

NeuroKeya Manual

by Nobaiha Rayta

Table of Contents

| | |
|--|----|
| Introduction..... | 2 |
| About the mini games..... | 2 |
| How to Play | 3 |
| Game 1 – Name the Person or Object | 5 |
| Game 2 – Sort the Groceries..... | 7 |
| Game 3 – Match Sounds to Pictures..... | 8 |
| Game 4 – Simple Puzzle | 10 |
| Game 5 – Odd One Out..... | 11 |
| Game 6 – Follow the Pattern | 13 |
| Contact Info..... | 14 |

Introduction

NeuroKeya is a customizable cognitive training mini-game application designed to support individuals living with dementia, as well as those recovering from head trauma, stroke, or other forms of cognitive impairment. The app features a multilingual interface with support for 66 languages, making it accessible to users from diverse linguistic and cultural backgrounds.

NeuroKeya includes six carefully designed mini games targeting core cognitive skills such as memory, attention, categorization, sequencing, auditory processing etc. Among these, two games are fully customizable, allowing caregivers or family members to upload personal images such as familiar objects or faces, tailoring the experience to the user's unique memories and environment.

This level of personalization is key to enhancing emotional engagement and cognitive recall, making the training not only more effective but also more meaningful. Whether used at home, in care facilities, or during rehabilitation sessions, NeuroKeya provides a simple yet powerful tool to help maintain mental agility, stimulate memory, and improve the quality of life for users at any stage of cognitive decline.

About the mini games

As mentioned earlier, this application includes six unique mini games, each designed with a specific objective to target different cognitive skills. The games are:

1. *Name the Person / Object –*

This is a personalized memory game where users are shown photos of loved ones or familiar objects (uploaded by caregivers) and asked to identify them from a list of 2 - 4 choices. The goal of this game is to improve or maintain users' memory and recognition skills by identifying loved ones or daily used objects from photos, reinforcing personal connections and cognitive function.

2. *Sort the Groceries –*

This is a categorization game where users drag & drop some grocery items into their correct storage locations in a kitchen scene. This activity supports visual memory, attention, and real-life problem-solving skills.

3. *Match Sound to the Picture –*

This is a sensory recognition game where users hear a recorded sound such as a dog barking or a doorbell etc. and match it to the correct image.

This activity helps strengthen auditory processing and memory.

4. *Simple Puzzle –*

This is an interactive drag & drop game where patients complete an image by assembling puzzle pieces. Caregivers can upload family photos or familiar photos, which are then turned into customizable puzzles. The goal of this game is to support visuospatial reasoning and fine motor skill development.

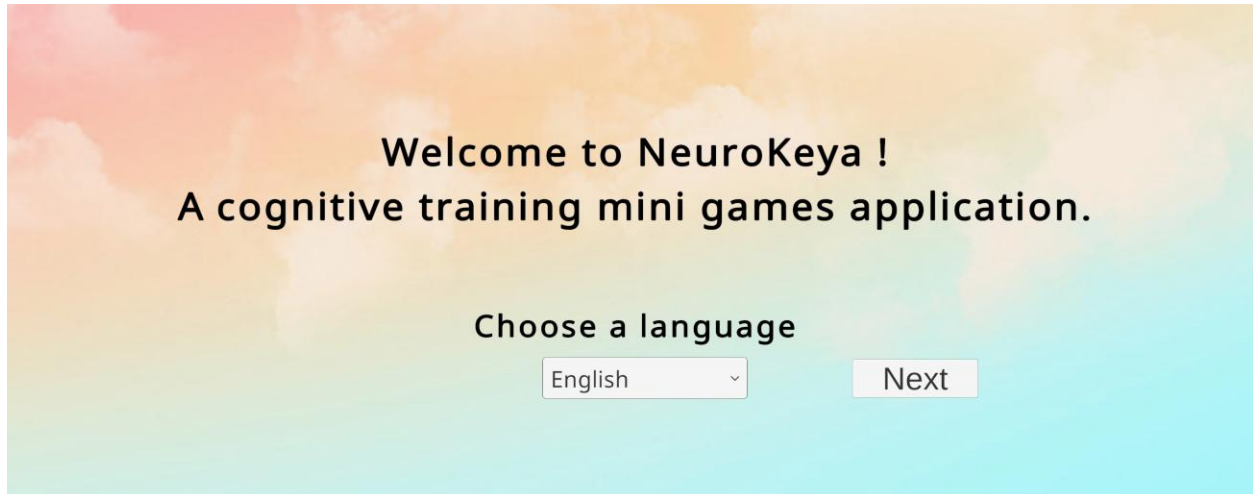
5. *Odd One Out* –

This is a visual reasoning game where users are shown a set of 3 - 4 pictures and must choose the item that doesn't belong, for example, spotting a shoe among fruits. This activity encourages categorization and logical thinking.

