# "Interactive Storytelling in Unity with Asynchronous/Parallel Programming"

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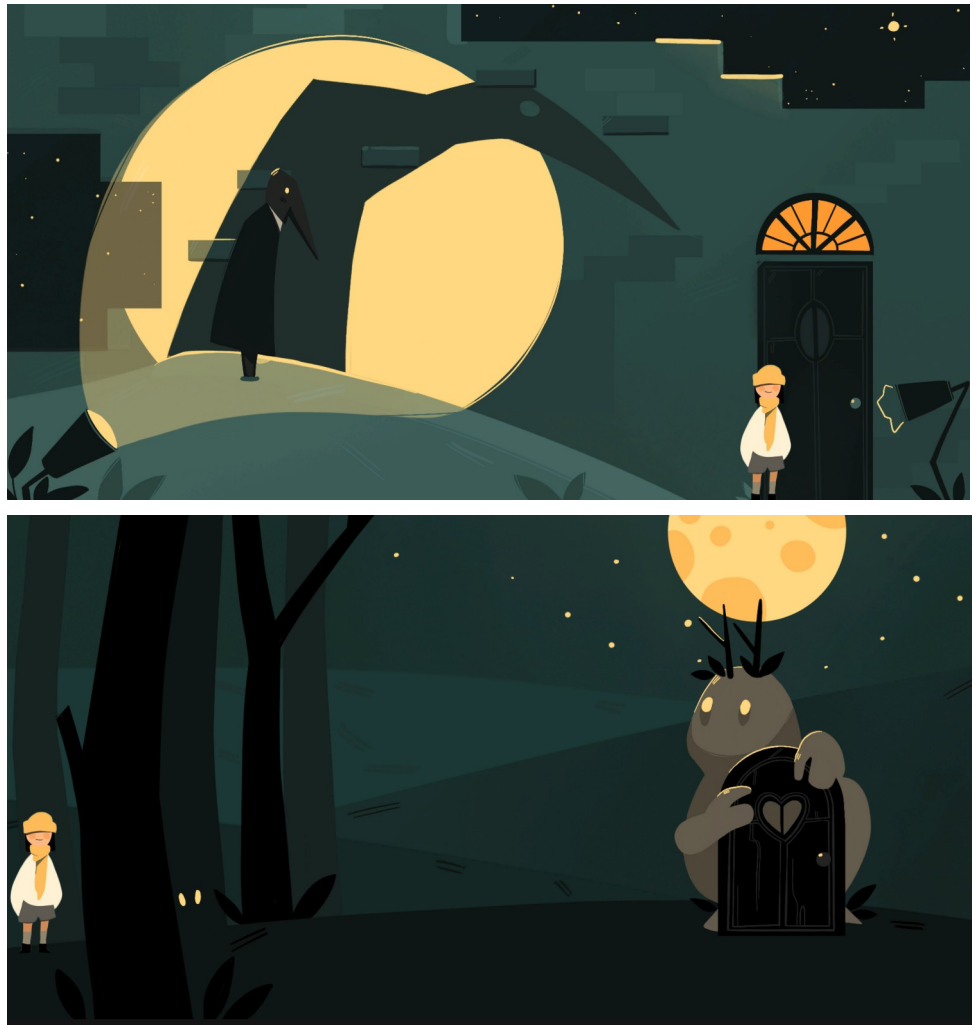
# Project & Idea



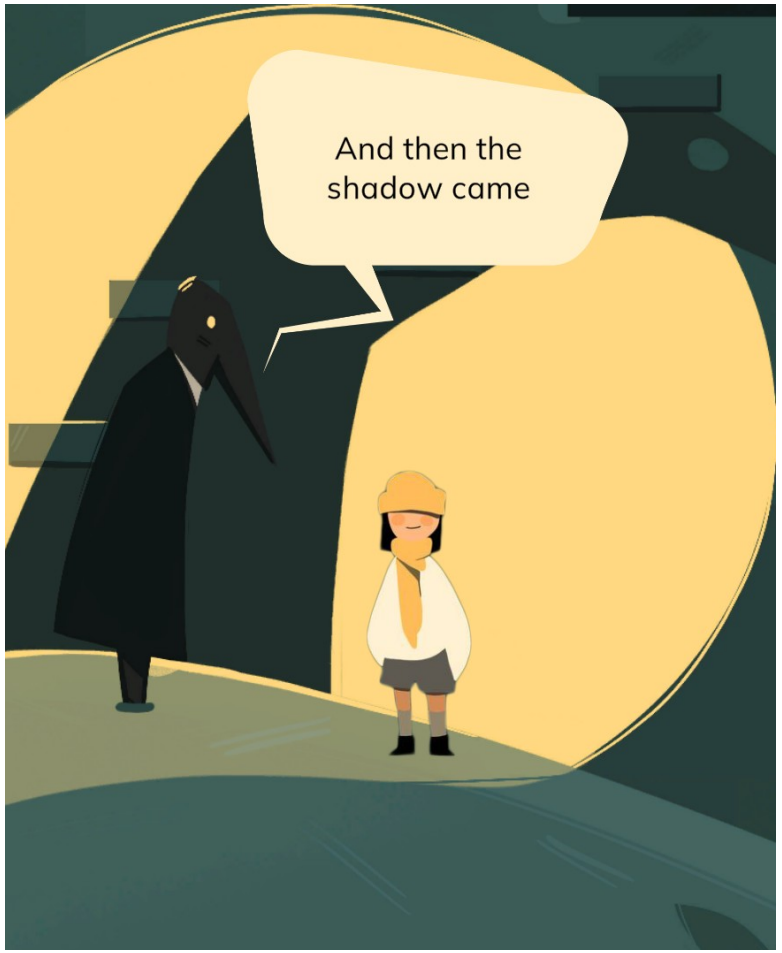
## Idea:

- 2D narrative game in Unity
- Two short levels (Crow & Mouse)
- Environment reacts to player actions

## Goal:

Explore how async/await and parallel logic improve interaction and performance.

# Async Programming in Dialog System




## Problem:

- Blocking transitions and UI when switching dialog lines.

## Solution:

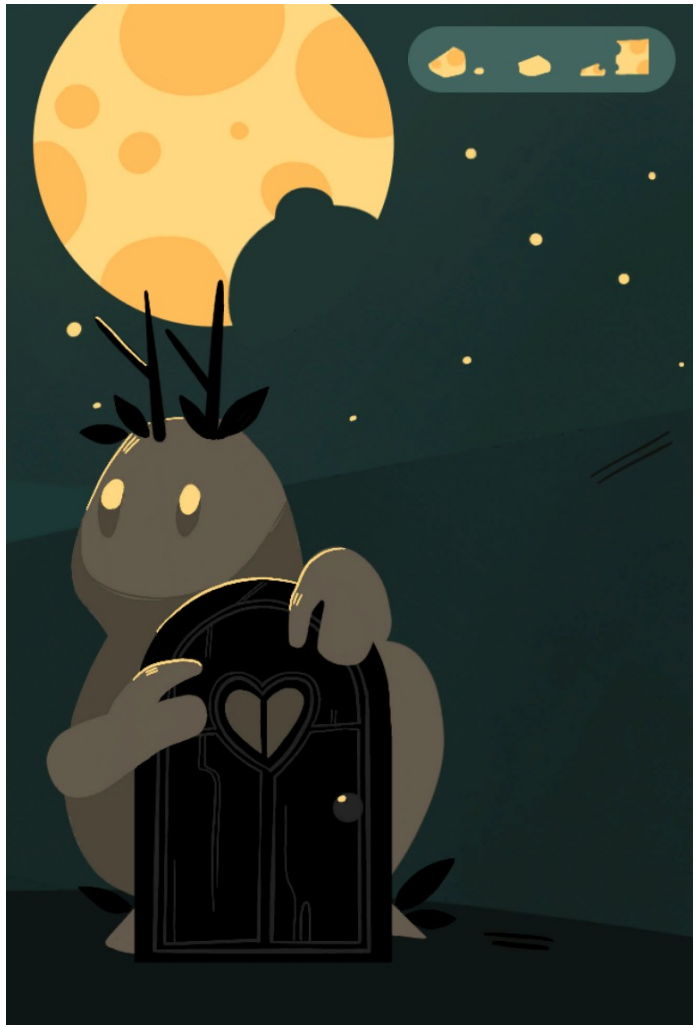
*async* Task used to:

- Fade text in/out.
- Wait for player interaction
- (await Task.Delay).
- Avoid freezing UI/animations.

```
private async Task StartDialog()
{
    if (isDialogPlaying) return;

    isDialogPlaying = true;
    _ = FadeCanvasGroup(talkHint, 0f);
    await FadeCanvasGroup(dialogBox, 1f);

    string[] linesToShow = scaredLines;

    if (lampOff && !starInserted)
        linesToShow = afterShadowLines;
    else if (lampOff && starInserted)
        linesToShow = finalLines;

    foreach (string line in linesToShow)
    {
        await FadeText(line);
        await Task.Delay((int)(timeBetweenLines * 1000));
    }

    await FadeCanvasGroup(dialogBox, 0f);
    dialogText.text = "";
    dialogText.alpha = 0f;
    isDialogPlaying = false;

    if (lampOff && starInserted && doorLight != null)
    {
        doorLight.enabled = true;
        finalDialogFinished = true;
    }
}
```

Explore how async/await and parallel logic improve interaction and performance.

# Parallel Animation of Inventory Items



## Problem:

- Sequential cheese icon animations feel slow.

## Solution:

Task.WhenAll(...) animates all icons in parallel:

```
var tasks = new Task[]
{
    CheeseInventoryManager.Instance.AnimateCheeseAtIndex(0)
    CheeseInventoryManager.Instance.AnimateCheeseAtIndex(1)
    CheeseInventoryManager.Instance.AnimateCheeseAtIndex(2)
};

await Task.WhenAll(tasks);
```

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# Thank you

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