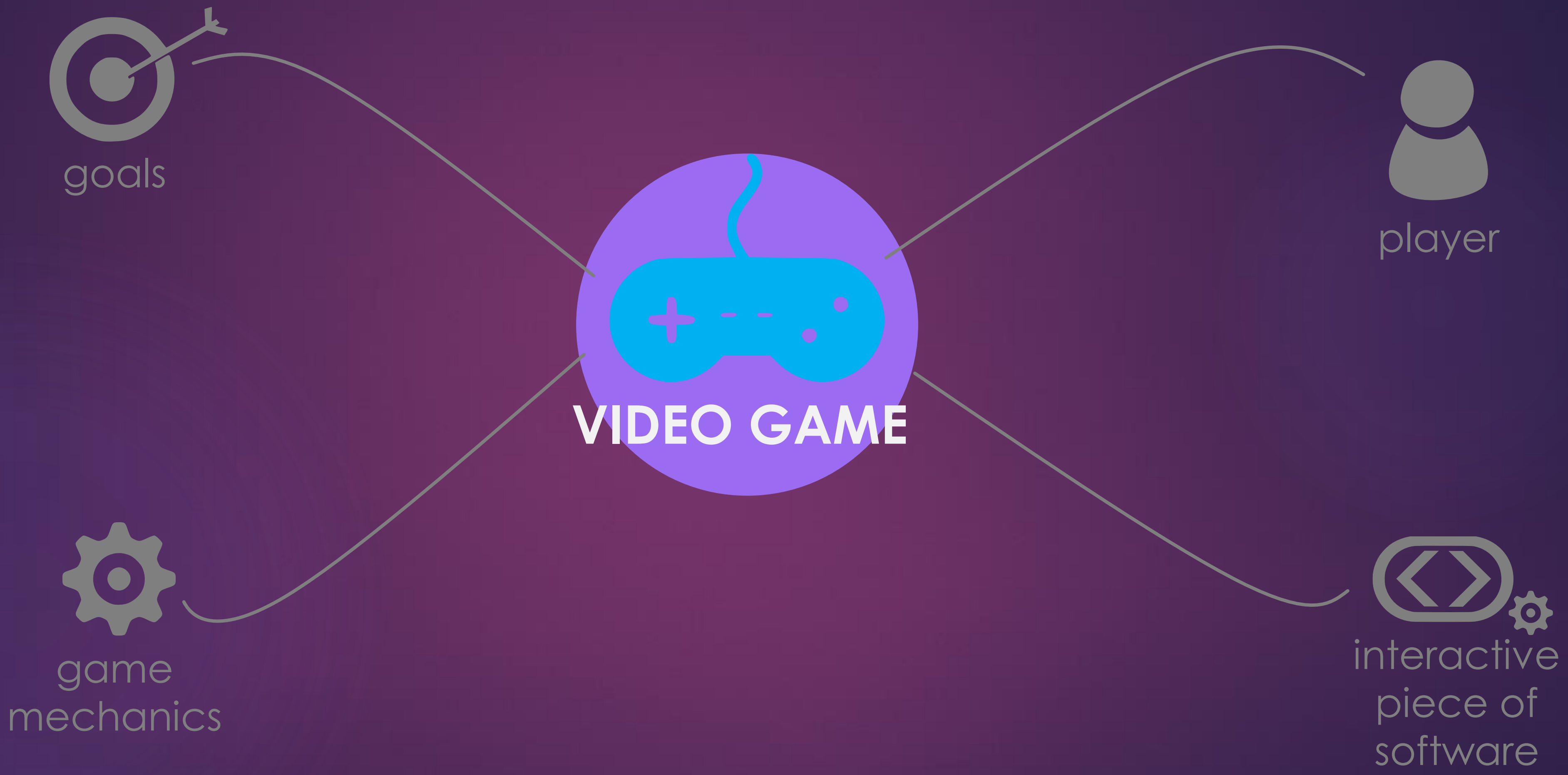
UNITY ECS

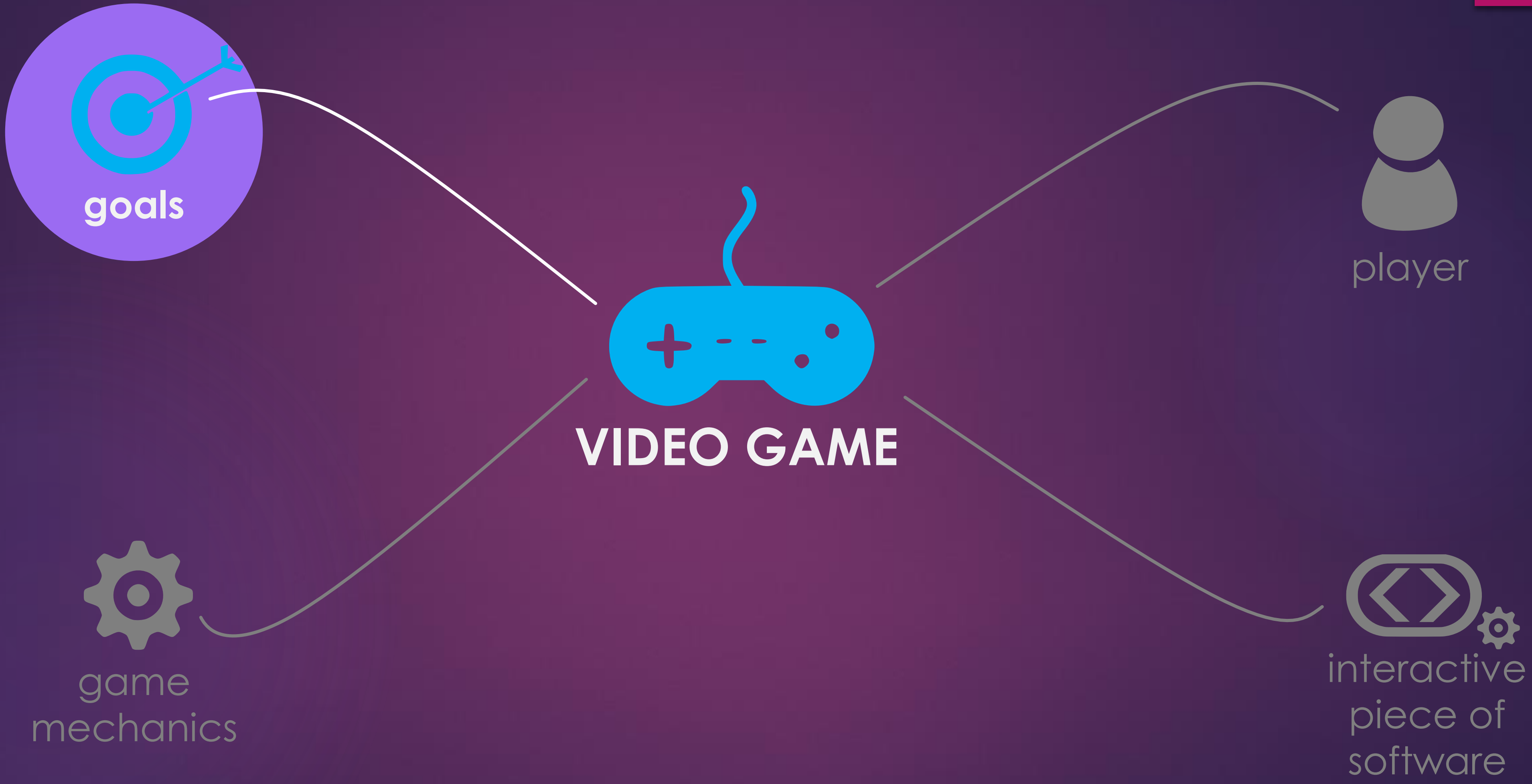
COMPUTER GRAPHICS SEMINAR

DANIEL NAEL

- video game


goals
player
VIDEO GAME
game mechanics
interactive piece of software

- video game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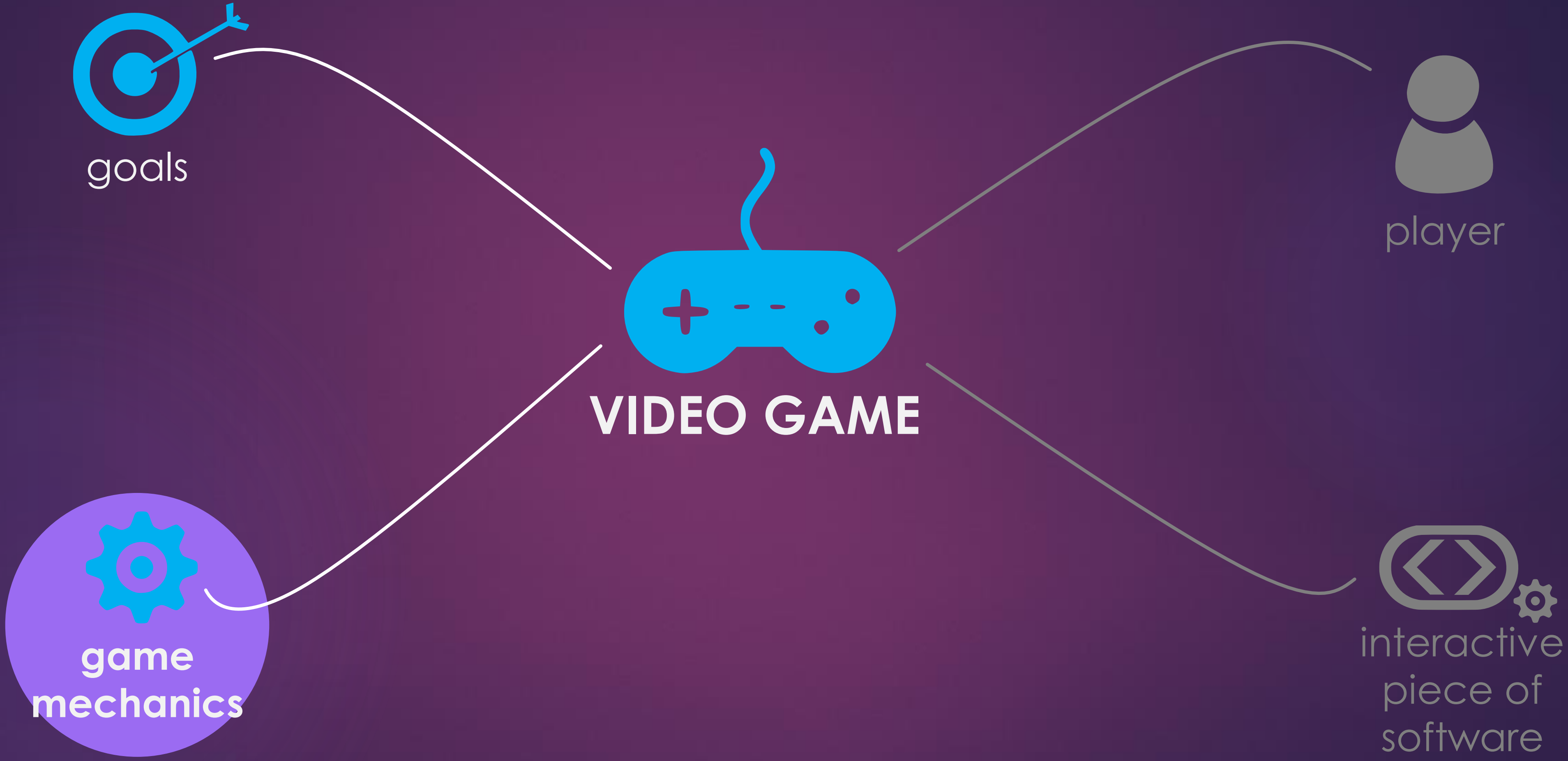