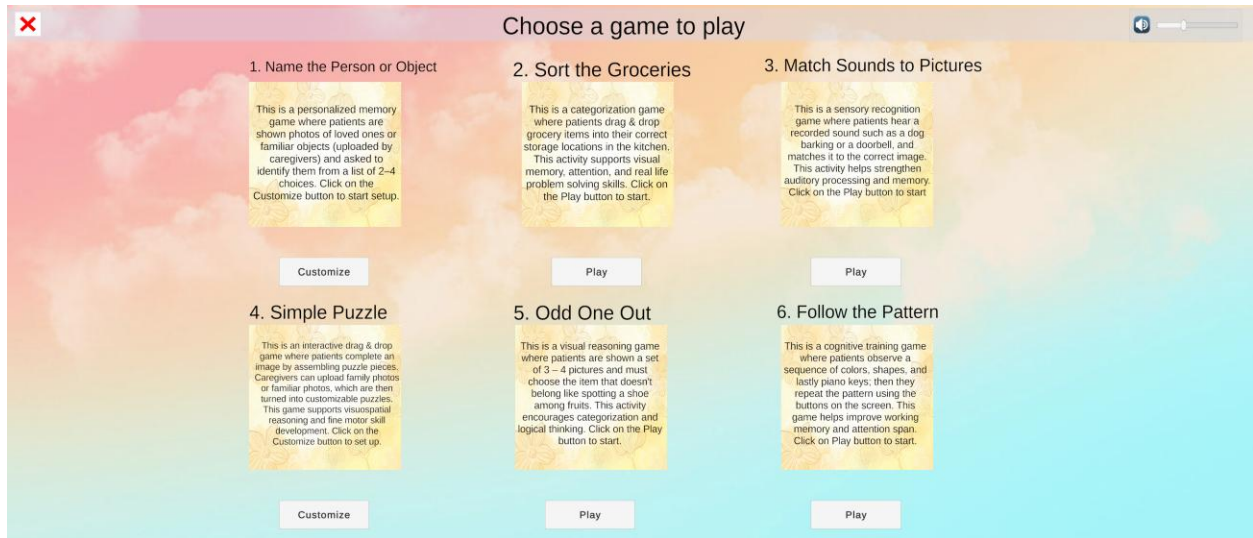
6. *Follow the pattern* –

This is a cognitive training game where users observe a sequence of colors, shapes, and lastly piano keys; then they repeat the pattern using the buttons on the screen. The game has 3 levels, and each level has few rounds where difficulty increases from Easy to Hard. This game helps improve working memory and attention span.

How to Play



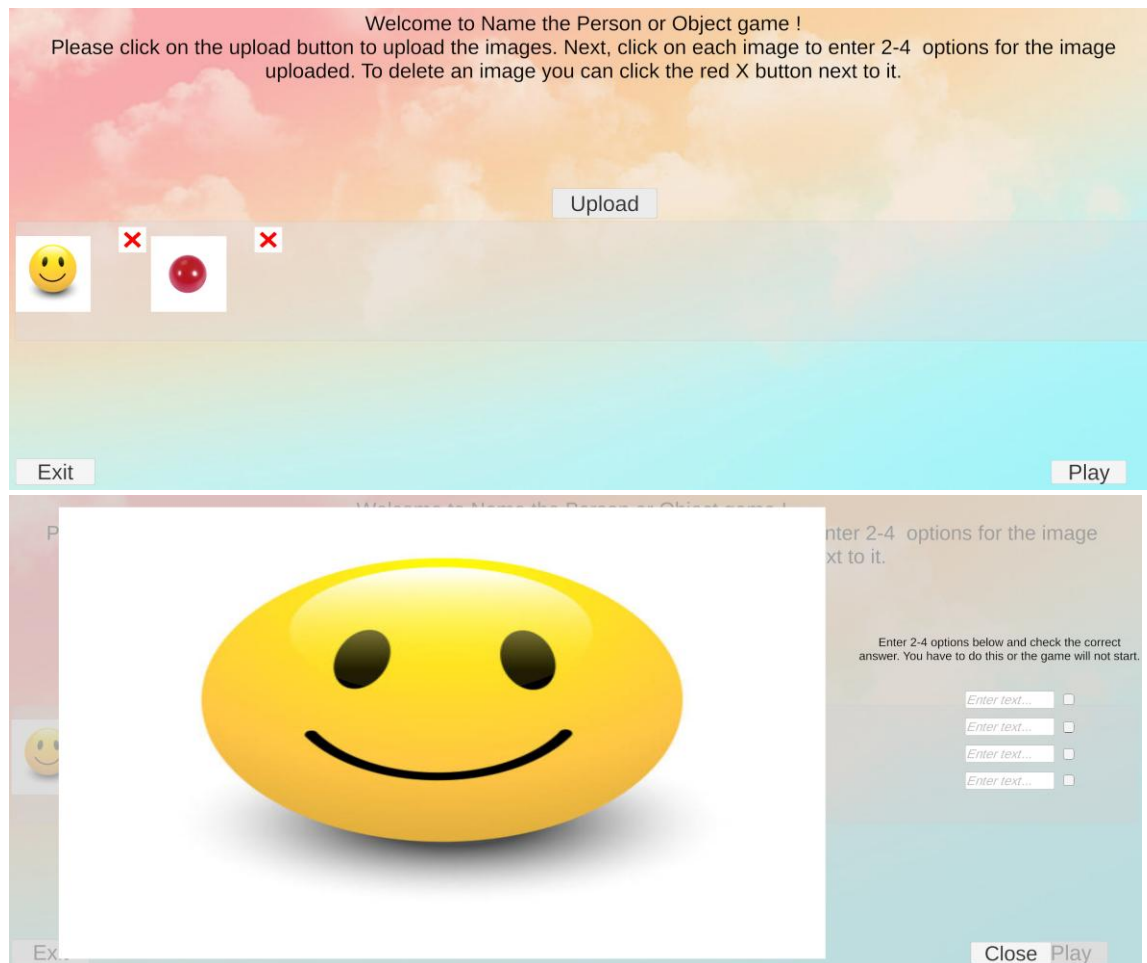
From the drop-down menu, select your preferred language. The default language is **English**. Once selected, click **Next** to proceed. To exit the application press on the **X** at the top left hand side.



