



# Week 4: Heuristics and Evaluation

Nicole Meng-Schneider

# Week 4 Feedback Form

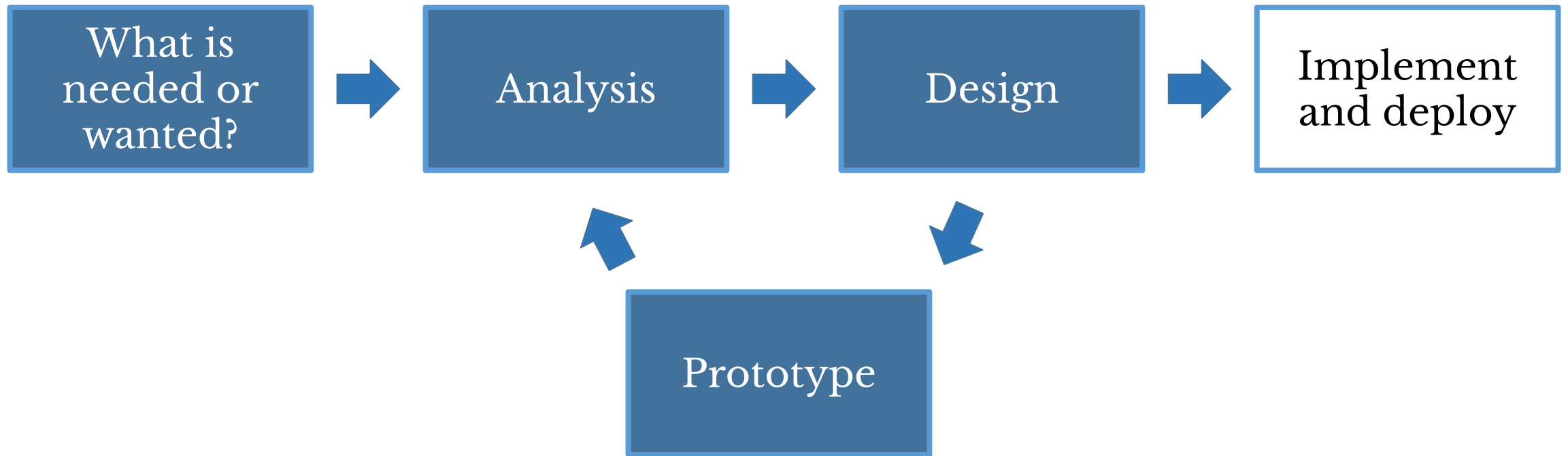


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# **Coursework: A brief note**