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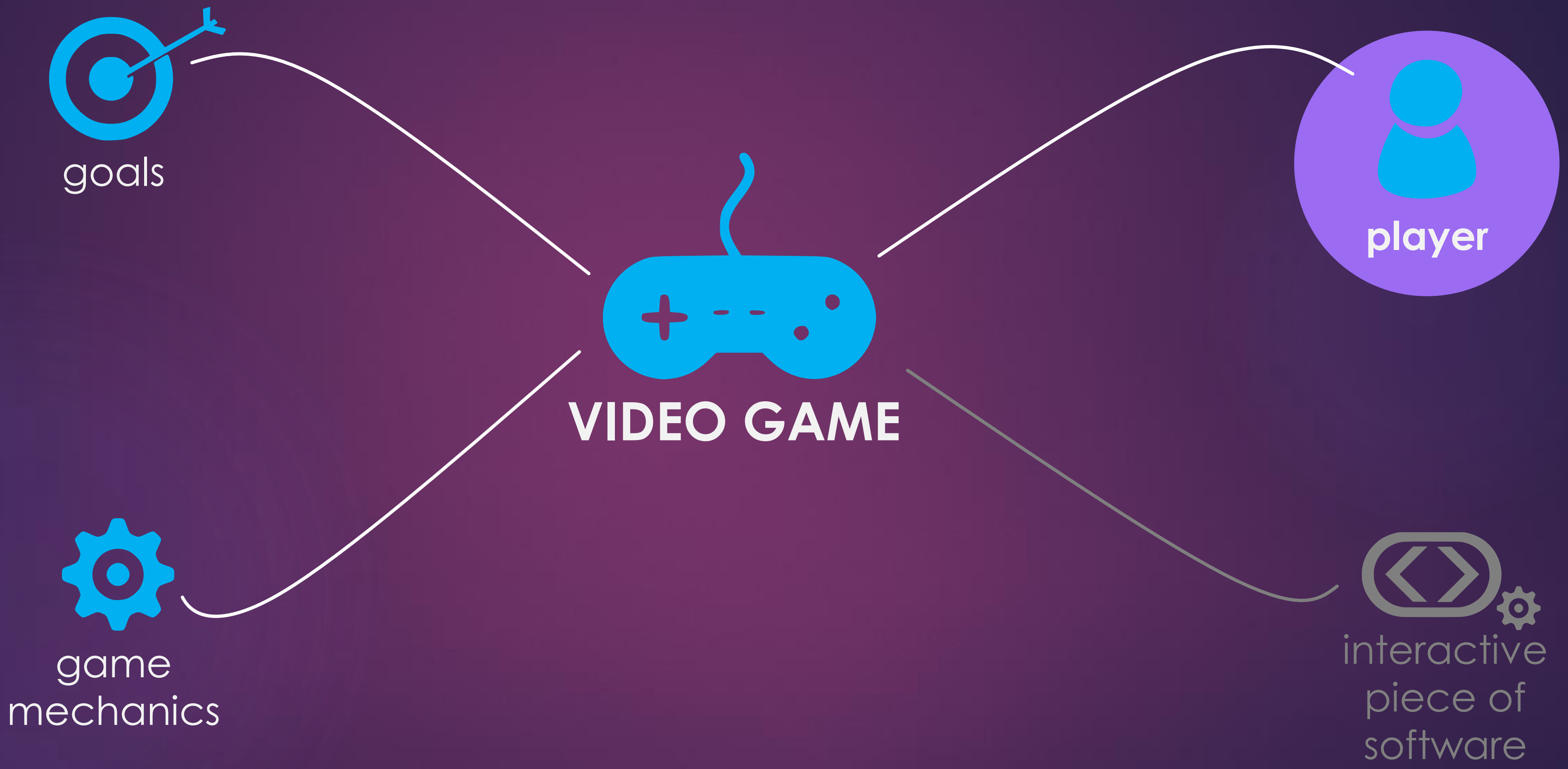
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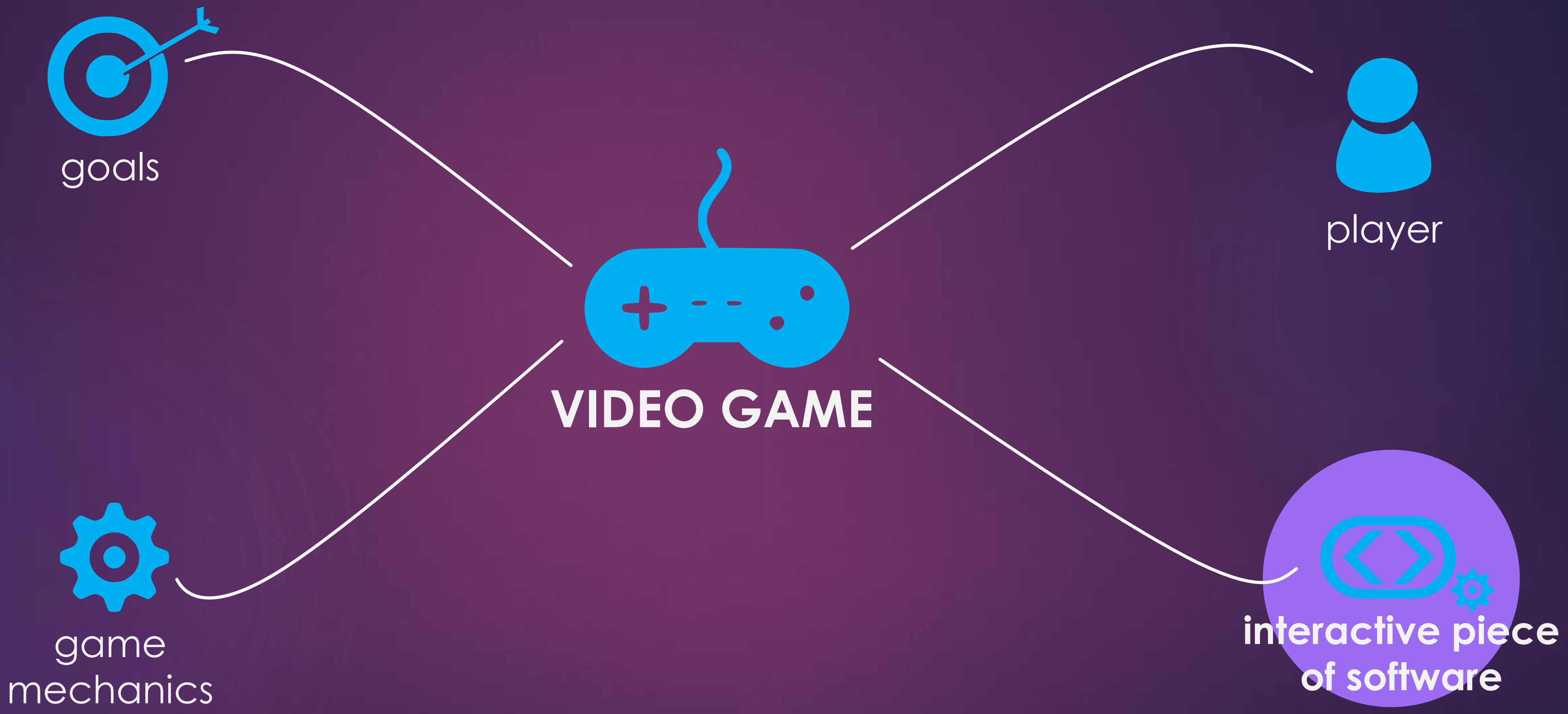
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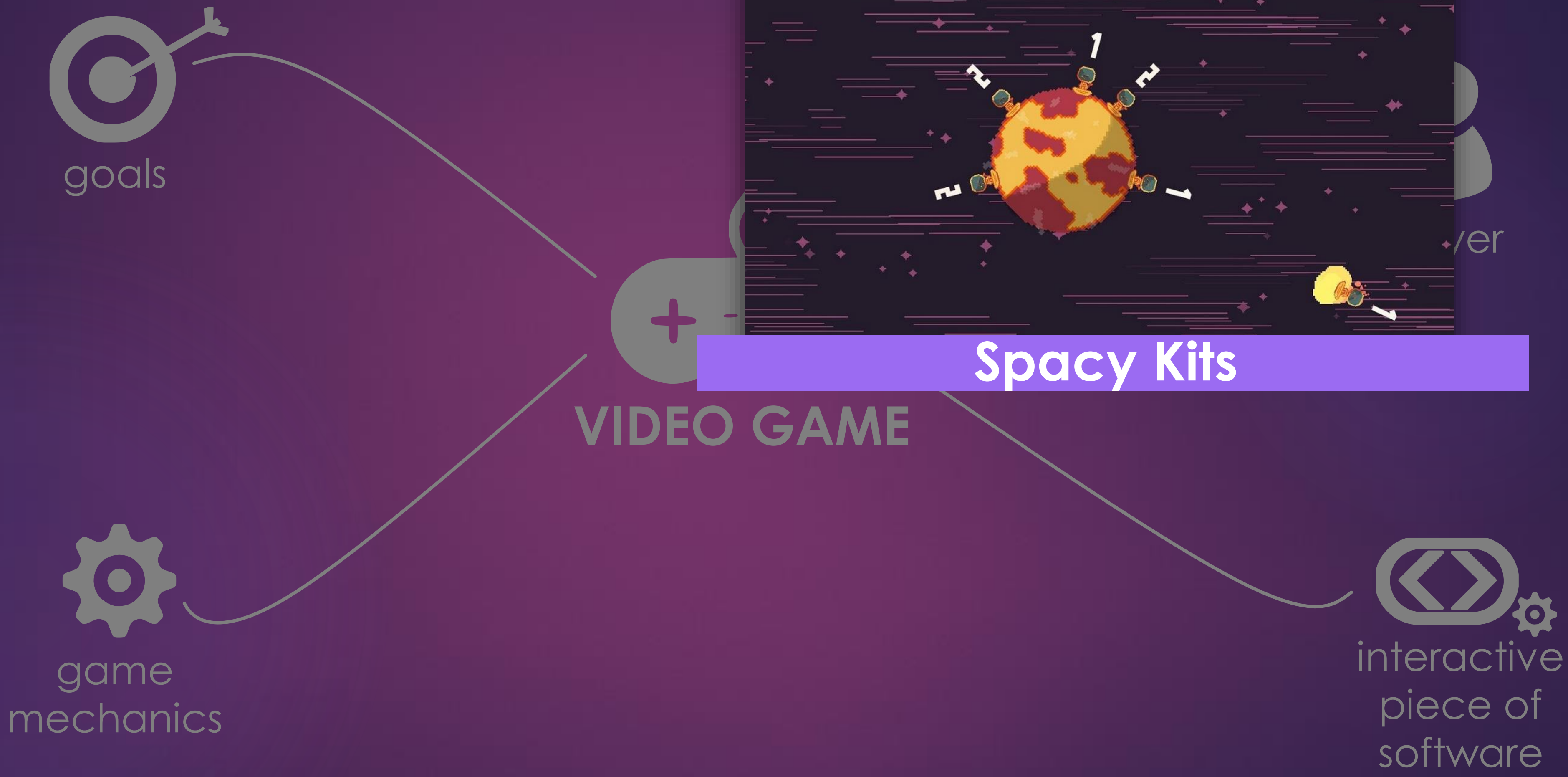