The Main Menu displays all six mini-games.

- **Hover** over a game description to enlarge it for easier reading.
- The **background music controller** can be found in the top-right corner; use the slider to adjust volume.
- To start a game, click either **Play** or **Customize** (for games that allow personalization).

Game 1 – Name the Person or Object



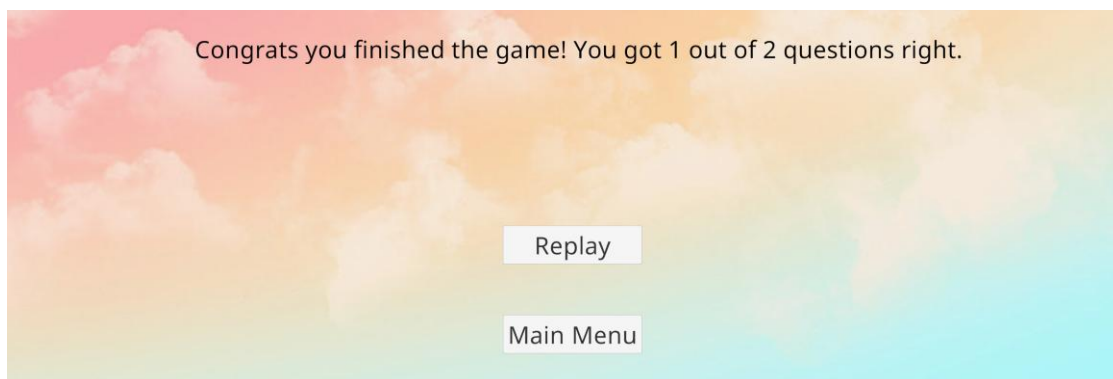
Setup:

1. Click **Upload** to add as many images as needed.
2. To remove an image, click the **X** button.
3. Click an image to:
 - o Enter name options.
 - o Mark the correct answer.The game will not start if all the steps are not completed.
4. After setting up each image, click **Close**.
5. Once setup is done, click **Play**.



Gameplay:

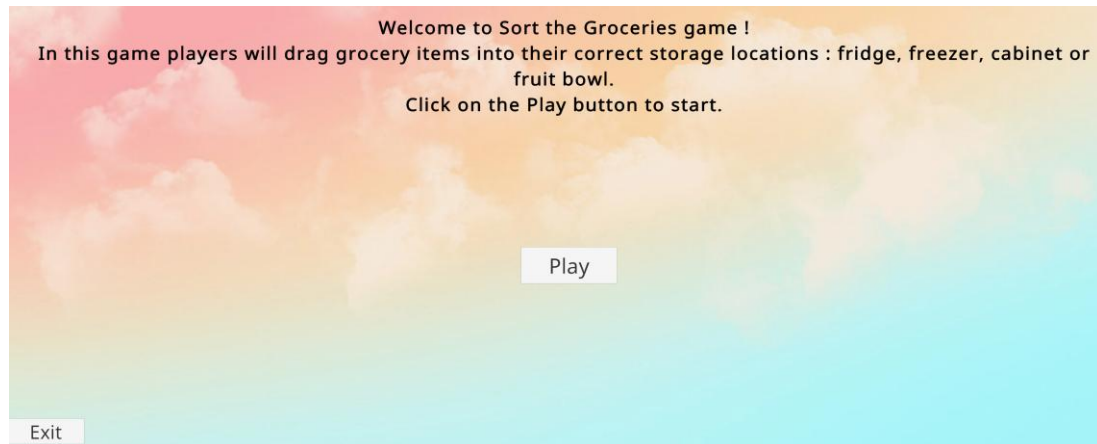
- Select an answer; your choice will be highlighted.
- Click **Next** to move to the next image.
- Click on **Exit** button to go back to the menu at any time.



Results:

- At the end, a results screen shows the number of correct answers.
- Choose **Replay** or **Return to Main Menu**.

Game 2 – Sort the Groceries



Setup:

- Read the welcome screen instructions.
- Click **Play** to start.



