Experiment -2

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Design a UI where users recall visual elements (e.g., icons or text chunks). Evaluate the effect of chunking on user memory.

EXPERIMENT: VISUAL MEMORY RECALL USING "SPOT THE DIFFERENCE" GAME

Objective:
Design a UI where users recall visual elements and evaluate the effect of chunking on user memory using a game-based approach.

FRAME 1: INTRODUCTION PAGE

Analysis of the Introduction Screen

This screen introduces the user to the **Memorial Task – Spot the Difference game** and sets the cognitive context for the experiment.

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1. Purpose of the Screen

- Introduces the concept of visual memory recall.
- Explains that the task is based on spotting differences between images.
- Prepares users for a memory-based activity.

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2. Chunking Strategy Applied

- Information is divided into **short paragraphs** instead of long text.
- Key ideas such as *game objective*, *memory focus*, and *chunking concept* are clearly separated.
- This reduces cognitive load and improves comprehension.

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3. Visual & UX Design

- Simple background with minimal distractions.
- Clear heading **"Memorial Task"** draws attention.
- "NEXT" button provides clear navigation to the next stage.

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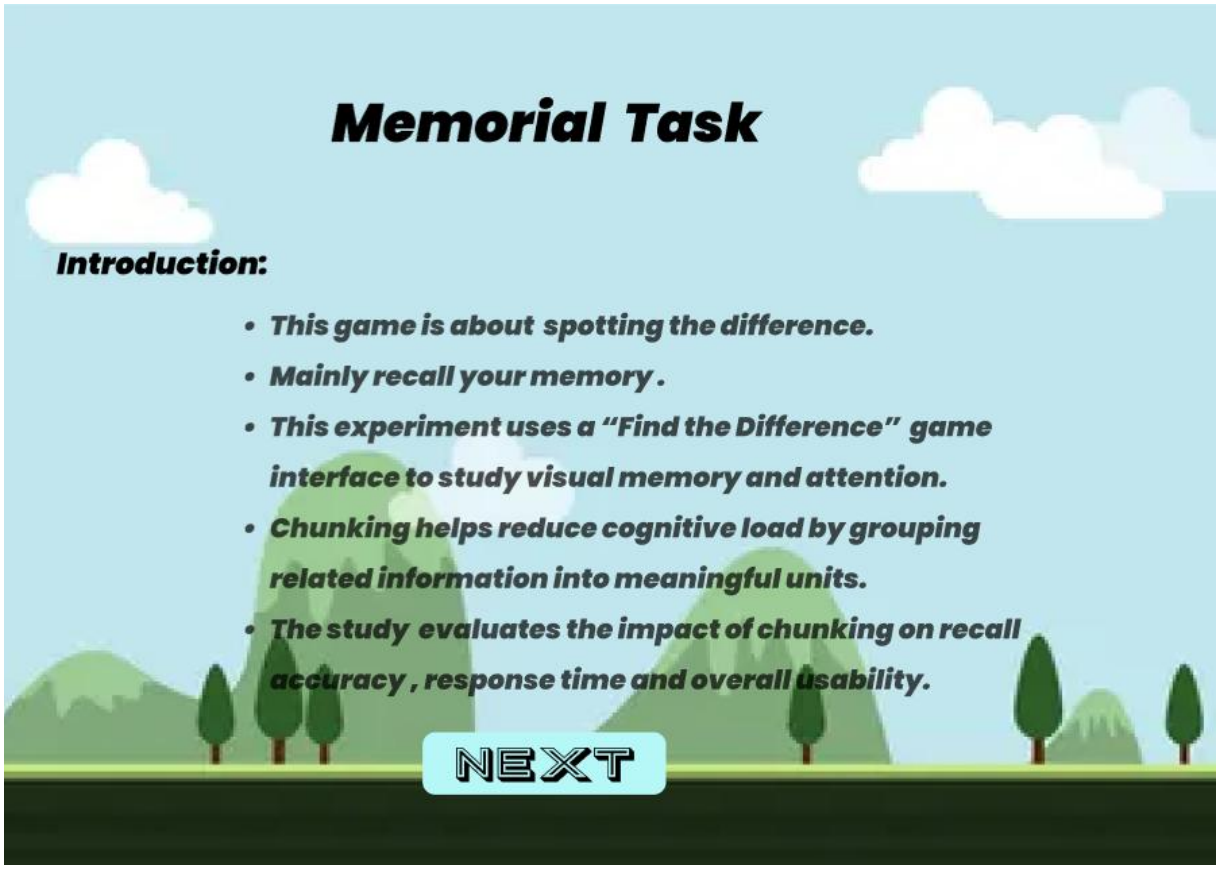
4. Cognitive Benefit

- Gradual introduction helps users understand the task before performing it.
- Chunked explanation improves information retention.



