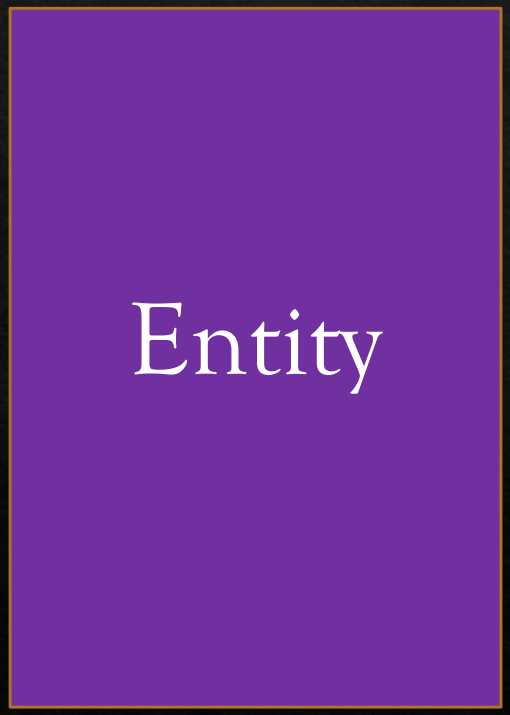
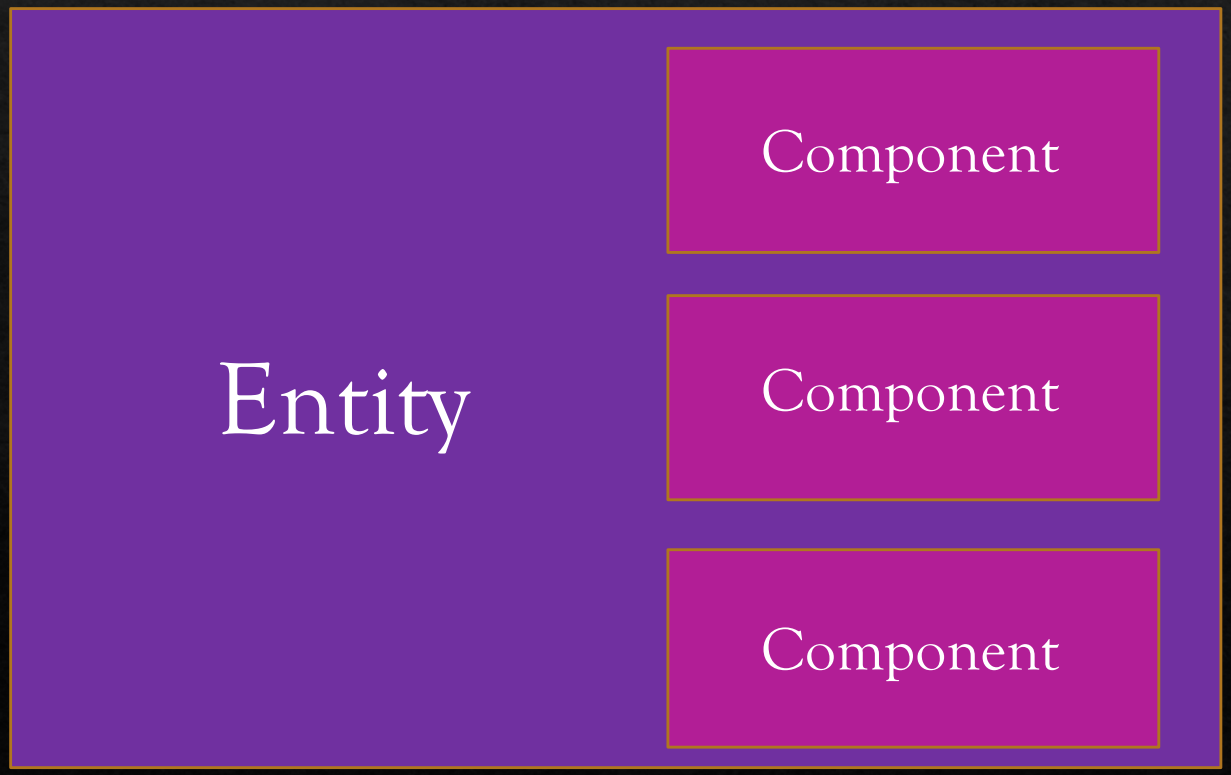