Gameplay:

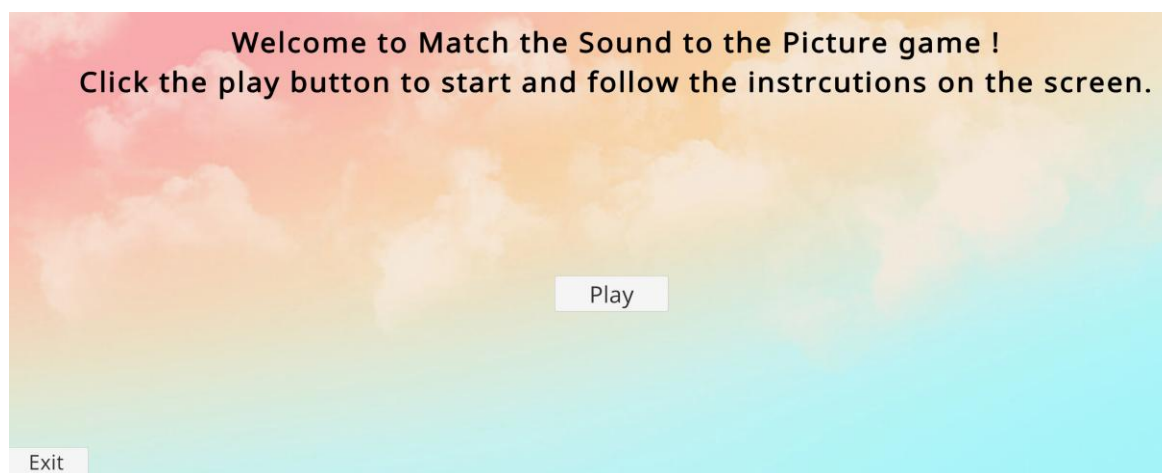
- Grocery items are displayed on the table.
- Click and hold an item to drag & drop it to one of four locations: **Fridge**, **Freezer**, **Fruit Bowl**, or **Cabinet**.
- Some items may have multiple correct locations (e.g., soda can be stored in the fridge or cabinet).
- The selected item's name appears in the right-hand panel.



Results:

- Once all items are sorted, results will display correct and incorrect placements.
- Choose **Replay** or **Return to Main Menu**.

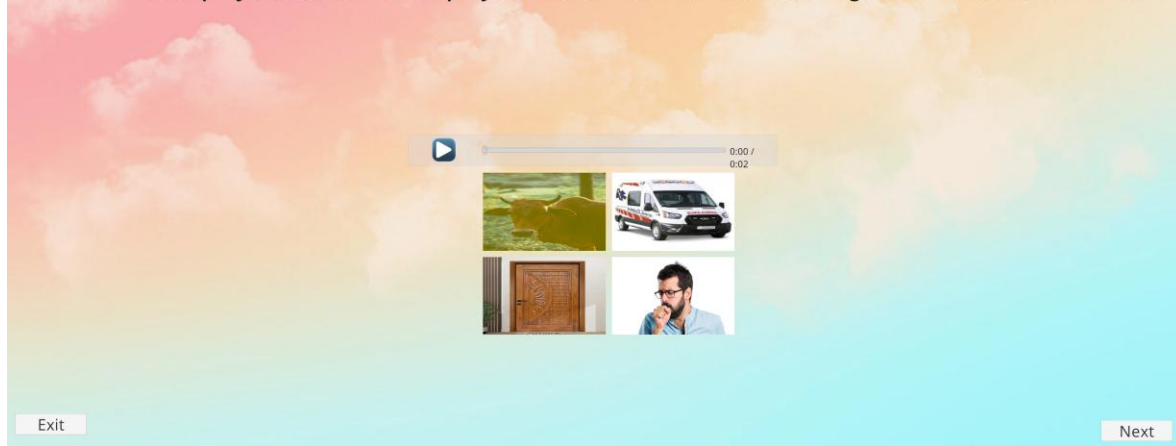
Game 3 – Match Sounds to Pictures



Setup:

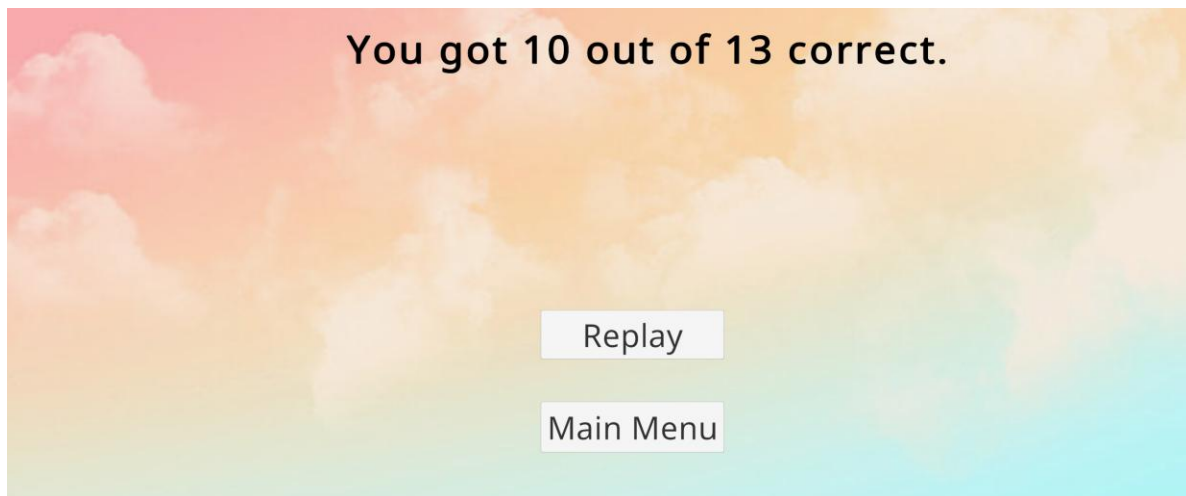
- Click **Play** and follow the on-screen instructions.