Spacy Kits

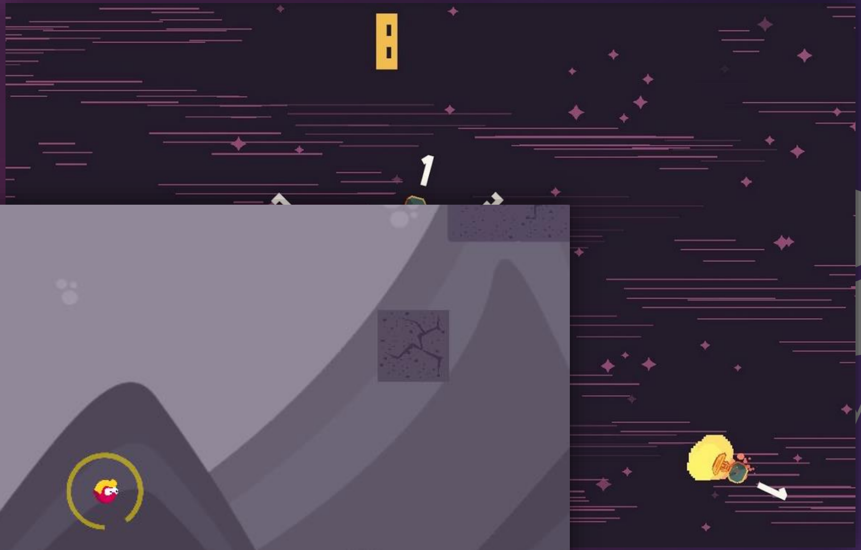
- video game

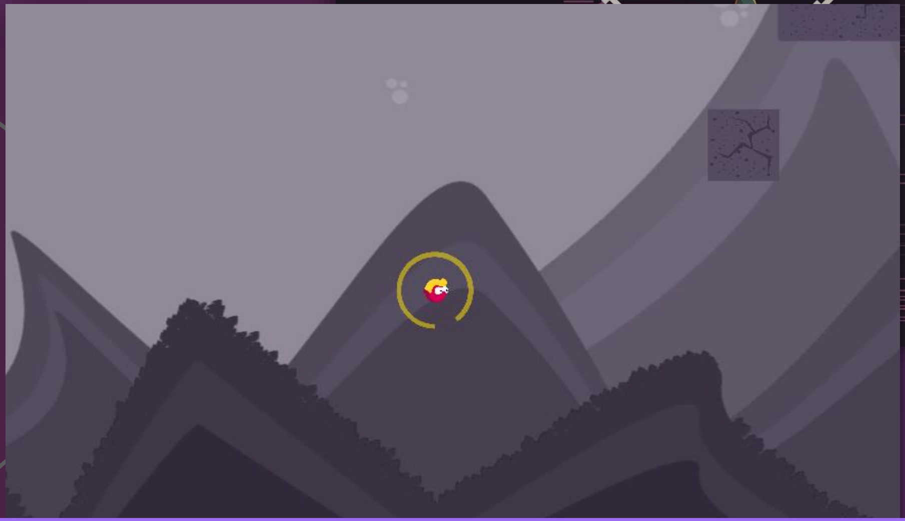
goals

game mechanics

interactive piece of software

/er

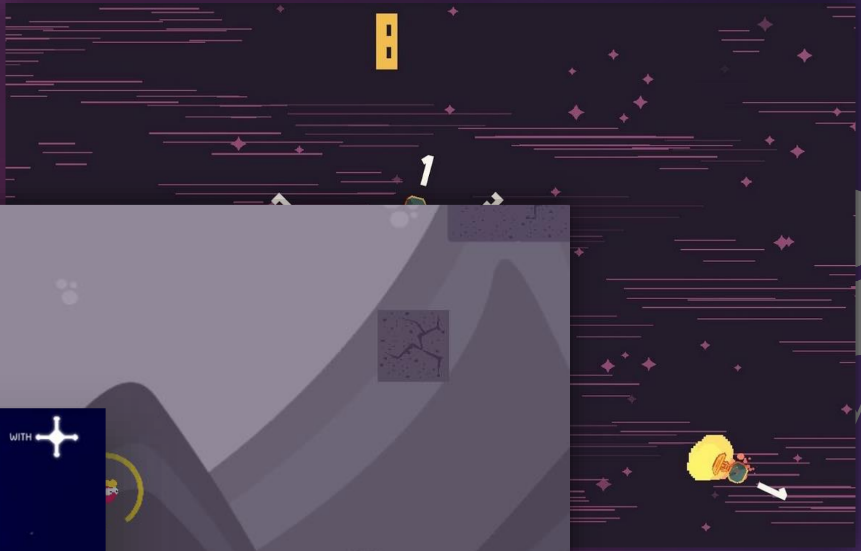


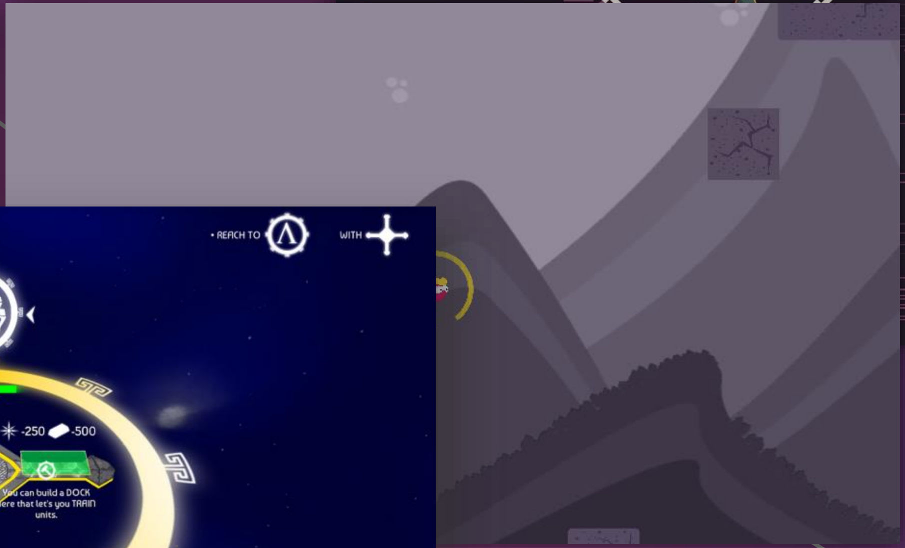


Slingventure

- video game

goals





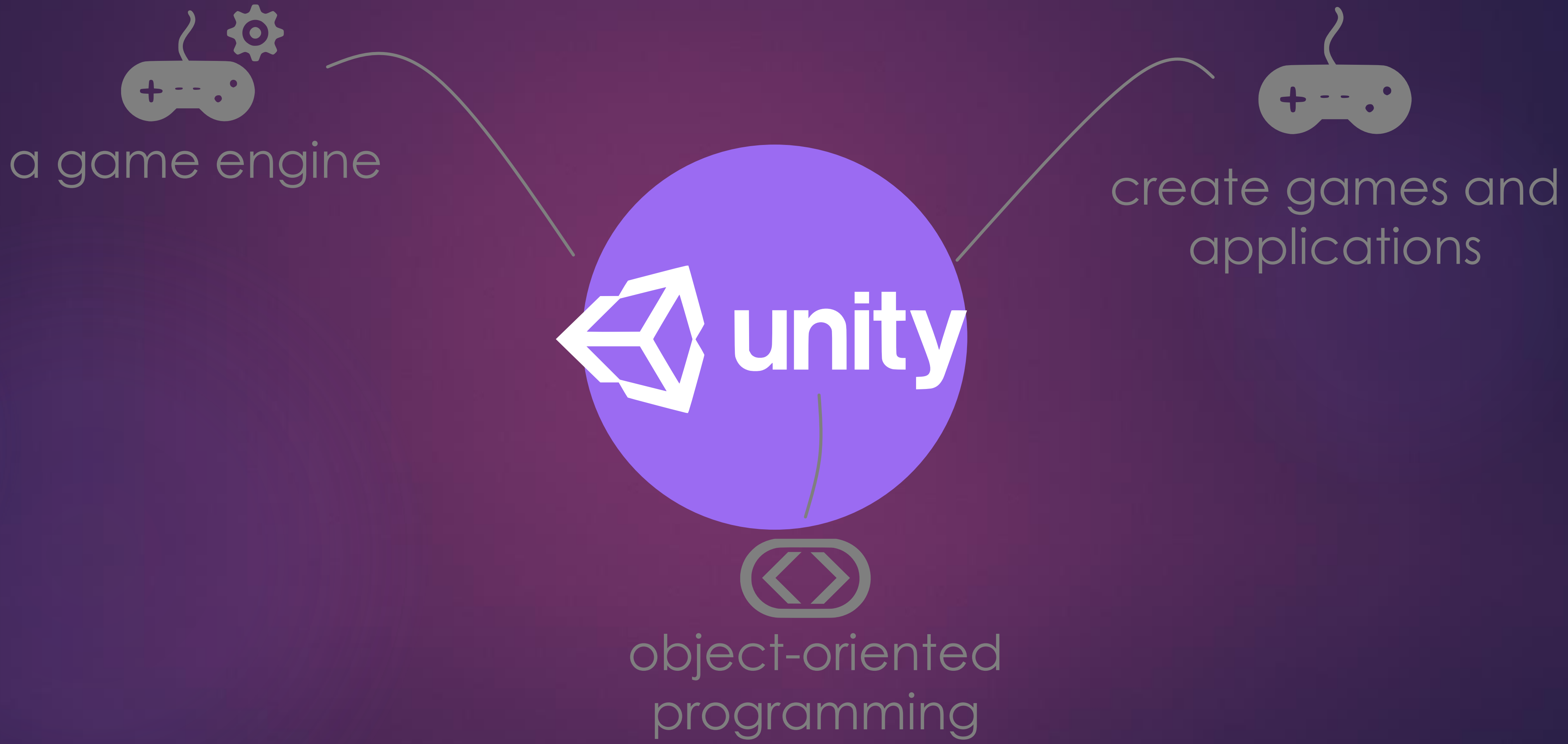