Unity 2D
Basics
Part 1:
Entity-Component-System
Model

Entity-Component-System



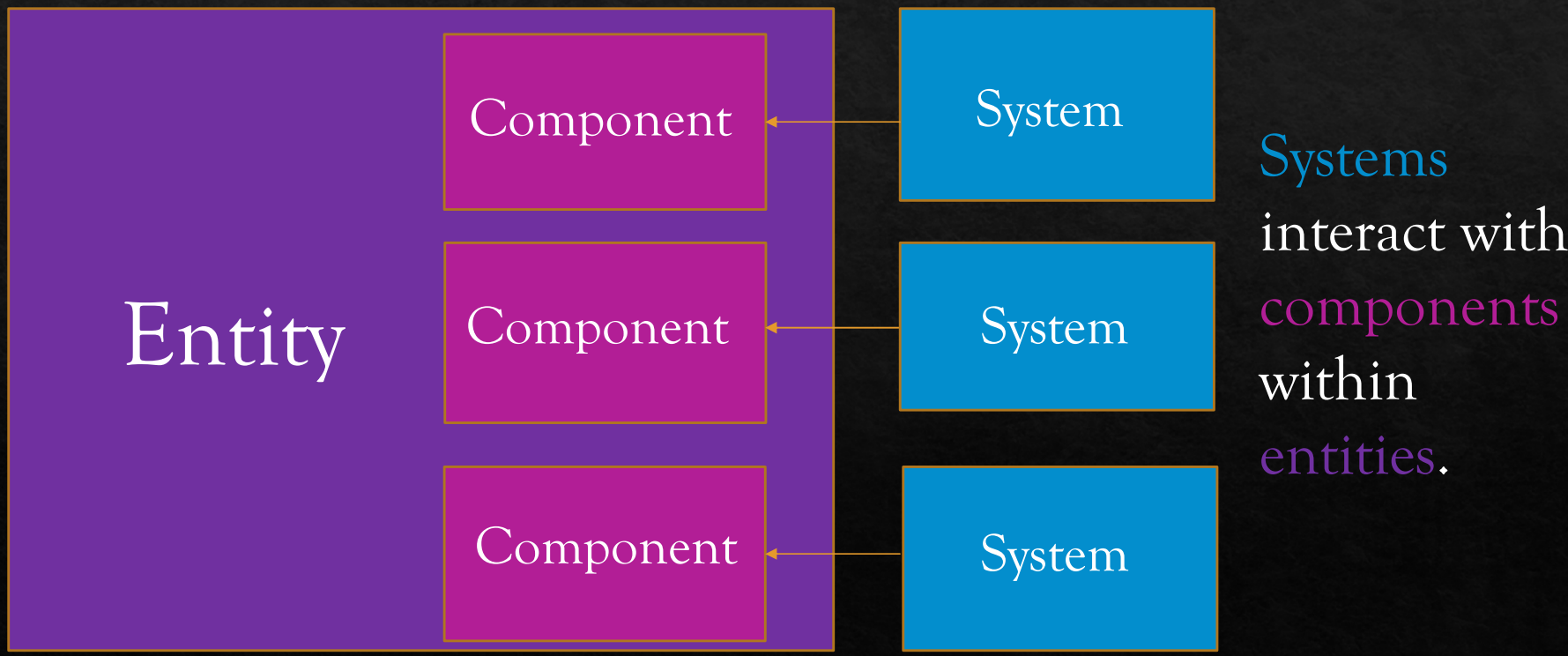
Each entity is a container with unique identification.

Entity-Component-System



Each entity is composed of different components.

Entity-Component-System



Systems interact with components within entities.

