

Cabbage World

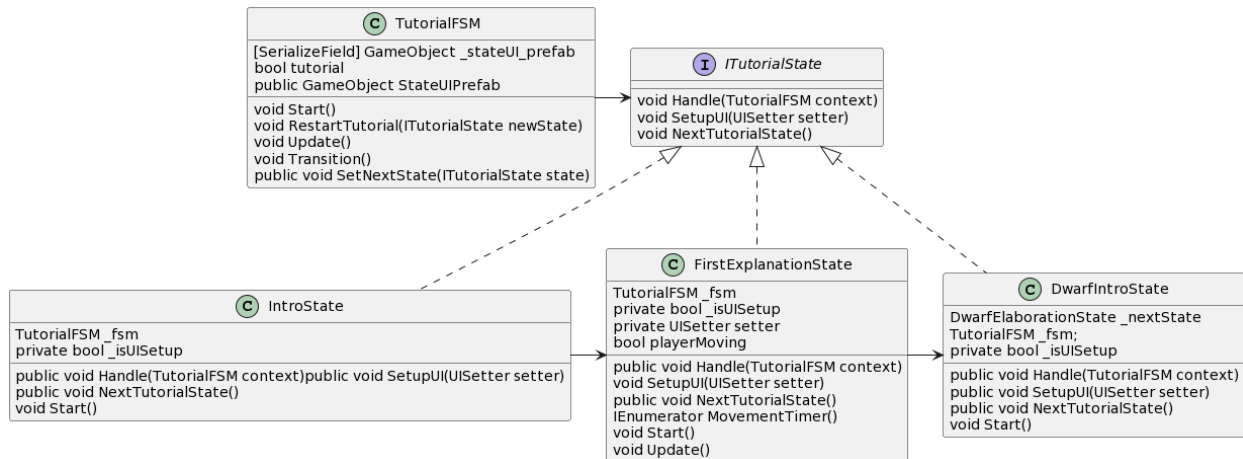
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Required Patterns

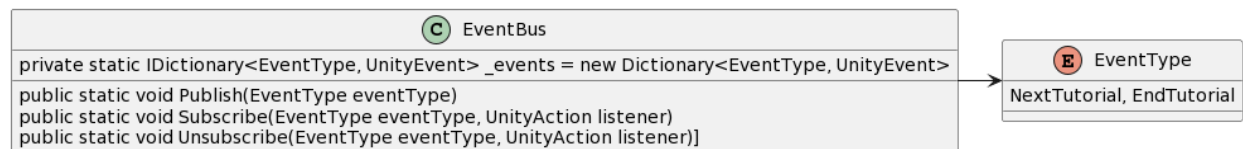
State Diagram



Note: This UML diagram does not encompass every state in the system, as including them all would be redundant and balloon the size of the image. The list of all states is below.

- IntroState
- FirstExplanationState
- DwarfIntroState
- DwarfElaborationState
- SnakeIntroState
- FinalInformationState