Click the blue play button below to play the sound and choose the image that matches the sound.



Gameplay:

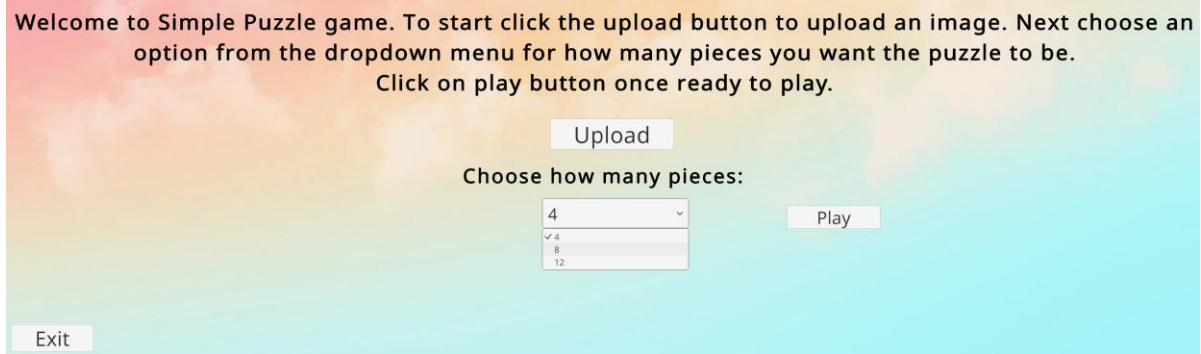
- Click the blue button to play a sound.
- Sounds can be paused and replayed as needed.
- Select the matching image; your choice will be highlighted.
- Click **Next** to move to the next round.



Results:

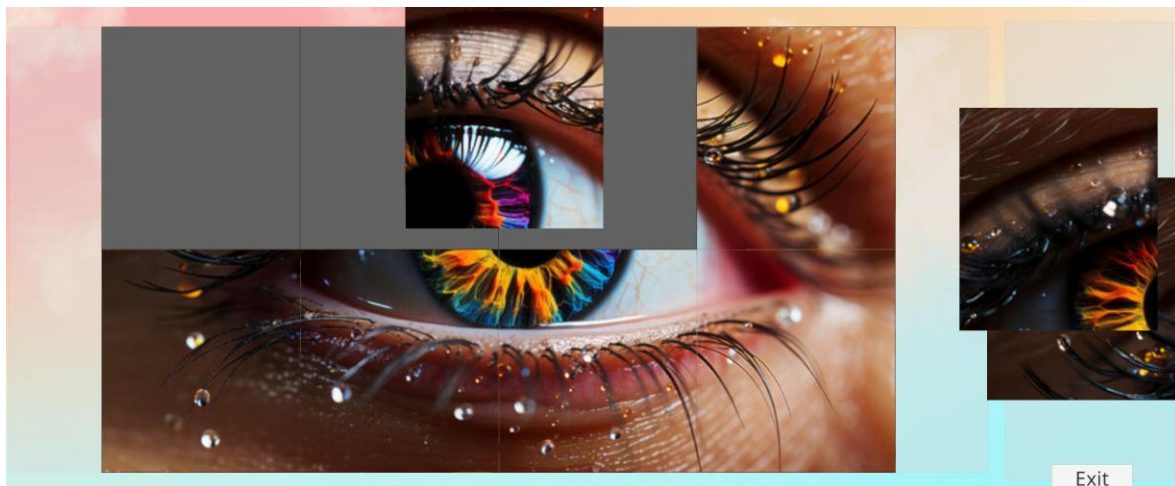
- Final score is displayed.
- Choose **Replay** or **Return to Main Menu**.