Icarus

m

er

interactive piece of software

- unity


a game engine
unity
create games and applications
object-oriented programming

- unity

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unity

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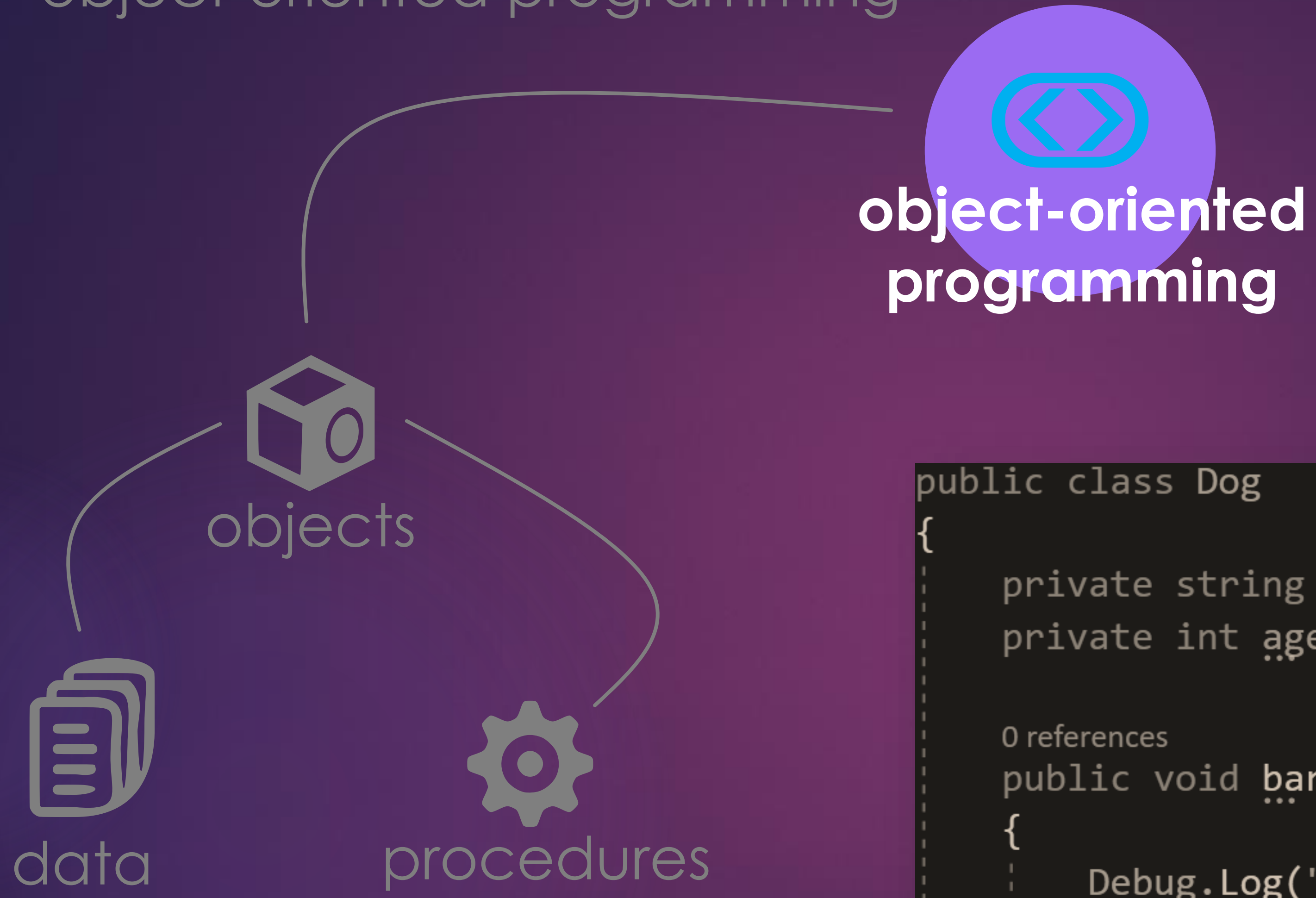
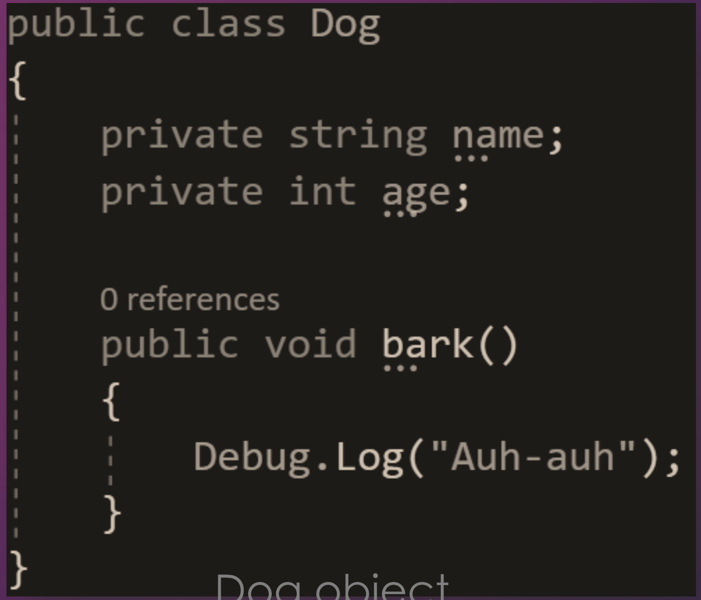


