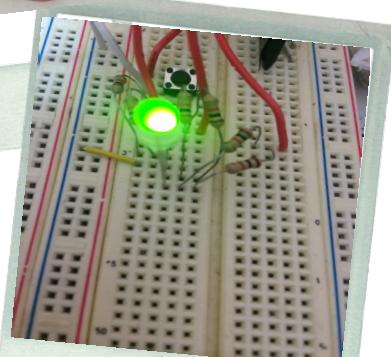
- The product is technologically feasible.
- The shape and size was good for the 11 months old baby.

#### What didn't work well?

- The 2 months old wasn't engaged as much.
- Babies tend to eat the prototype, misinterpretation.



you can add some photo's of your test here!



#### What can be improved?

- Full LEDs.
- Built-in music player.
- Built-in battery.
- Complete form with rubber exterior, transparent plastic cover above LEDs, buttons, light sensor.