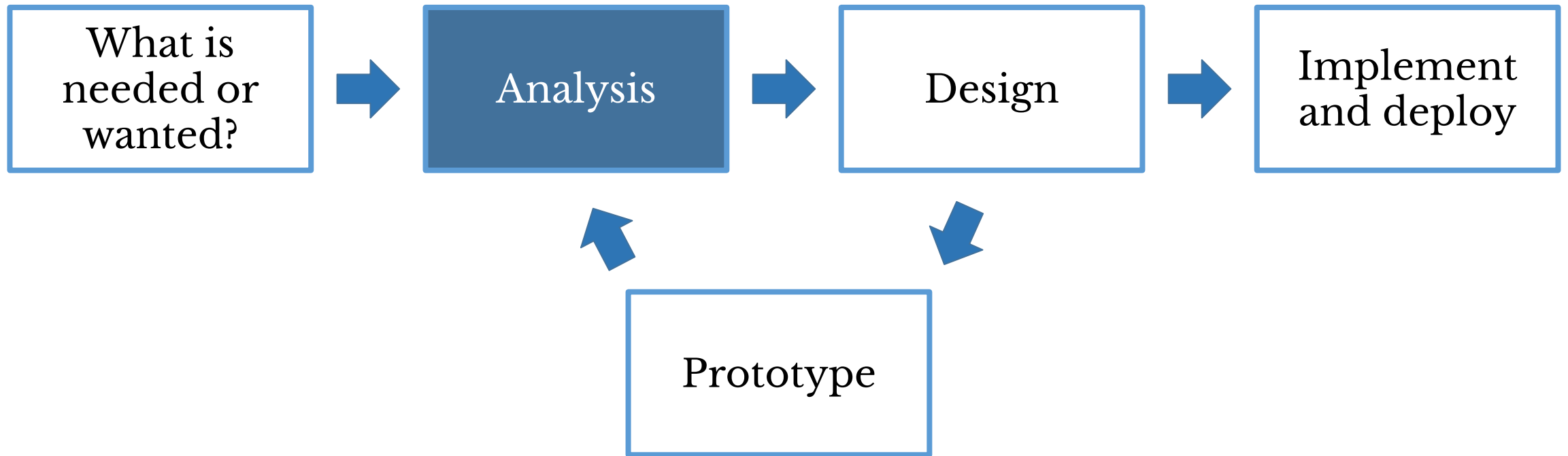
# Design Process

## Coursework 1: Initial Mockup of Learn (OpenCourse)



# Design Process

Coursework 2: Evaluate other designs and give design recommendations



# CW2: Analysis

## What do we expect?

- Evaluate TWO mockups for your clients
  - Submit TWO reports, one for each mockup
- For each mockup:
  - Cognitive Walkthrough with the persona as a group
  - Fill out Usability Aspect Reports (UARs) while you do it
    - 4 UARs per group member
    - At least one positive and one negative per group member
  - Report your findings to your clients (use template)

# Heuristics

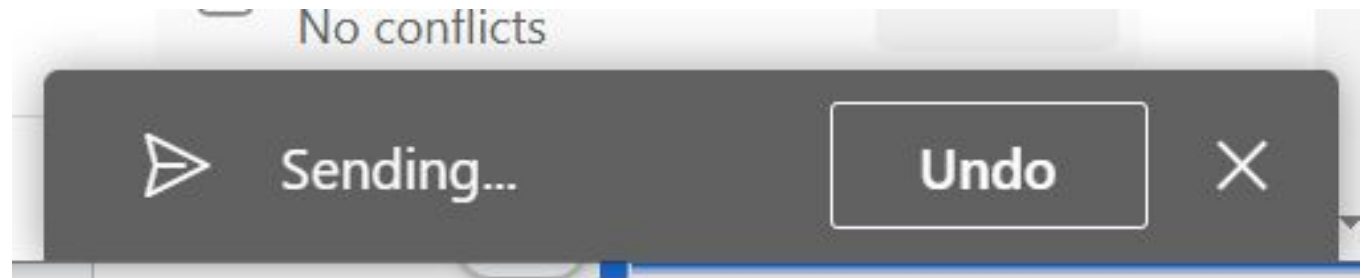
# Nielsen's Heuristics for improving usability

- 1: Visibility of System Status
- 2: Match Between the System and the Real World
- 3: User Control and Freedom
- 4: Consistency and Standards
- 5: Error Prevention
- 6: Recognition Rather than Recall
- 7: Flexibility and Efficiency of Use
- 8: Aesthetic and Minimalist Design
- 9: Help Users Recognize, Diagnose, and Recover from Errors
- 10: Help and Documentation



# 3: User Control and Freedom

- Always have a way out
  - Undo
  - Exit
  - Cancel
  - Beware of keyboard traps for users with only a keyboard
- Adjustability
  - Sound
  - Display
  - Input



