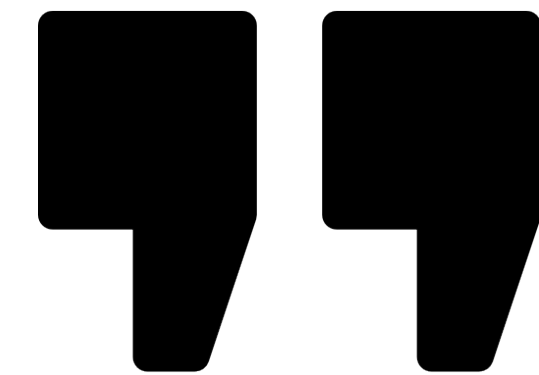
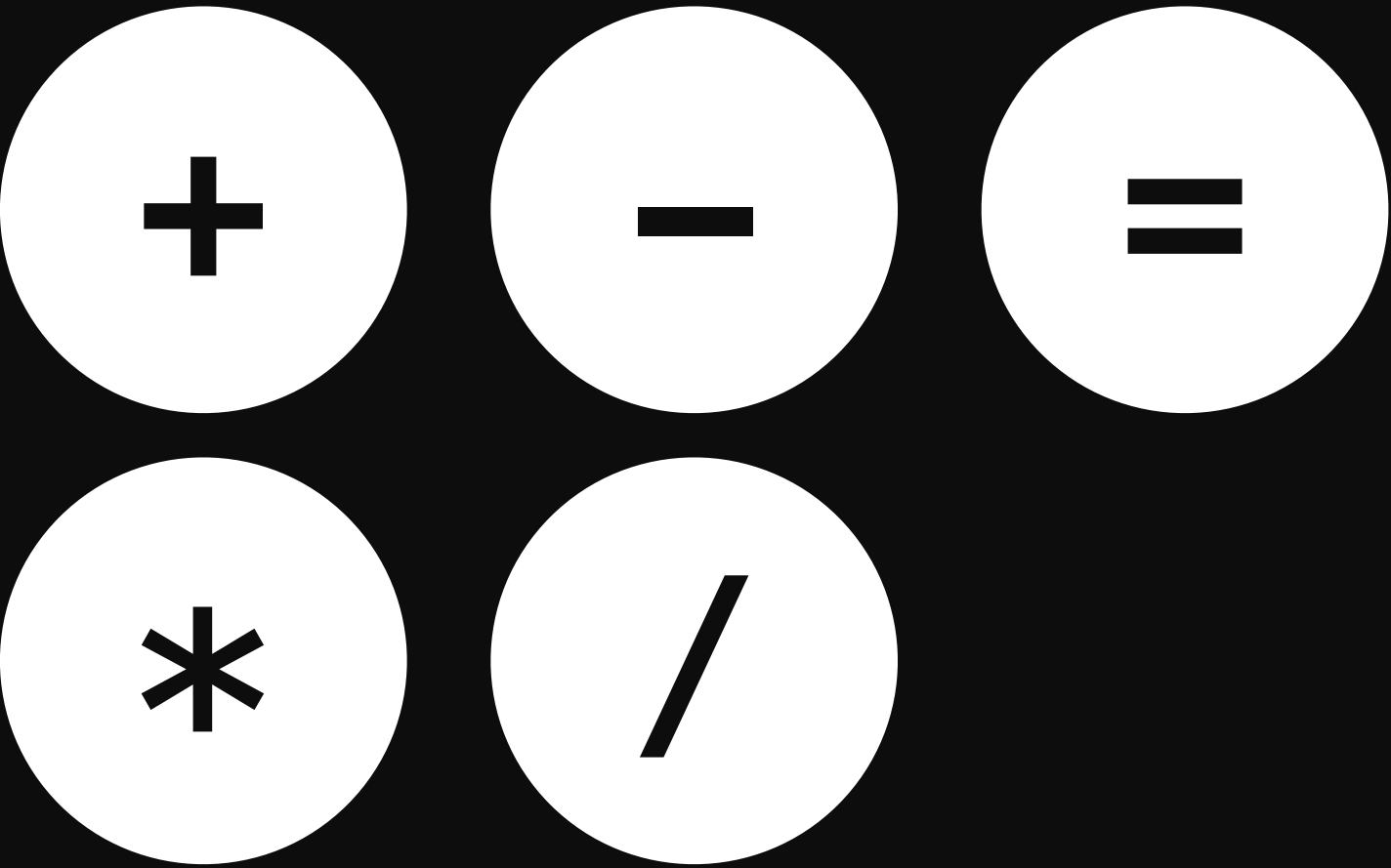