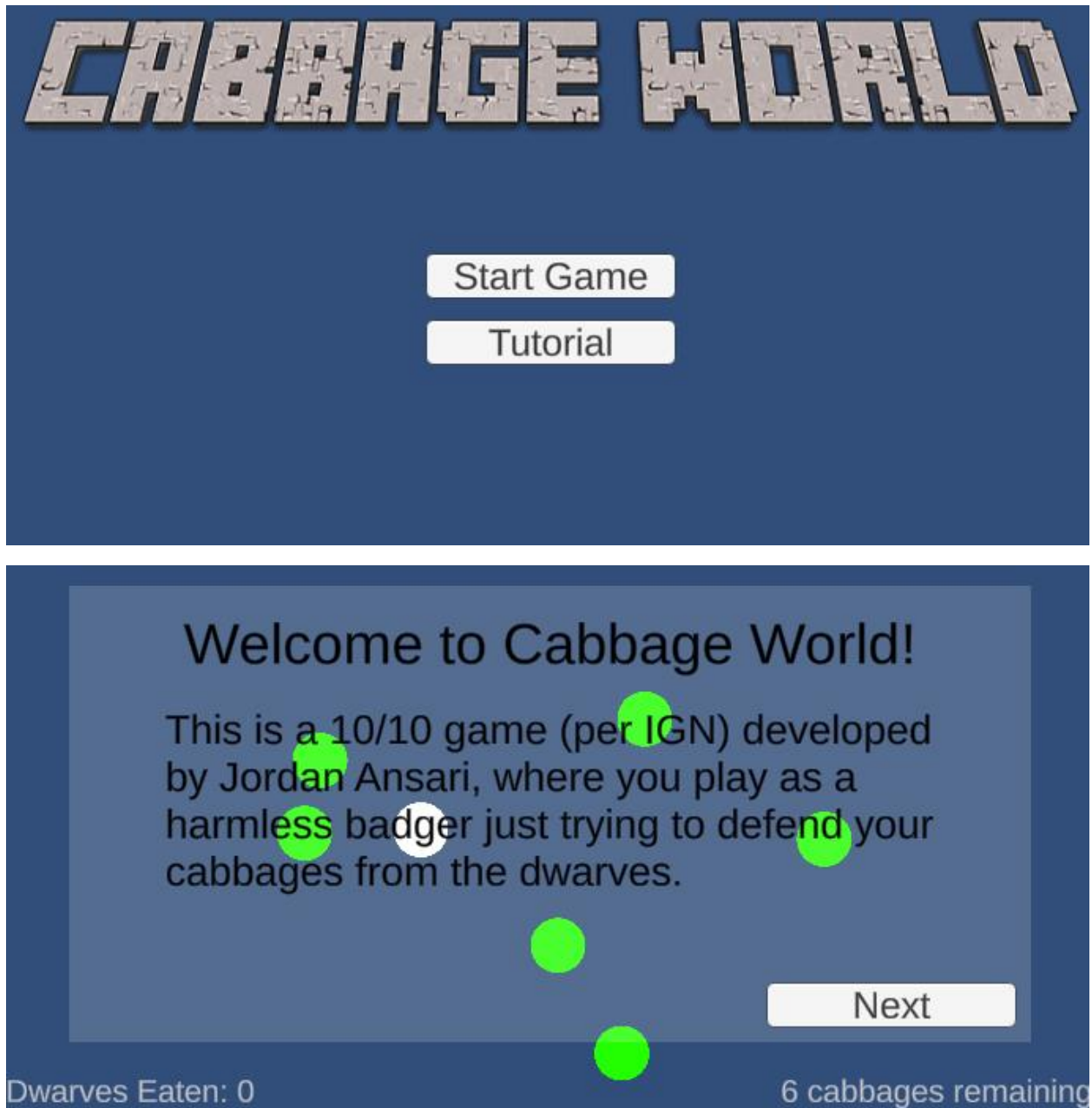
Event Bus

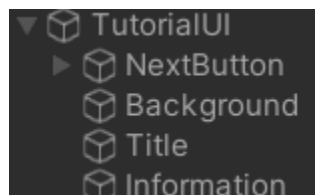
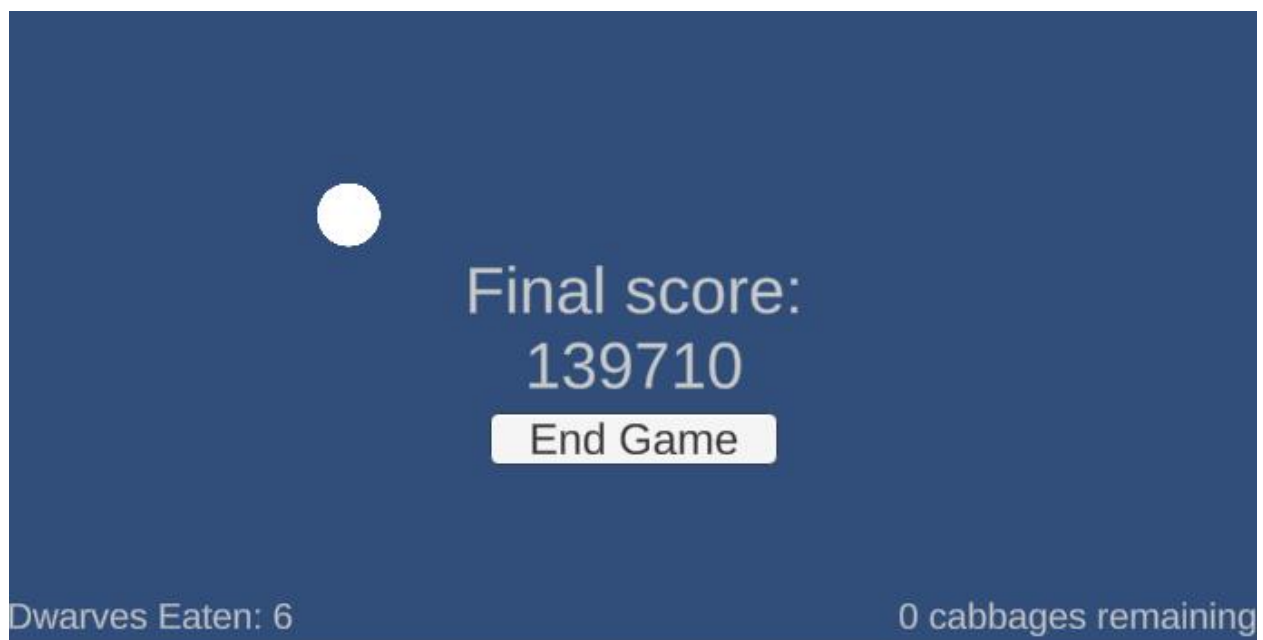
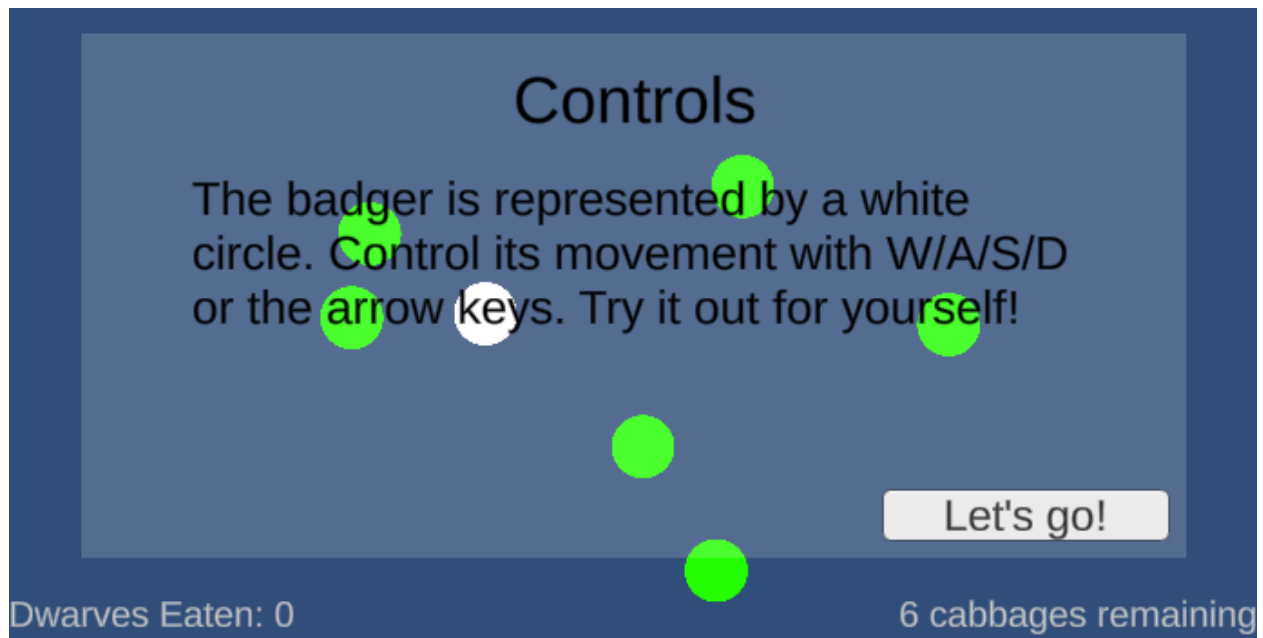


List of events:

- NextTutorial
- EndTutorial

Screenshots





Feature Implementation

For the main menu, I simply created a new scene with only an interactable UI. There is a `HomeScreenManager` class that stores a boolean depending on whether the player clicked “Start Game” or “Tutorial,” which allows the `GameManager` to respond appropriately.

The tutorial uses a State Machine, UISetter, and Event Bus to perform its tasks— the EventBus tracks when the “Next” button has been pressed, and has two events: NextTutorial and EndTutorial. The UISetter allows for the changing of the title, information text, and button text in the tutorial panel, which is what the states do. Each tutorial screen is its own state: some merely move to the next tutorial screen, while others allow for the player to move around for a bit in between the next screen. This is a combination of a coroutine and using the GameManager to pause/unpause the movement of objects within the game.

The score is simply calculated by the equation: # dwarves eaten * time survived. When the game ends, the GameManager activates the text element and main menubutton. The button uses the SceneManager to go back to the main menu.

Fancy Points

- Make the game pause during different parts of the tutorial to give the user time to read.
 - The tutorial freezes the game until the player presses the “next” button. Depending on the phase of the tutorial, the player will then either regain control to experience moving around or the game will remain frozen. The dwarf spawning/movement and the player movement can be paused independently.
- Implement pop-ups when hovering over game elements to display info (e.g. speed stat of player or dwarves).
 - There aren’t pop-ups, but the bottom left and right display the number of dwarves eaten and number of cabbages remaining.