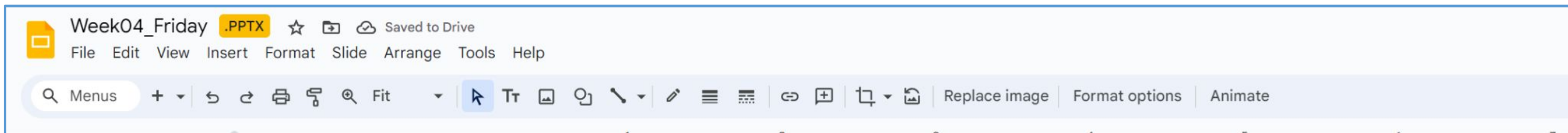
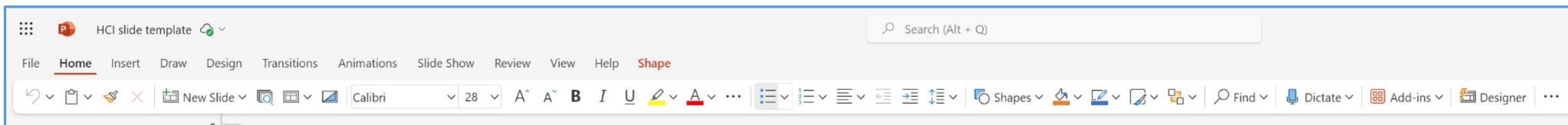
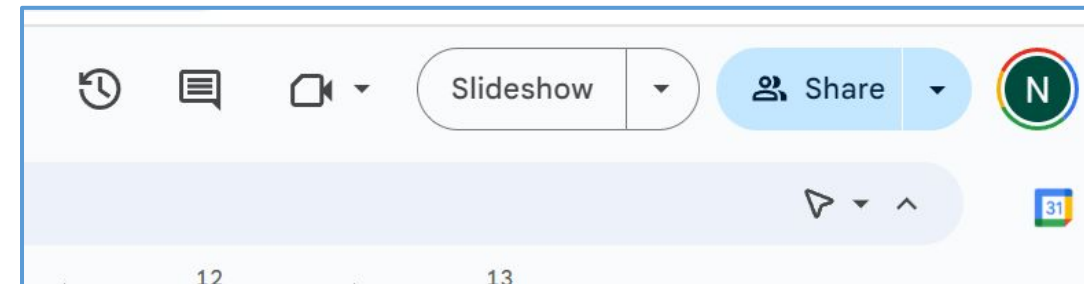
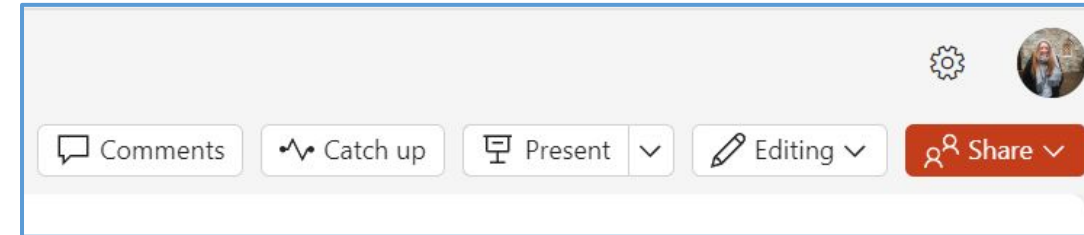
Screenshot of Outlook



Screenshot of settings of Piano Kids App

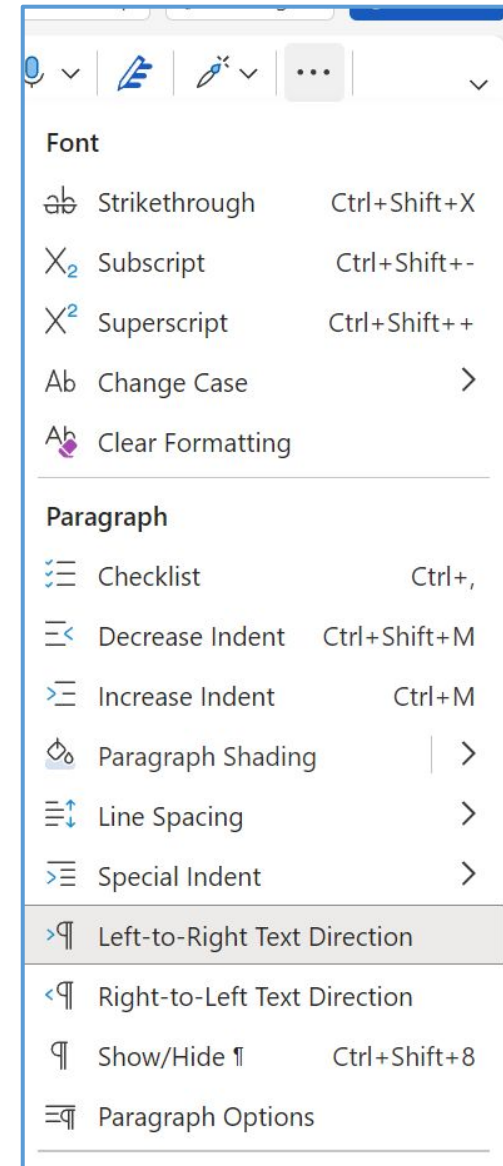
# 4: Consistency and Standards

- When things look and the behave the same, we know what to expect.
- We need less mental capacity if things are similar
- Makes it easier to use new interfaces



