Bubble Sort Game Explanation

Slide 1: Introduction

This Python project is a graphical sorting game using Tkinter.

The user has to arrange random numbers in ascending order using drag and drop.

The sorting logic is based on Bubble Sort algorithm.

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Slide 2: Login Page

The game starts with a login window.

User enters their name and clicks 'Start Game'.

If no name is entered, an error message is shown.

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Slide 3: Game Window

The main game window shows the game title, buttons, and number labels.

Each number is draggable, allowing users to reorder them.

Players must sort numbers in ascending order.

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Slide 4: Bubble Sort Logic

The game checks the order using a bubble sort function.

Bubble sort compares and swaps adjacent numbers to sort the array.

It is used to generate the correct sorted order for comparison.

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Slide 5: Features

- Check Order: Validates if numbers are sorted.
- Reshuffle: Randomly shuffles numbers again.
- Auto Shuffle: Visually sorts numbers automatically.
- Min/Max: Increase or decrease number of items.

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Slide 6: Scoring and Levels

Each level has a different number of items to sort.

Score is calculated based on time taken to solve.

The game has a maximum of 5 levels.

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Slide 7: Draggable Labels

Each number is a draggable label using mouse events.

Click and drag functionality is built using Tkinter events.

Labels can be moved freely across the window.

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Slide 8: Game Over

After completing 5 levels, the game ends.

Total score is displayed.

All interactive buttons are disabled at the end.