Experiment No. 2: Evaluating the Effect of Chunking on User Memory in UI Design

Aim:

To examine how chunking (grouping visual elements such as icons or text) affects users' ability to recall information in a UI environment designed in Figma.

Procedure:

Step 1: Setting Up the UI in Figma

1. **Create a Home Screen (Instruction Page)**

   o Open Figma and create a **new frame** (1024x768px for desktop view).

   o Add a **heading**: "Memory Recall Task."

   o Provide **instructions** explaining that users will view grouped icons/text and recall them later.

   o Create a **Start button** using a rectangle and link it to the next screen using Figma's **Prototype feature**.

2. **Chunking Phase (Display Chunked Items)**

   o Create a **new frame** to show the items users will memorize.

   o Design two versions:

      ▪ **Chunked Design:** Group icons or text into 3-5 item clusters using boxes.

      ▪ **Unchunked Design:** Display items randomly without clear separation.

   o Set up a **5-second delay** to automatically transition to the next screen.

3. **Recall Phase (User Memory Test)**

   o Create a **new frame** for recall.

   o Design two options for user input:

      ▪ **Multiple-choice selection:** Users select from a set of options.

      ▪ **Text input fields:** Users type the items they remember.

   o Add a **Submit button** to move to the results screen.

4. **Result Screen (Feedback and Analysis)**

   o Show feedback like: "You recalled 4/5 items correctly!"

   o Record user performance based on the number of correct answers.

- o Compare results for chunked vs. unchunked groups and icons vs. text-based chunks.
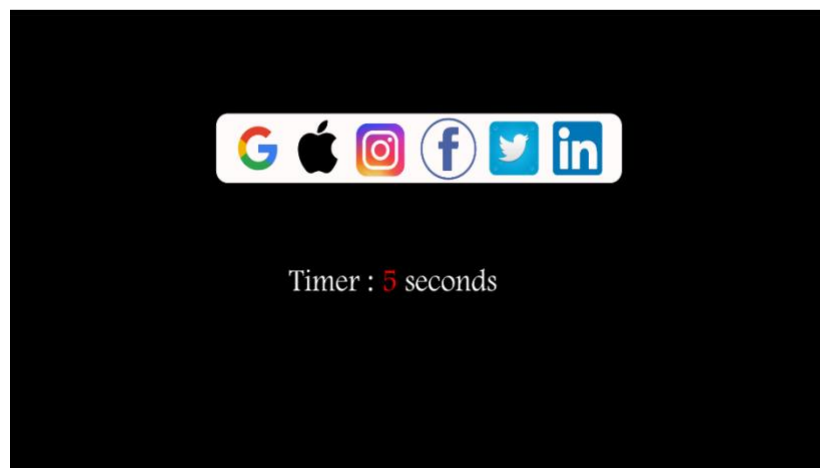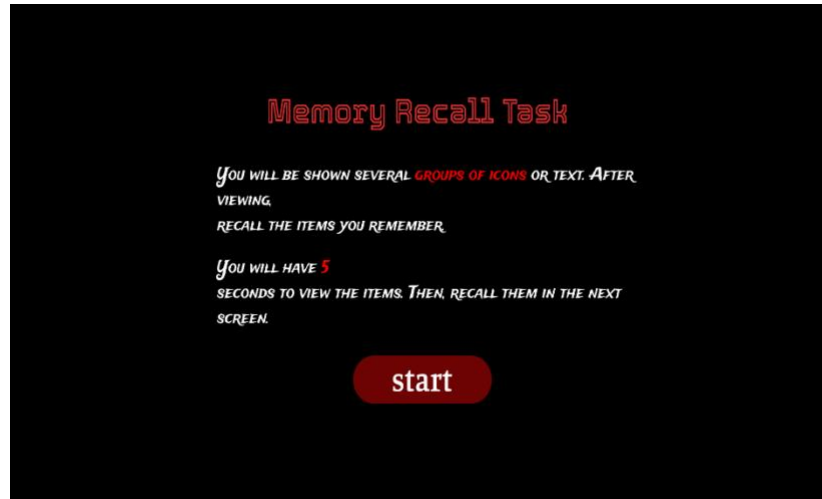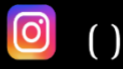
Output

select the item you remember

G ( )   (f) ( )   in ( )

(instagram) ( )   (twitter) ( )   (apple) ( )

Submit

You have recalled 4/5 items correctly

Next

Results:

Users recalled chunked items better than unstructured ones, with icons being more memorable than text. The optimal chunk size was 3-5 items, as recall dropped beyond this. Multiple-choice input was easier, but text input led to better memory retention.

Link:
https://www.figma.com/design/AUyGUUj8zYPpyhXI8z2mOz/Untitled?t=wDnJ36jgUX4wmRRq-1