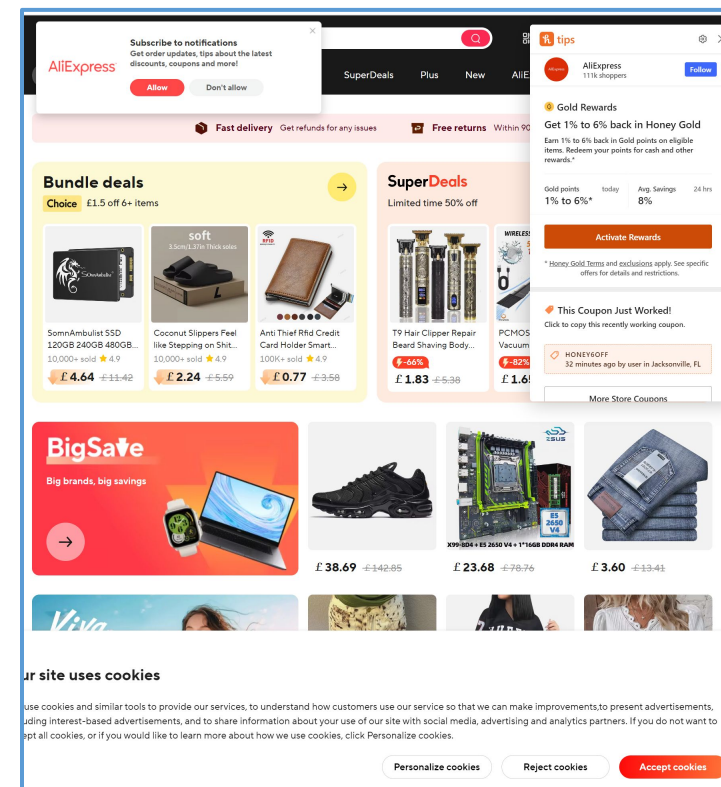
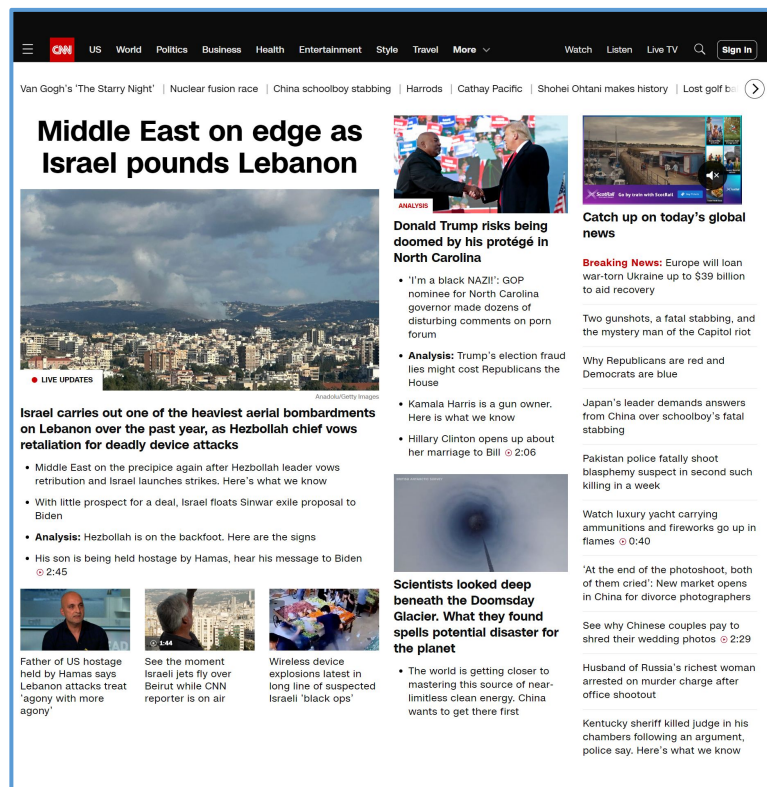
# 7: Flexibility and Efficiency of Use

- Make it work for different abilities and needs
  - Expert User vs Novice
- Offer multiple ways to accomplish popular options
  - e.g. keyboard shortcuts
  - List options but offer search



# 8: Aesthetic and Minimalist Design

- Principle is not about making something pretty.
- It's about clutter.
- Clutter on a page makes it hard to use. Having too many options or functions makes it hard to users to find which one they need/want



# Design Evaluation

## We iterated over our design. Why do we need to evaluate it???

- Verify that the design works in its final state
- Check that it fulfils all design requirements
- Ensure that it's “usable”
- Could test entire system or only part of it

**The evaluation method is based on the questions or goals you want to address.**

> Evaluation design depends on what you want to know

# Example: The Friendship Explorer


## The project

- Educational game for children with Autism (age 7-12)
- Tablet-based interface
- Simulations of social interactions, mainly dialogues.