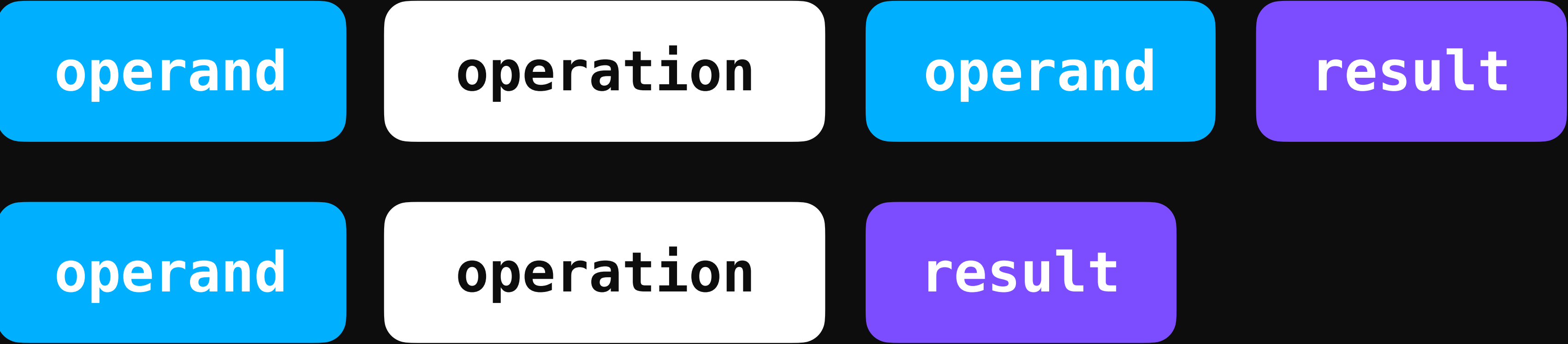