Game 4 – Simple Puzzle



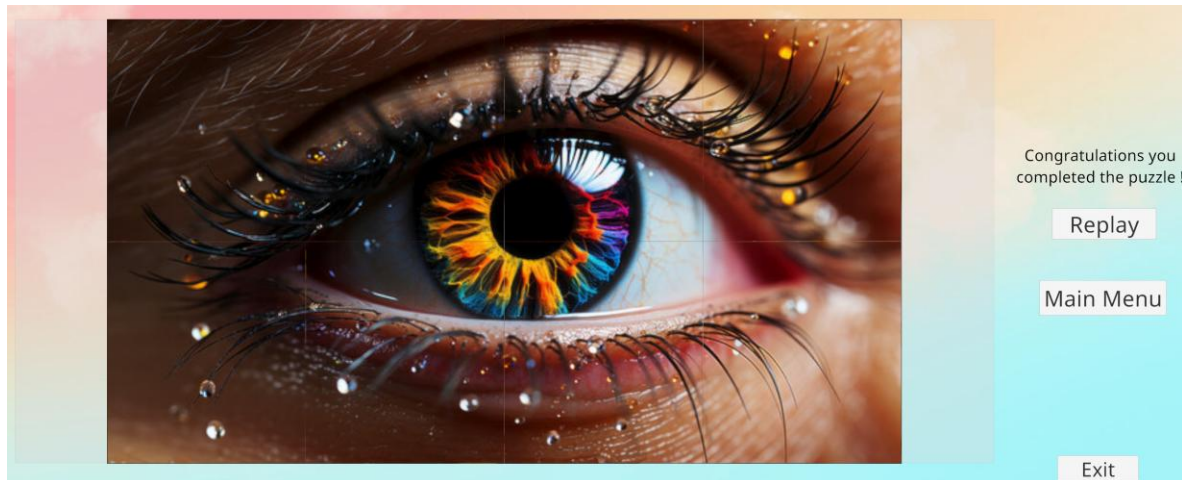
Setup:

1. Upload an image.
2. Select puzzle size: **4**, **8**, or **12** pieces.
3. Click **Play** to start.



Gameplay:

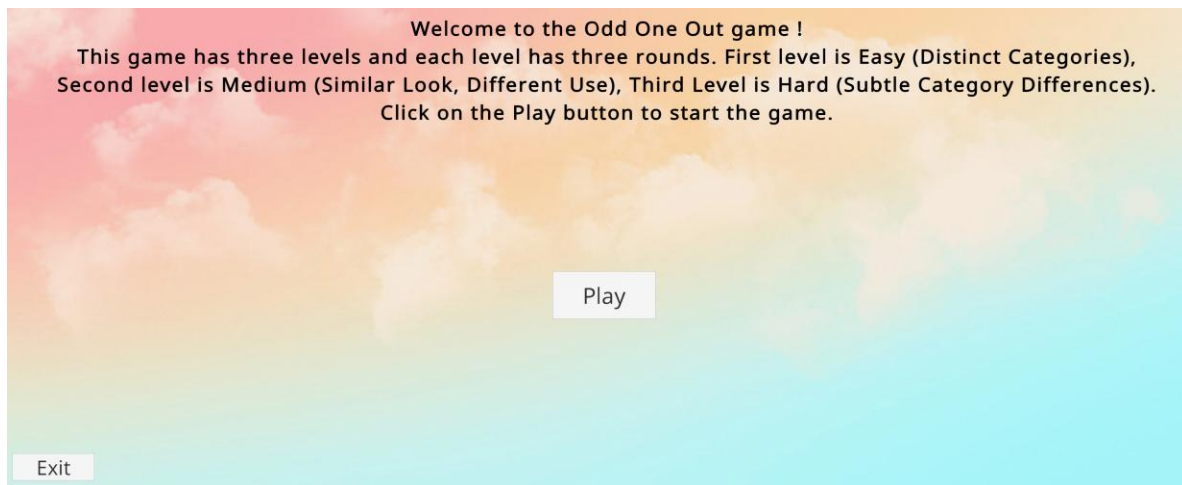
- Pieces appear on the right side.
- Drag and drop pieces into the correct positions.
- Pieces snap into place when close to their correct location.



Results:

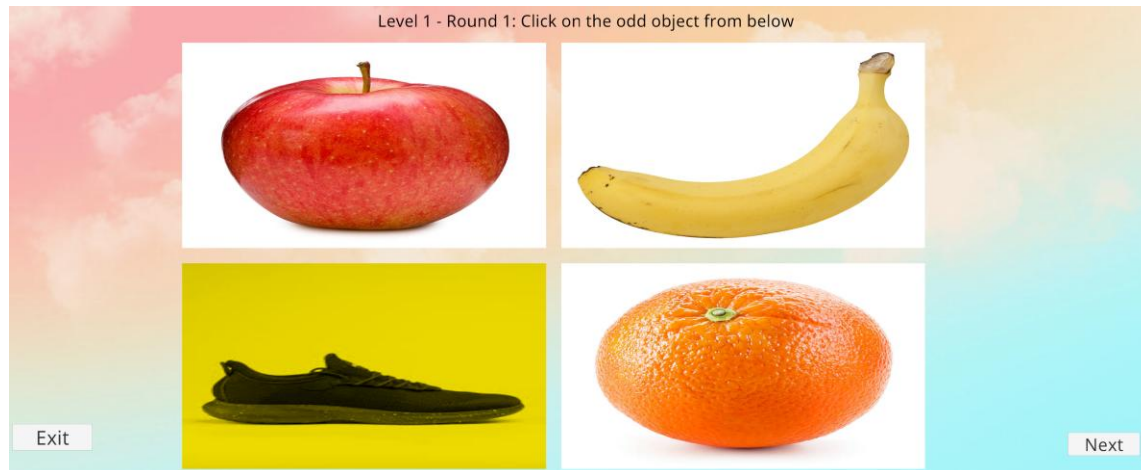
- Choose **Replay** or **Return to Main Menu**.