# Example: The Friendship Explorer

## The project

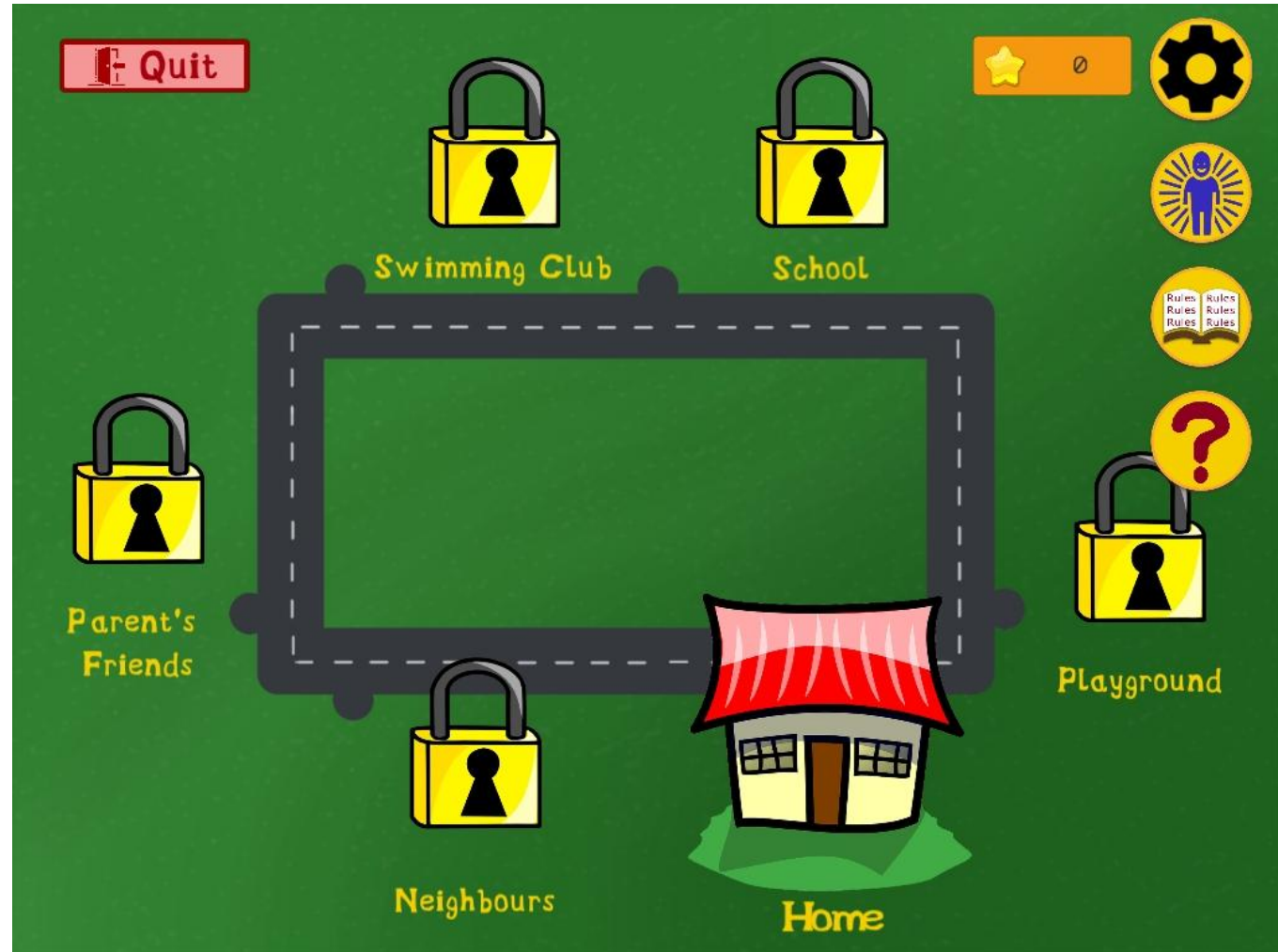


The screenshot shows the title screen of a game called "The Friendship Explorer". At the top left is a small house icon with a red roof. To its right, the title "The Friendship Explorer" is written in green. Below the title, it says "Choose your avatar." and shows two character avatars: a boy with brown hair and a girl with blonde pigtails. Underneath the avatars, it says "Please enter your name and age." followed by two input fields. The first field is labeled "Name:" and contains the placeholder text "Enter username...". The second field is labeled "Age:" and contains the placeholder text "Enter age...". At the bottom center is a large orange button with the word "PLAY" in black capital letters.



# Example: The Friendship Explorer

## The project



# Example: The Friendship Explorer

## The project



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# Example: The Friendship Explorer

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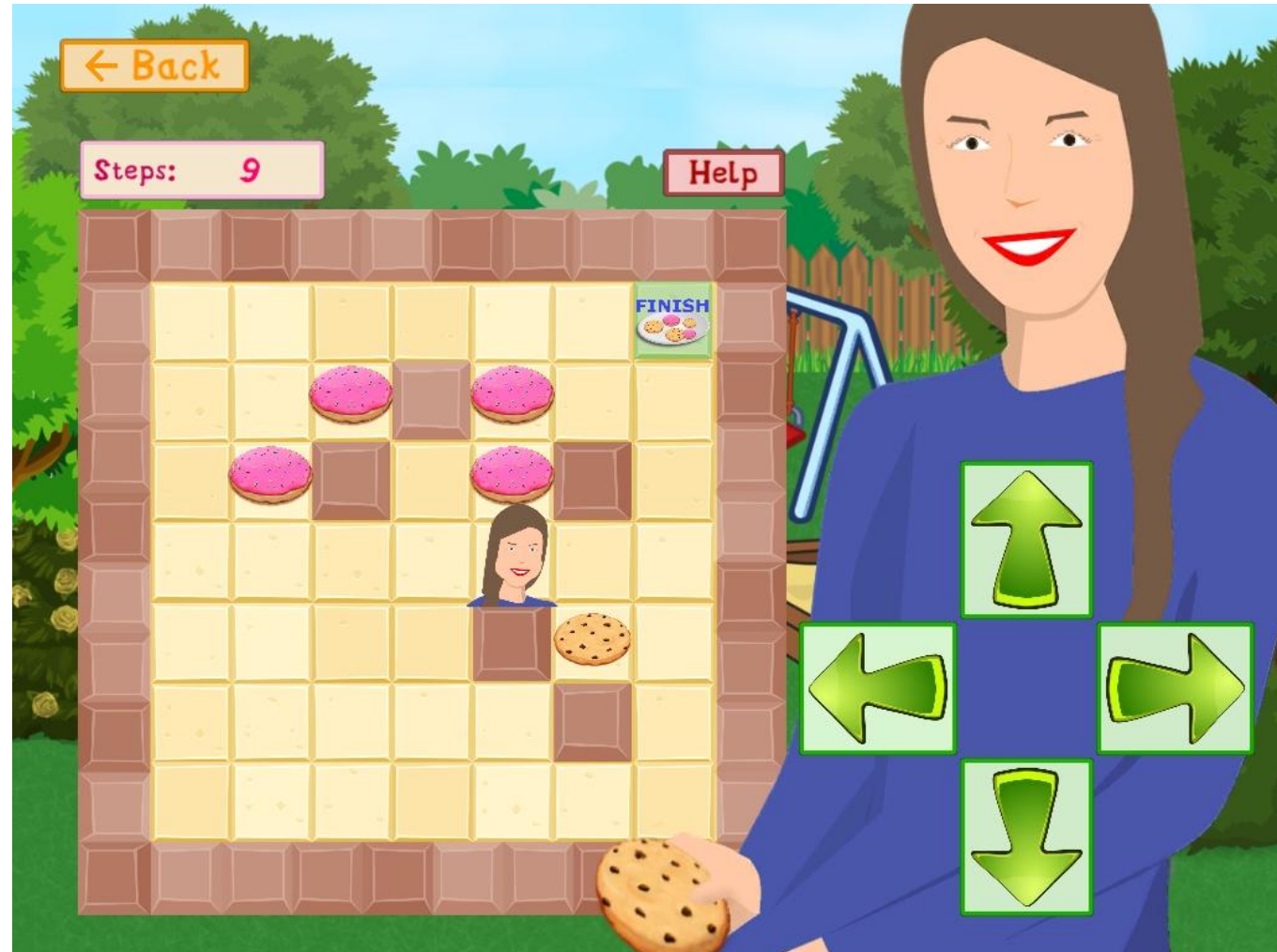
# Example: The Friendship Explorer