FRAME 2: INSTRUCTION PAGE

Analysis of the Instruction Screen

This screen provides step-by-step instructions for playing the Spot the Difference game.

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1. Purpose of the Screen

- Guides users on how to perform the task correctly.
- Sets clear rules to avoid confusion during gameplay.

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2. Chunking of Instructions

- Instructions are presented as **bullet points**.
- Each bullet focuses on a **single action**:
    - Observe images carefully
    - Find differences
    - Click on changed elements
    - Accuracy over speed

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3. Visual Hierarchy

- Instructions are placed centrally for readability.
- "START" button is highlighted to indicate the next action.

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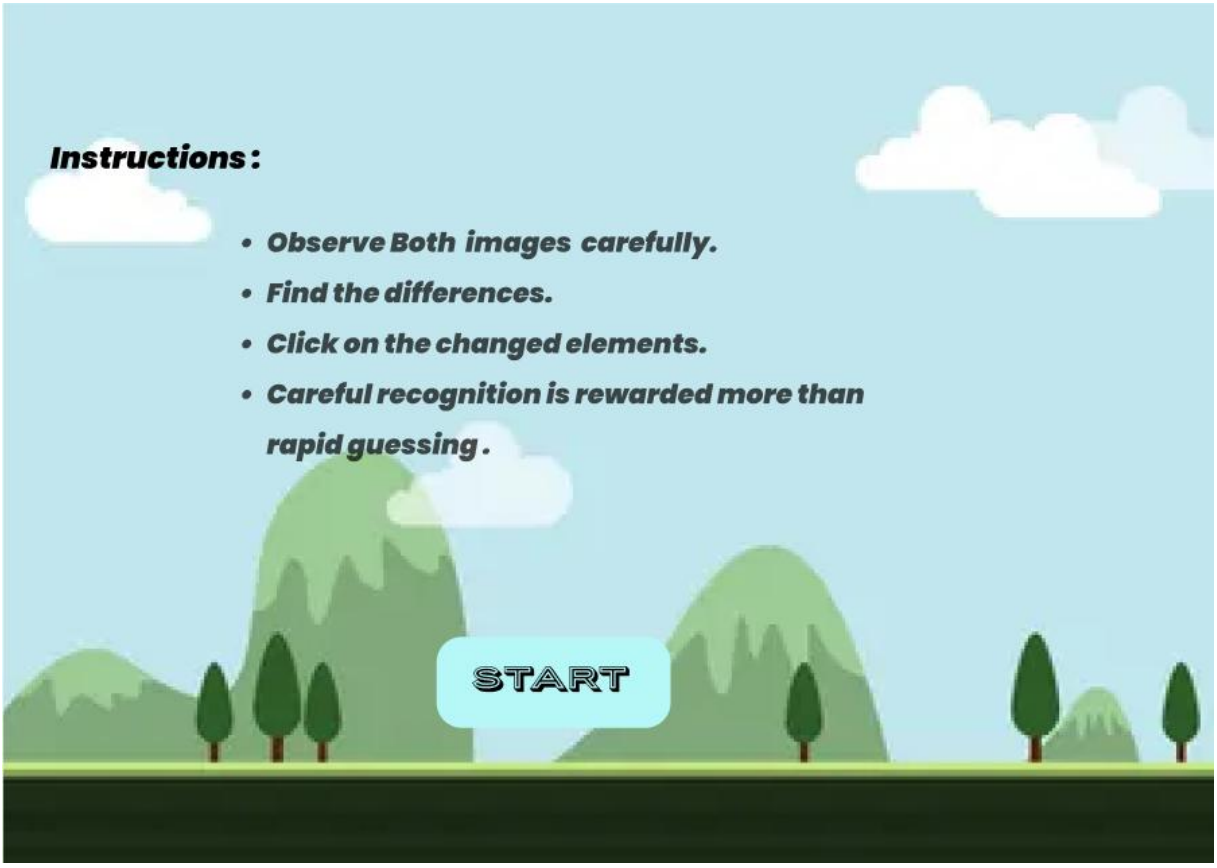
4. Cognitive & UX Benefits

- Chunked instructions reduce mental effort.
- Clear sequencing improves task execution.



FRAME 3: GAME SCREEN – OBSERVATION PHASE

Analysis of the Spot the Difference Game Screen

This screen represents the **visual encoding phase**, where users observe two similar images.