Game 5 – Odd One Out



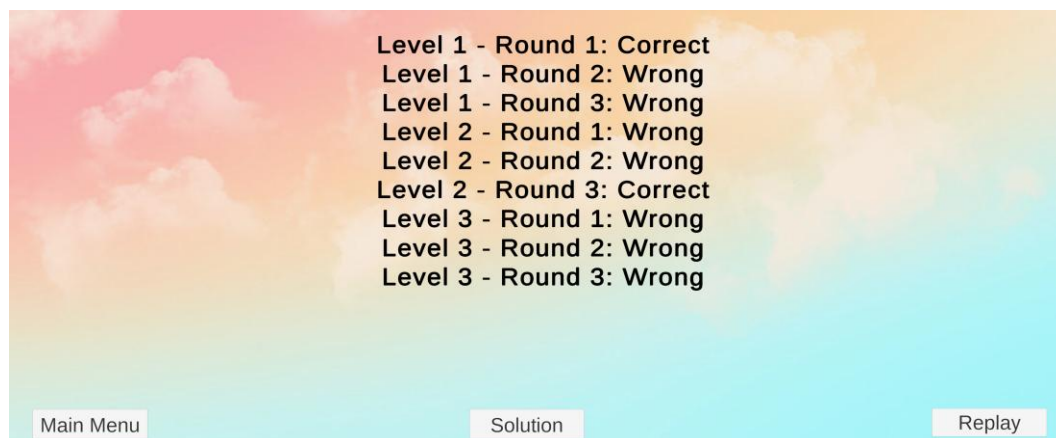
Setup:

- Read the welcome screen, then click **Play** to begin at Level 1, Round 1.



Gameplay:

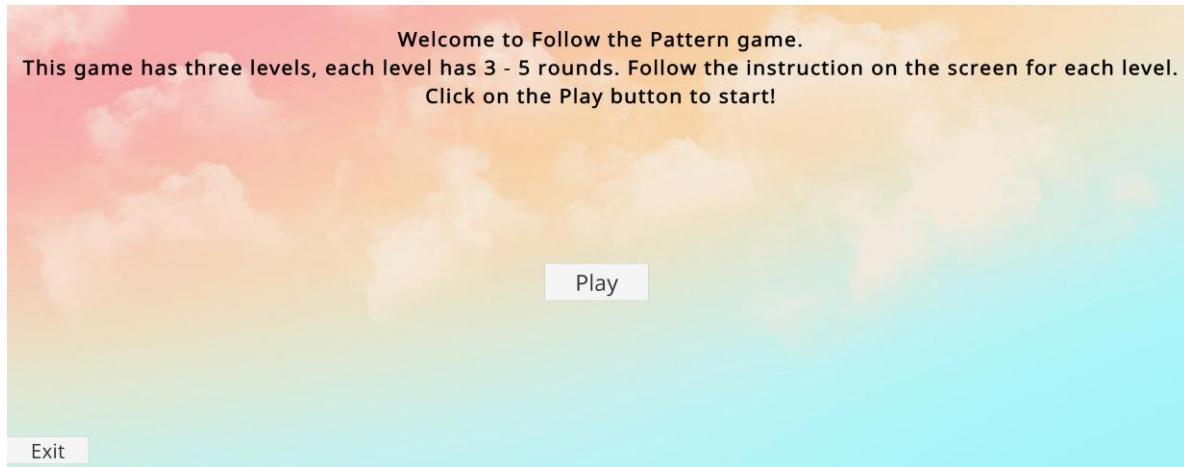
- Click the image you believe is the “odd one out.”
- The **Next** button becomes available after making a selection.
- Continue through all rounds and levels.



Results:

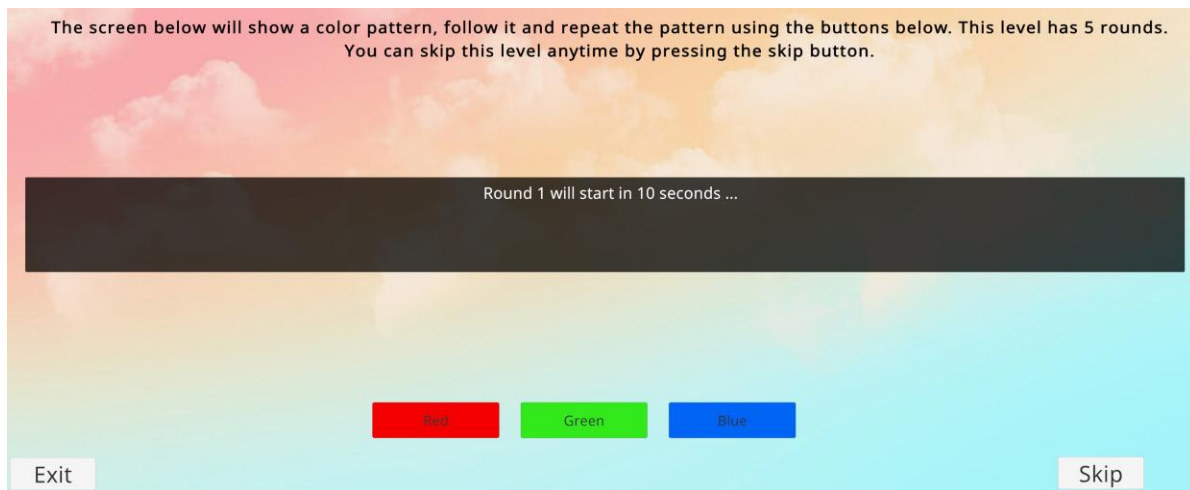
- Final results are shown.
- To check the solutions of all the rounds, click on the **Solution** button.
- Choose **Replay** or **Return to Main Menu**.