Examples



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public class Dog
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    private string name;
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    0 references
    public void bark()
    {
        Debug.Log("Auh-auh");
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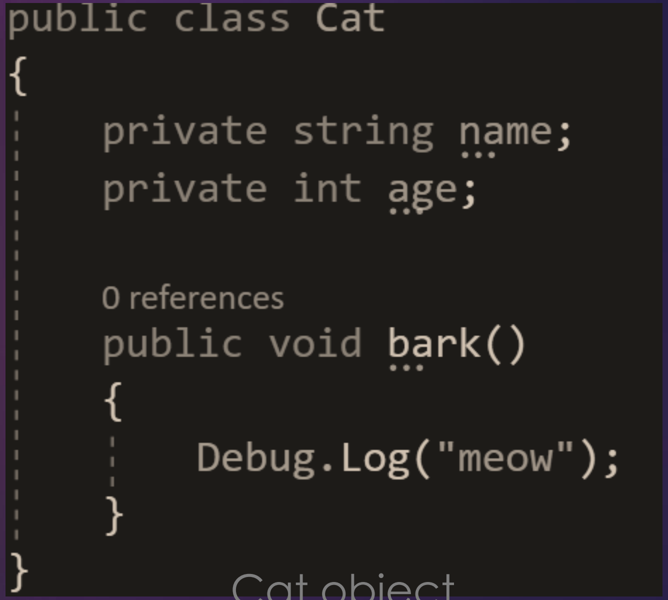
```

Dog object



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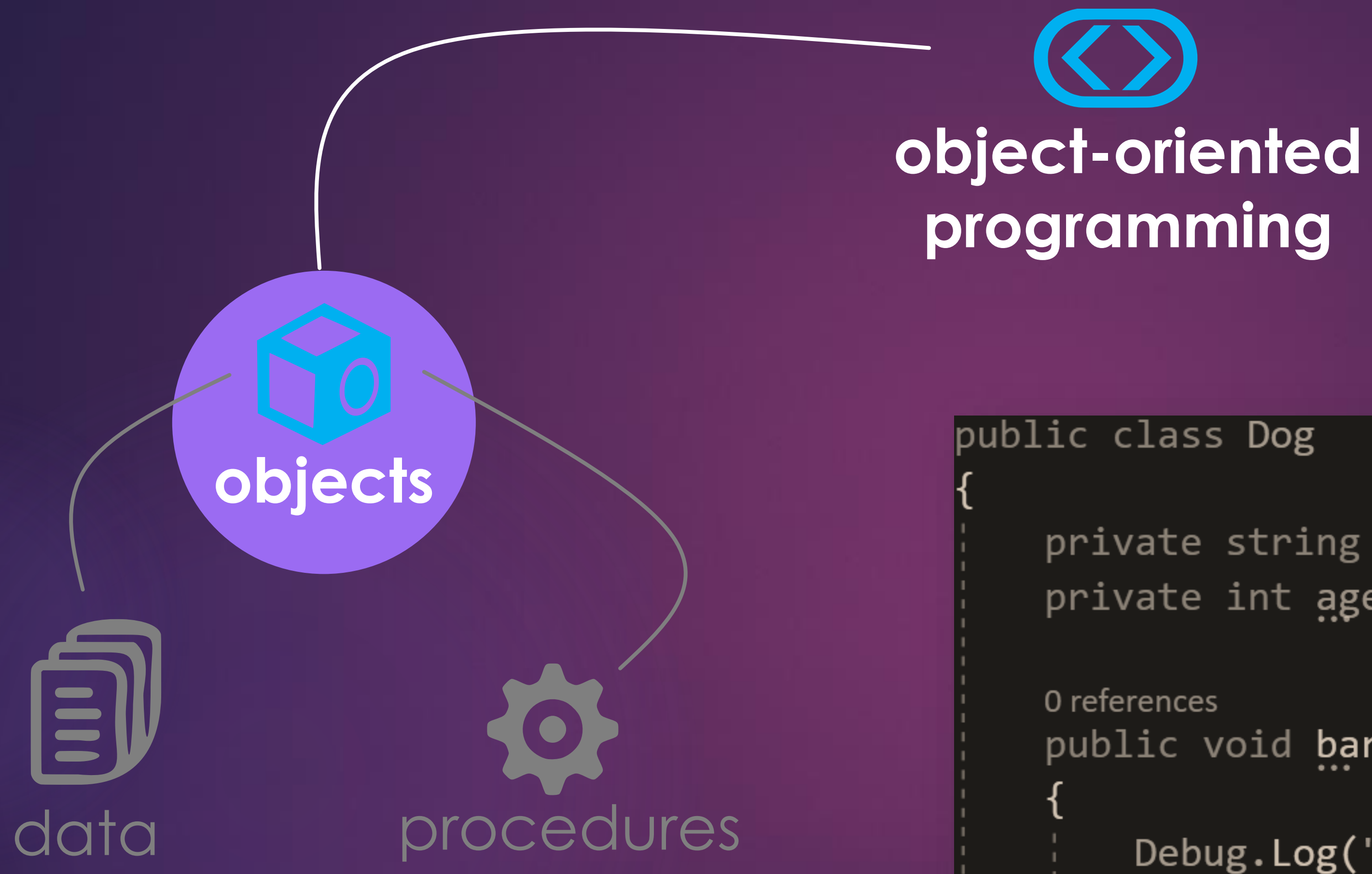
Cat object

- object-oriented programming



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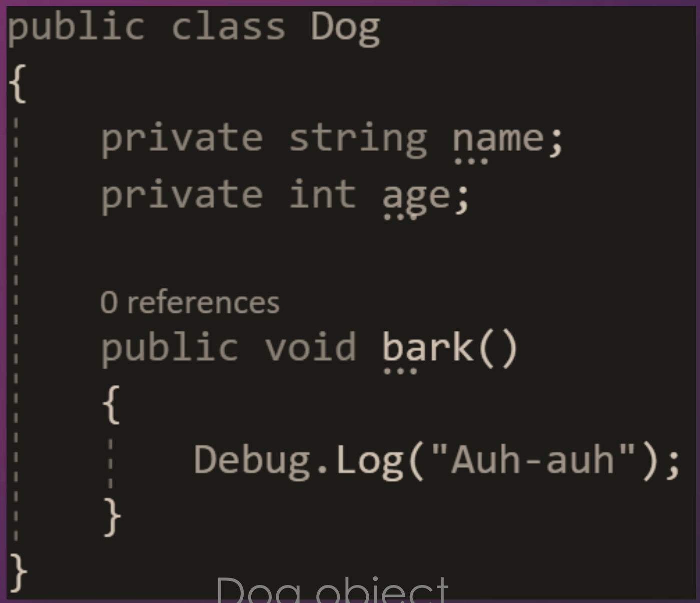