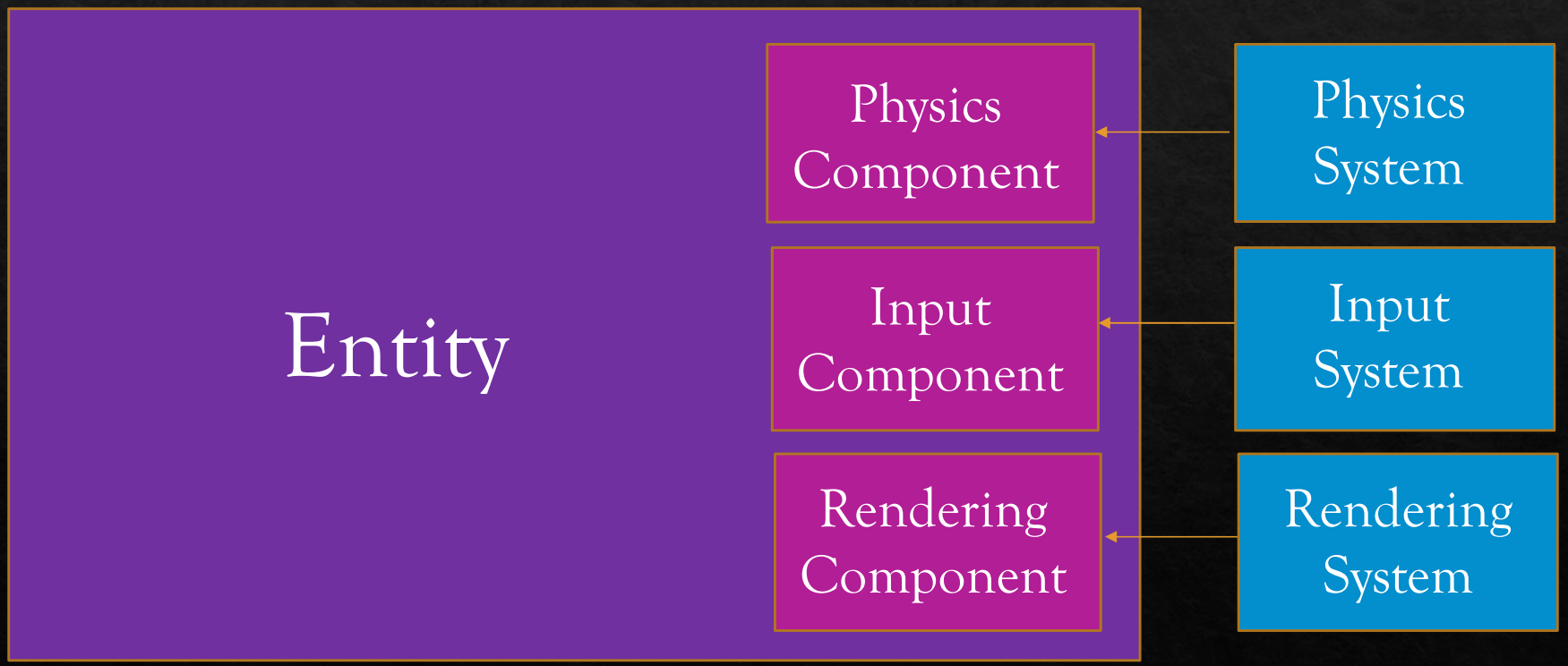
Entity-Component-System as Game Engine

A game engine may have multiple systems.

These can include:

- physics (determining if objects overlap),
- input (detecting if player has pressed a button), and
- rendering (drawing assets to screen).

Entity-Component-System



Entity-Component-System in Unity

- Entities are GameObjects. They are containers for components.
- When something happens (an event), Unity passes information from the system to the matching component of the GameObject.

Entity-Component-System in Unity

- A behavior script component can be added to a GameObject. This acts as its "game logic."
- When the GameObject receives an event via one of its components, it checks its "script" to see if it should react to the event somehow.

Example Entity-Component-System in Unity