Game 6 – Follow the Pattern



Setup:

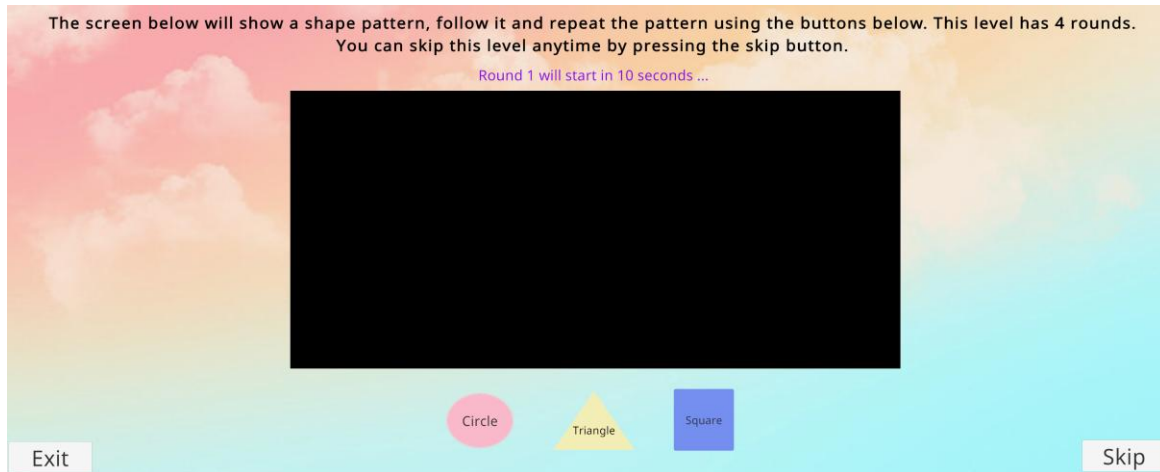
- Read the welcome screen, then click **Play**.



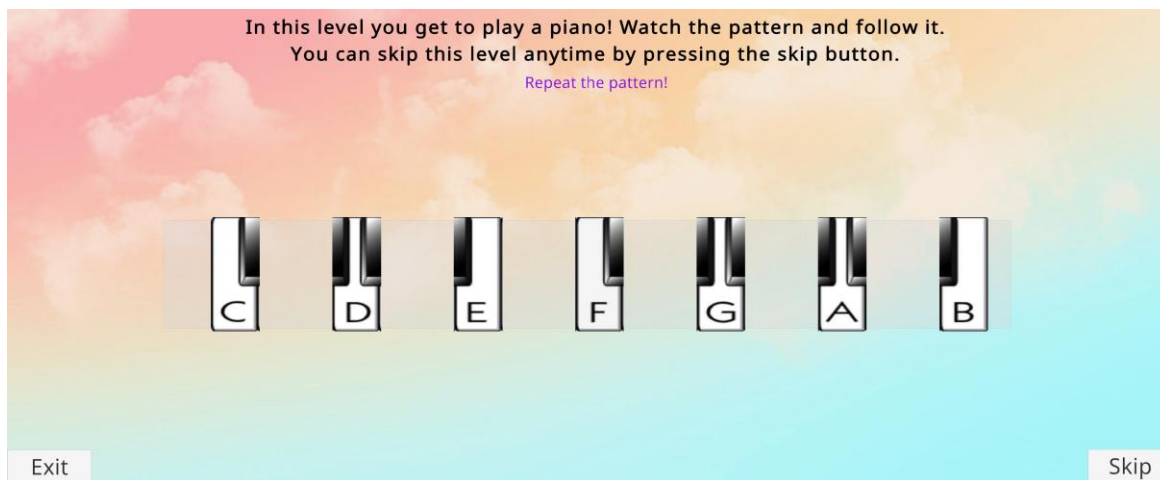
Level 1

Gameplay:

- Each level and round begins with instructions at the top of the screen.
- Difficulty increases from **Easy** to **Hard**.
- A short delay before each round allows time to prepare.
- Click **Skip** at any time to move to the next level.



Level 2



Level 3

Results:

- At the end, choose **Replay** or **Return to Main Menu**.

Contact Info

If there is any question, concerns or suggestions please feel free to send an email at raybridgetechnologies@gmail.com