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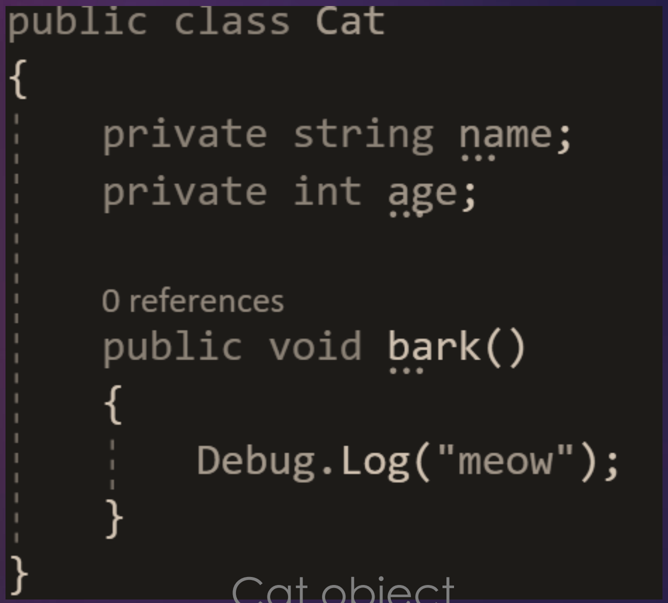
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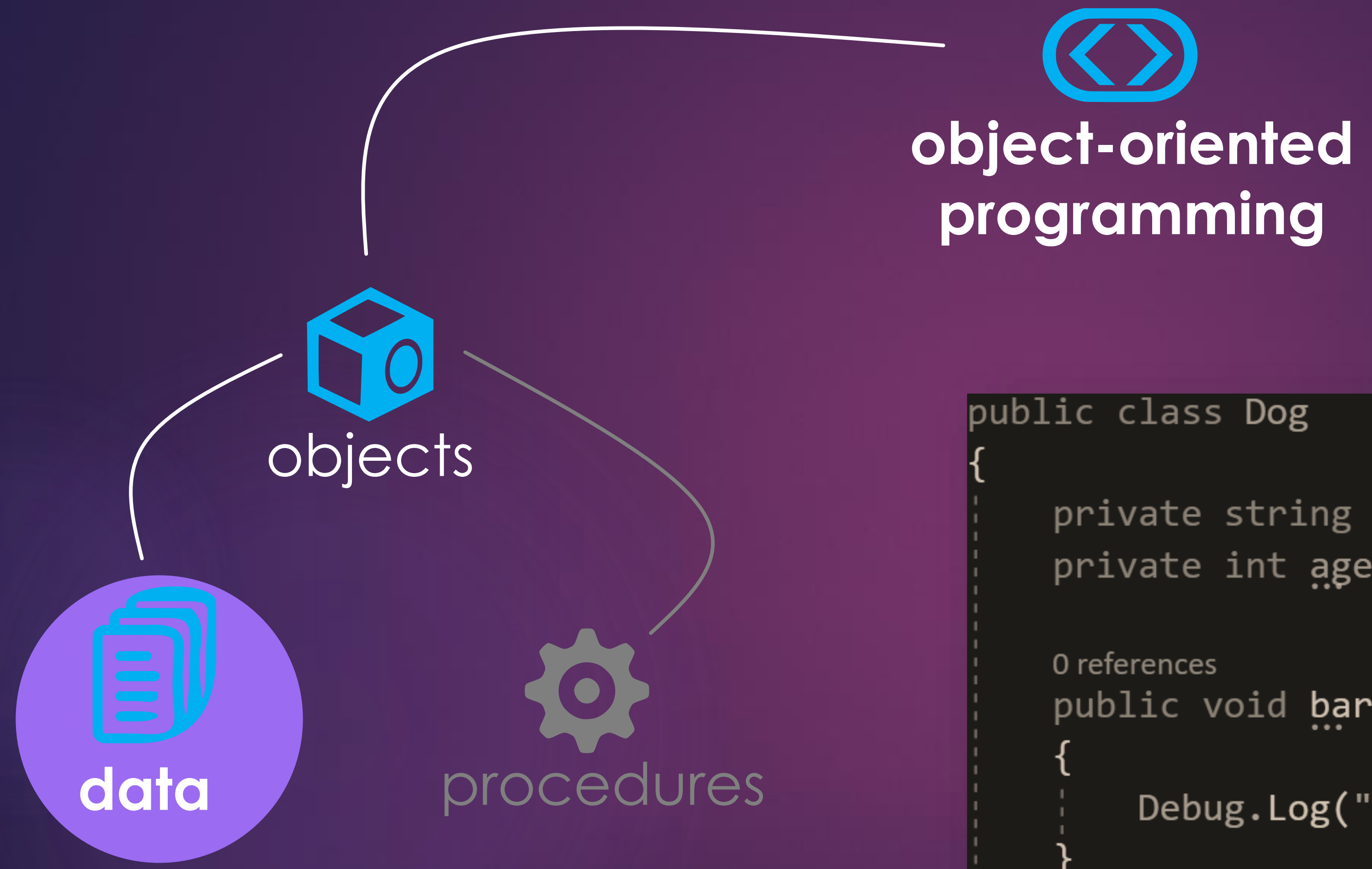

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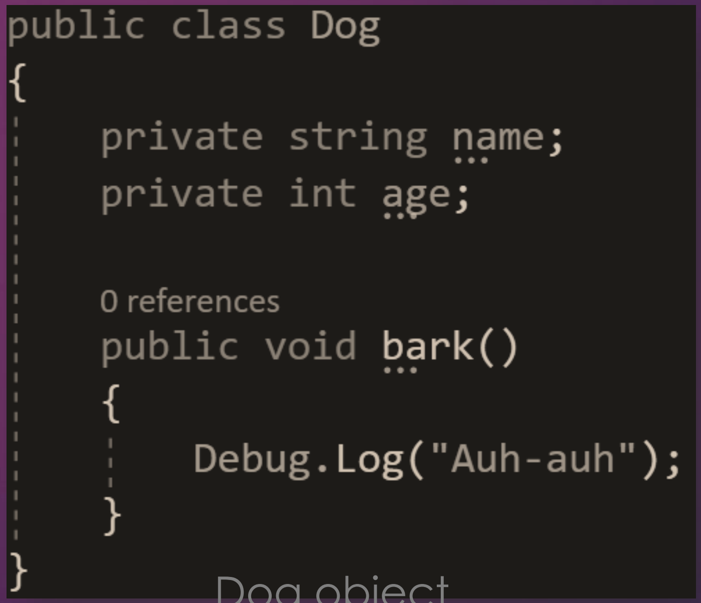

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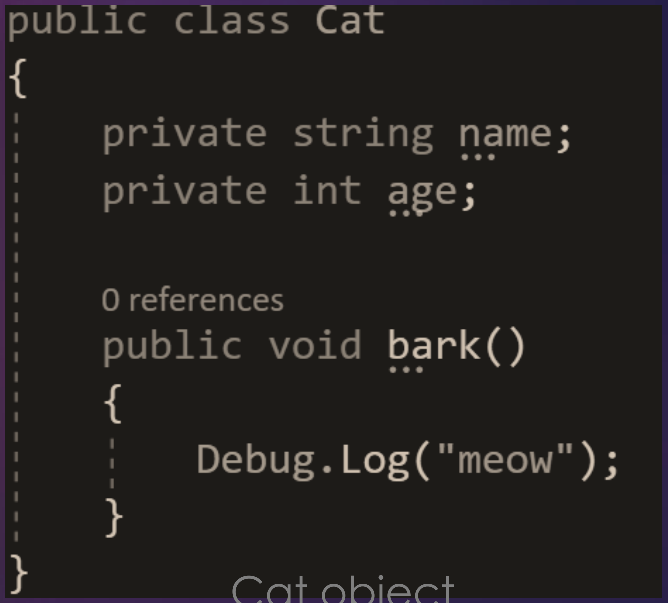

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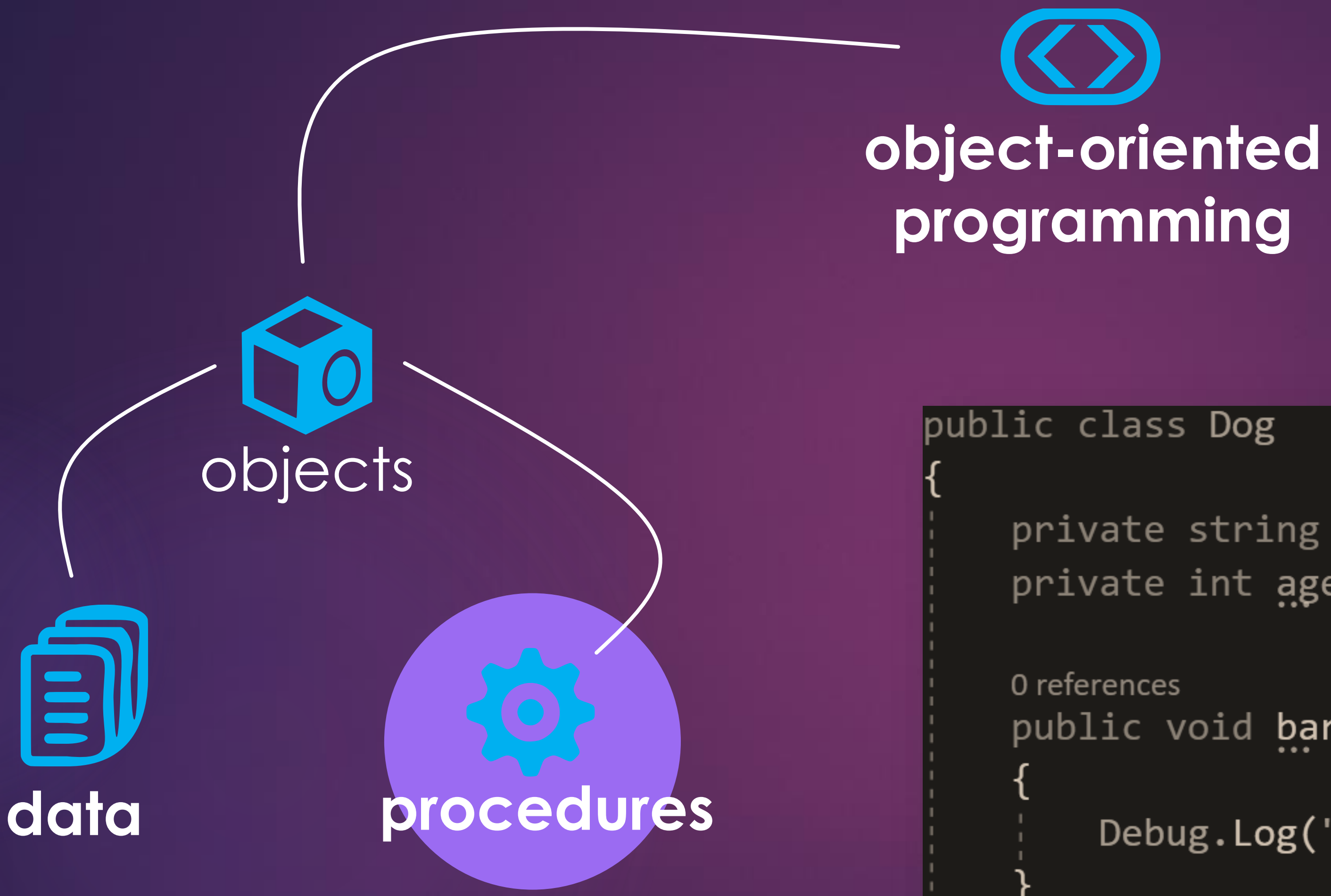

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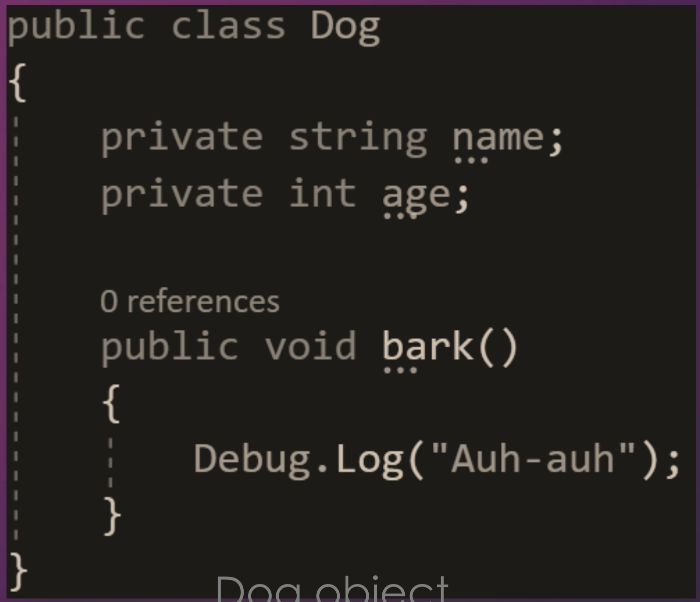

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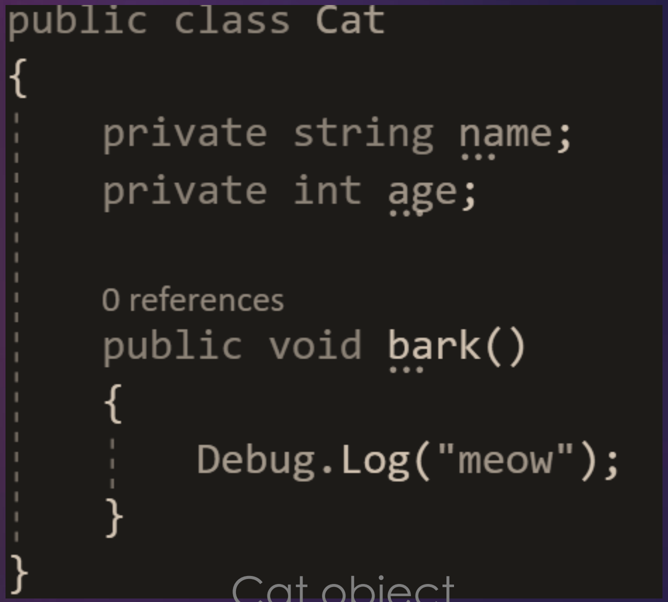