## The project



# Example: The Friendship Explorer

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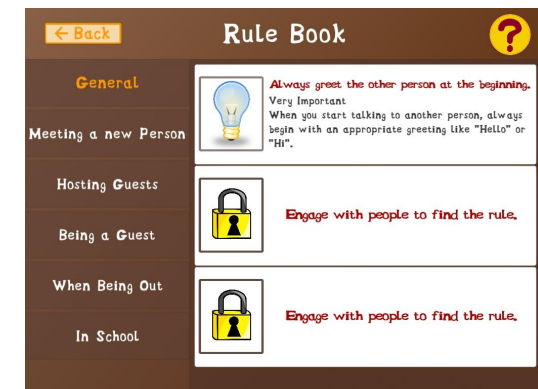
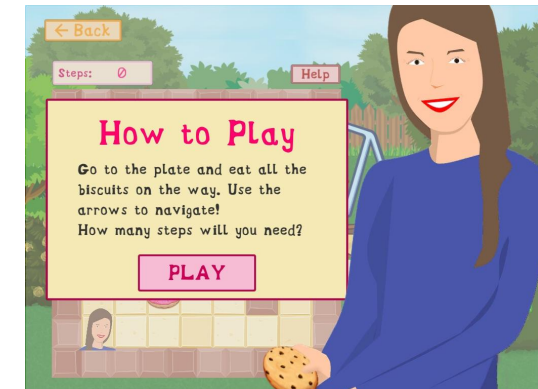
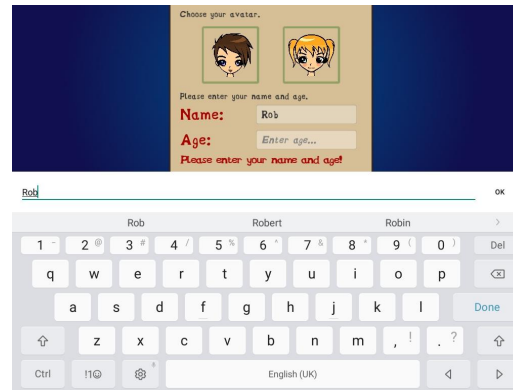
## The project





# Example: The Friendship Explorer

## The project



# Example: The Friendship Explorer

## The project

- Educational game for children with Autism (age 7-12)
- Tablet-based interface
- Simulations of social interactions, mainly dialogues.
- Positive reinforcement through rewards and continues motivation through minigames
- Design iterations with feedback from Autism and HCI experts as well as typically developing children



# Think – Pair – Share

How could we evaluate the game?

Think for 1 min  
Discuss with your neighbour for 5 min  
Share with the class for 5 min

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# Example: The Friendship Explorer

## The evaluation

- What could we evaluate for?
  - suitability for autistic children
  - effectiveness
  - usability
  - heuristics
  - ...

# Example: The Friendship Explorer

## The evaluation

- What could we evaluate for?
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Design  
Requirements

# Example: The Friendship Explorer

## The evaluation

1. Post-intervention **questionnaire**
  - a. Interaction during informatics fair followed by questionnaire
2. Two rounds of evaluation workshops with typically developing children
  - a. **8 focus groups**: 2-3 children each
3. Evaluation with experts:
  - a. **Think Aloud** followed by **semi-structured interviews**
  - b. Focused on suitability for Autism and effectiveness

**Any questions?**

# Week 4: Heuristics and Evaluation

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# Lecture Structure

Nicole:

1. Recap of heuristics 5min
2. look at the more confusing ones 10min
3. Recap: Why are we evaluating? 5min
  - a. Example: the Friendship Explorer (15min)