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1. Purpose of the Screen

- Allows users to observe and memorize visual elements.
- Users begin forming mental representations of the scene.

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2. Chunking in Visual Design

- Images are placed **side by side**, enabling easy comparison.
- Visual elements are grouped naturally (furniture, toys, decorations).
- This grouping helps users remember elements as **chunks** rather than individual objects.

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3. Interactive Elements

- "GO" button indicates transition to recall phase.
- Clean layout avoids unnecessary distractions.

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4. Cognitive Benefit

- Chunked visual layout supports short-term memory encoding.
- Enhances pattern recognition and spatial memory.

FRAME 4: RECALL PHASE

Analysis of the Recall Screen

This screen tests the user's ability to recall and identify differences.

1. Purpose of the Screen

- Evaluates visual memory retrieval.
- Users actively recall previously seen differences.

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2. Chunking Strategy

- Differences are placed within related areas of the image.
- Users recall changes by focusing on grouped regions.

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3. Interaction Design

- Users click on detected differences.
- “SUBMIT” button finalizes their recall choices.

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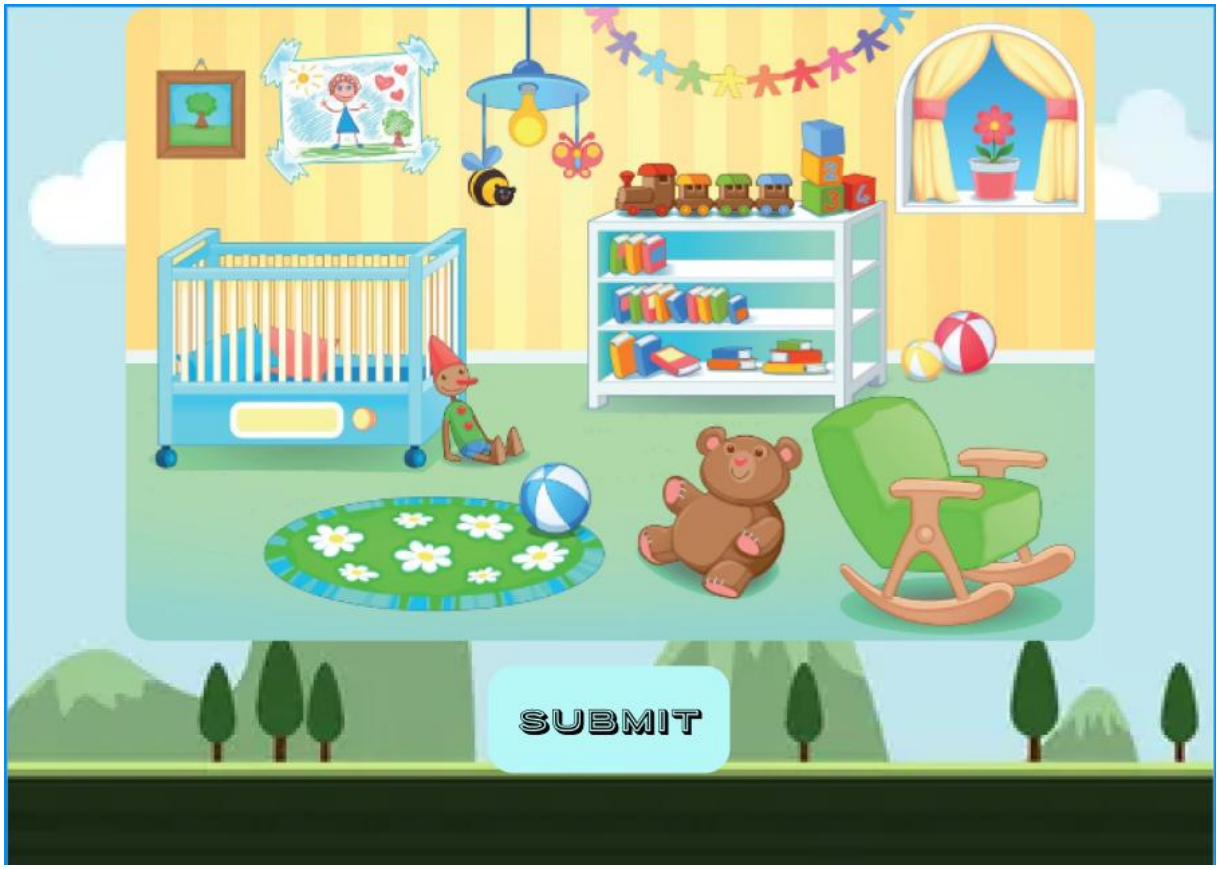
4. Cognitive & UX Benefits

- Encourages accurate recall rather than guessing.
- Tests effectiveness of chunked memory storage.