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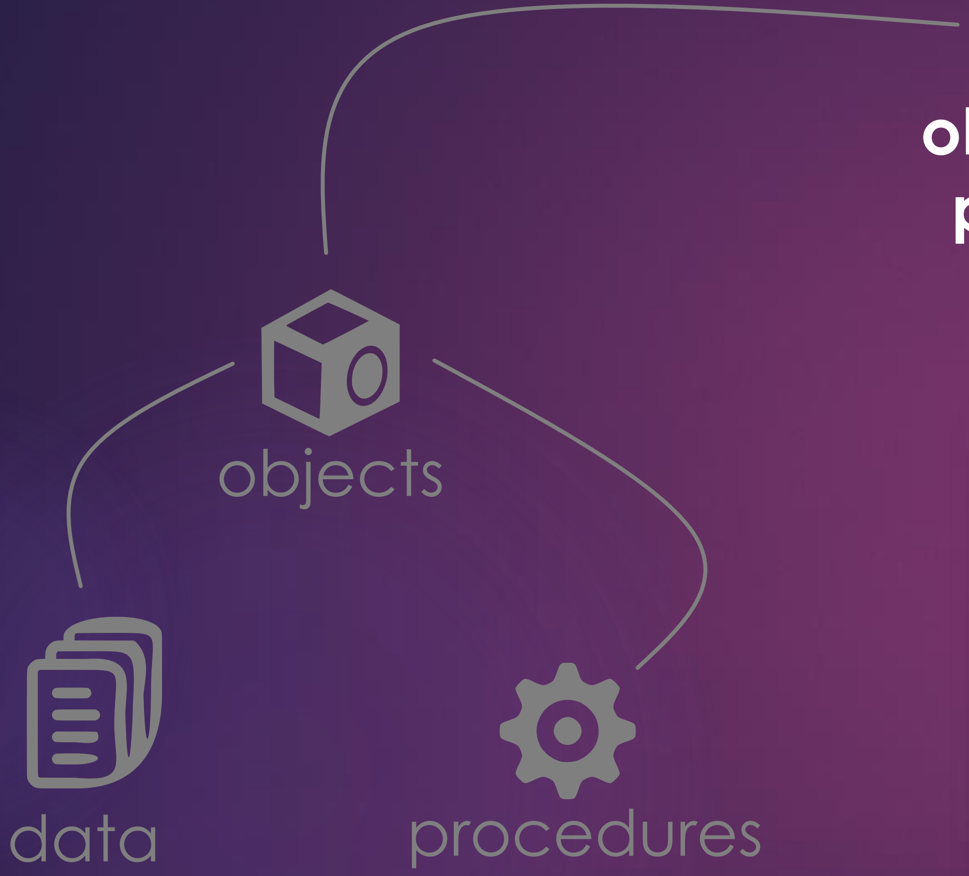

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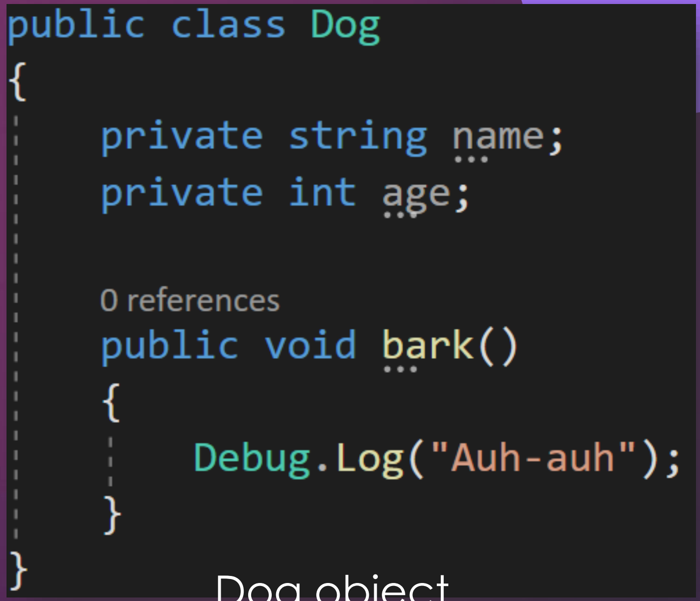

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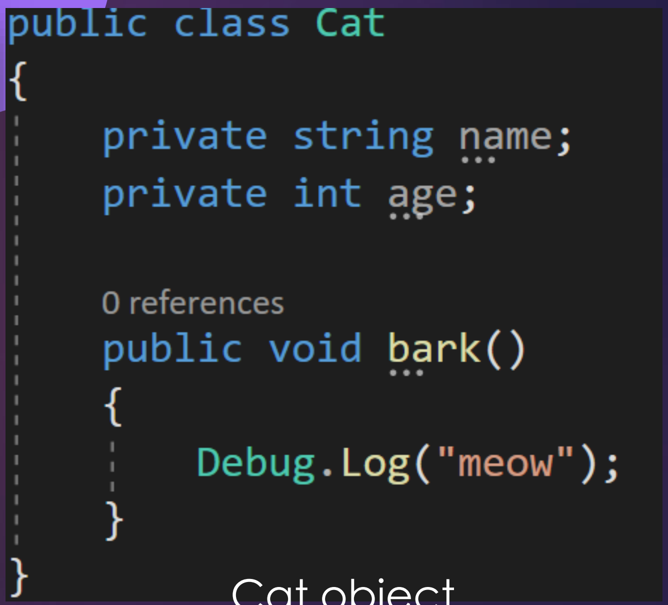

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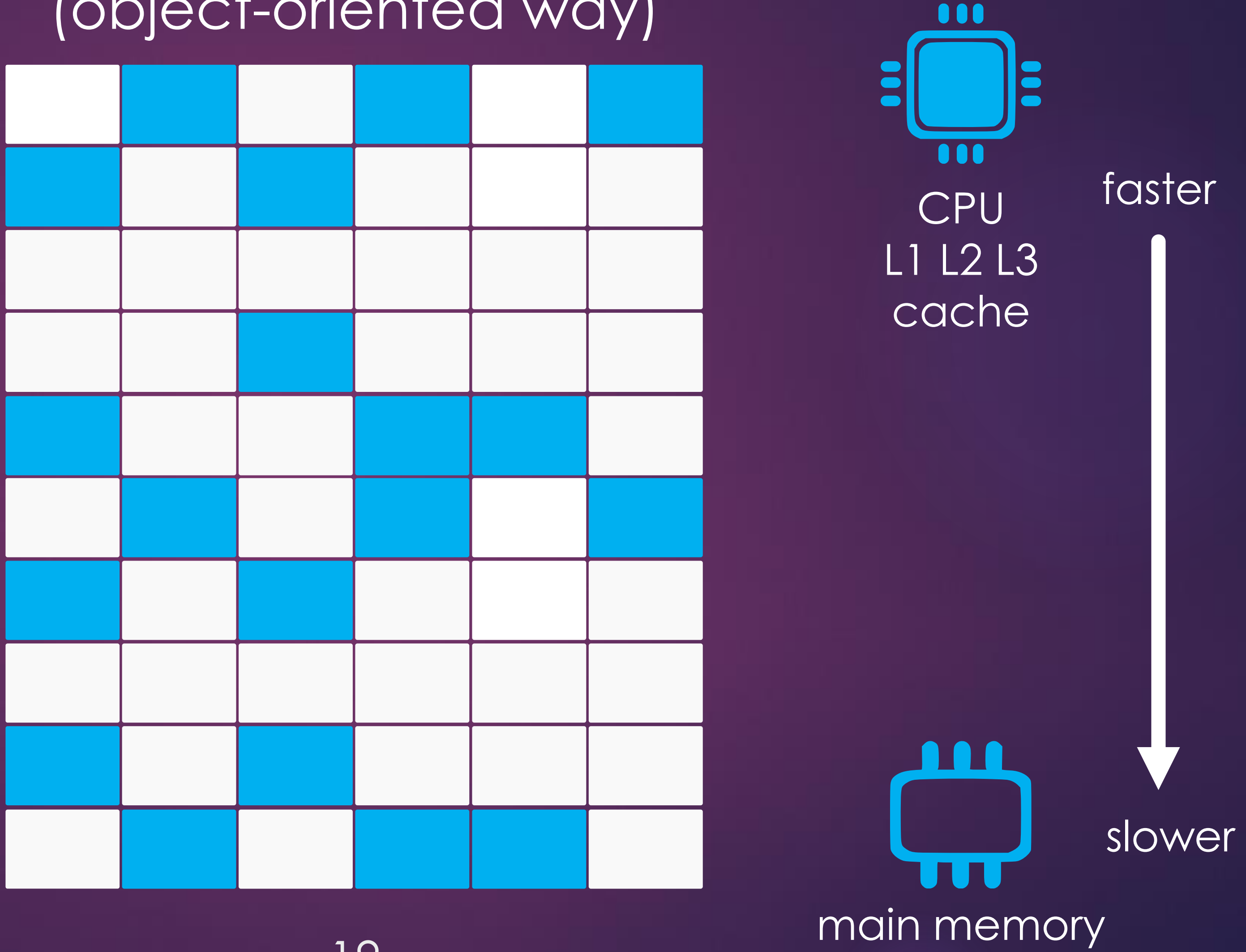
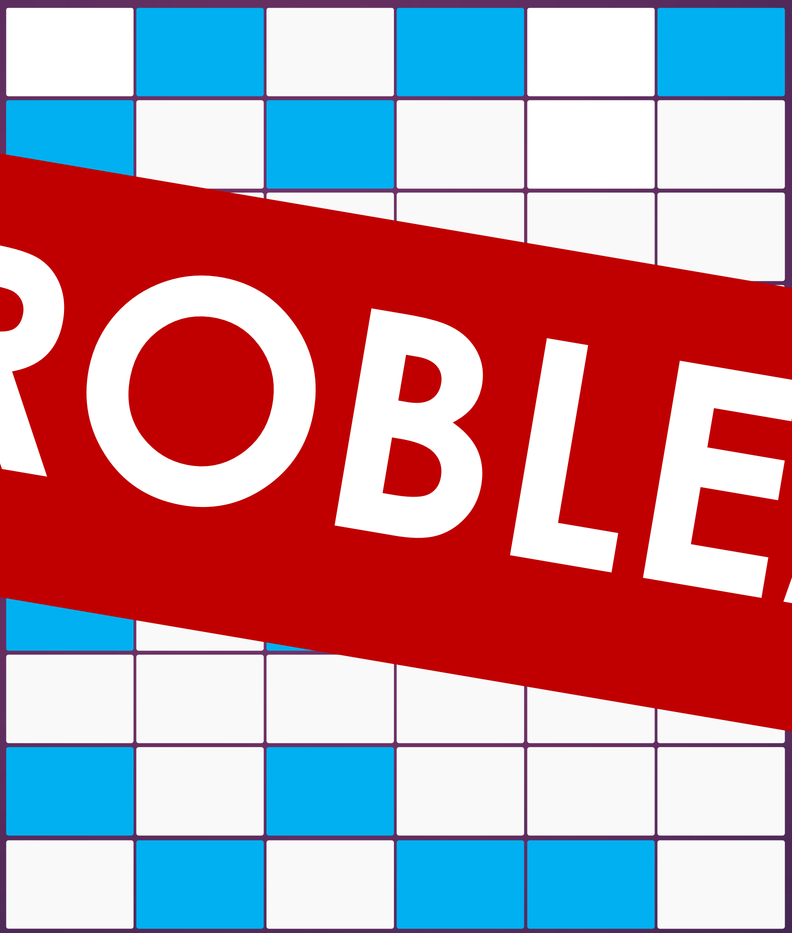
Cat object

data in memory (object-oriented way)



- object oriented programming

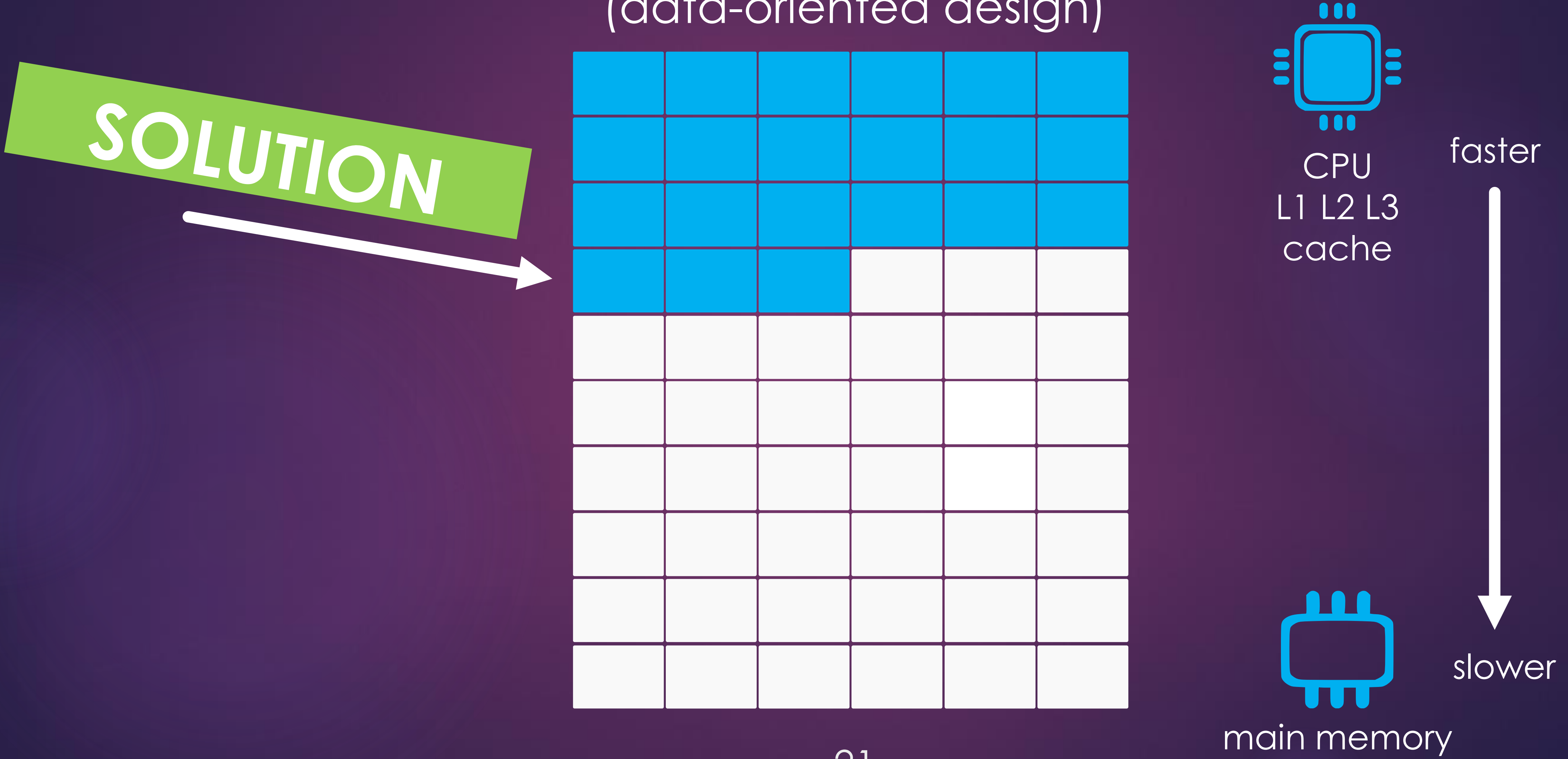
data in memory
(object-oriented way)



CPU
L1 L2 L3
cache
faster
slower
main memory

PROBLEM

- data oriented programming



- ECS overview

COMPONENT

- Represent the data of your application

ENTITY

- Things that populate your application
- Has no behaviour nor data
- Identifies which pieces of data belong together

SYSTEM

- Provides the logic that transforms the component data from its current state to its next state

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PRACTICE TIME

- used sources

- https://www.raywenderlich.com/7630142-entity-component-system-for-unity-getting-started
- https://docs.unity3d.com/Packages/com.unity.entities@0.14/manual/index.html

THANK **YOU** FOR **LISTENING!**