FRAME 5: FINAL SCORECARD

Analysis of the Scorecard Screen

This screen provides feedback on the user’s performance.

1. Purpose of the Screen

- Displays final recall score.
- Summarizes user performance clearly.

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2. Score Presentation

- Score shown as **5/6**, indicating correct differences found.
- A circular progress indicator visually represents performance.

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3. Feedback & Motivation

- Simple, uncluttered design focuses attention on results.
- Helps users understand how well they performed.

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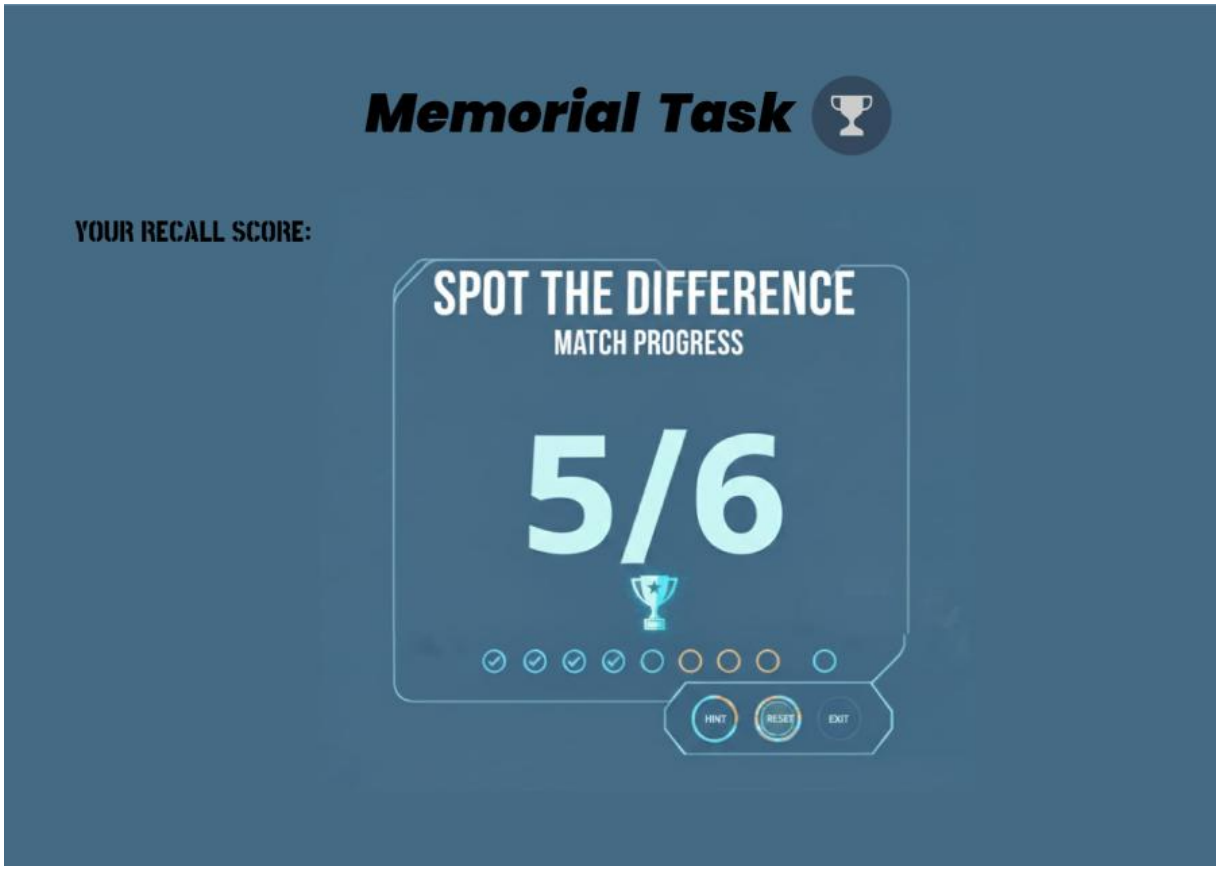
4. Cognitive & UX Benefits

- Immediate feedback reinforces learning.
- Visual score representation improves result comprehension.



PROTOTYPE LINK:

https://www.figma.com/proto/XoW9CVmWxC7spY5R2mT387/Memorial-Task?node-id=7-10&t=W050shToA6kQWp6l-0&scaling=scale-down&content-scaling=fixed&page-id=0%3A1&starting-point-node-id=7%3A10