Within the **DEFINED CONTEXT**, something is **Atomic**, IF it **WILL HAPPEN** in its **ENTIRETY**, without anything else **HAPPENING SIMULTANEOUSLY** in the **SAME CONTEXT**.





`i++`

`get value of i`

`increment value of i`

`store value of i`

INDIVISIBLE

UNINTERRUPTIBLE

Go Routine 1

read DATA

write DATA

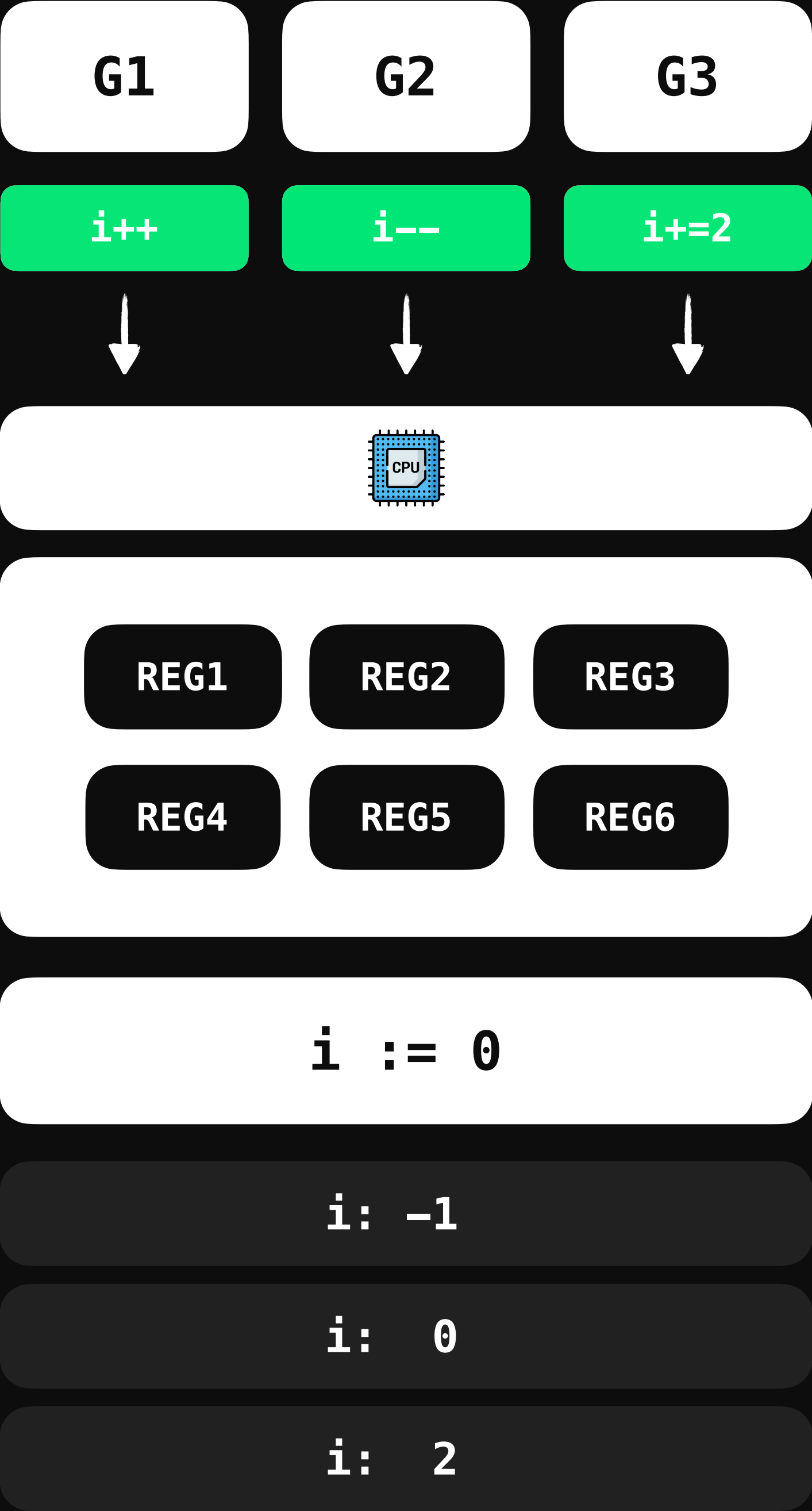
LOCK

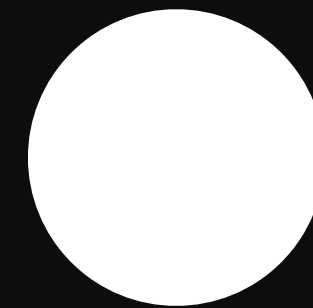
DATA

UNLOCK

Go Routine 2

write DATA





EMPTY REGISTER



FULL REGISTER



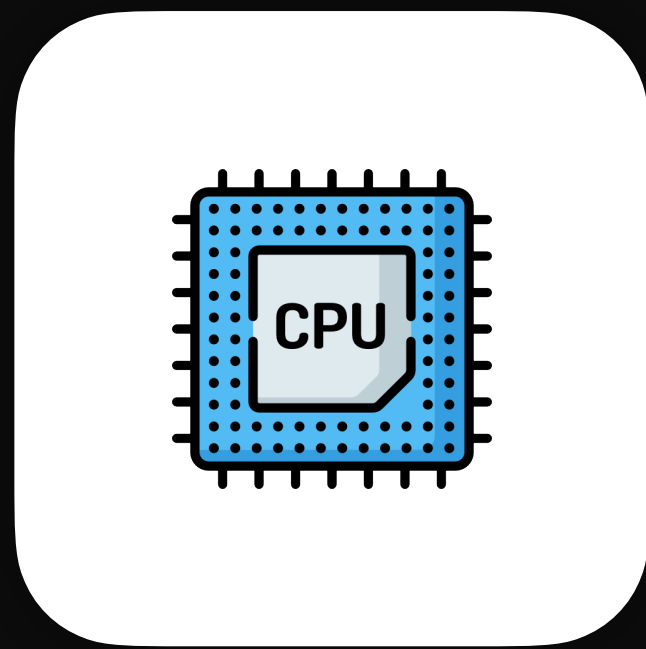
store instructions



store results



manipulate data



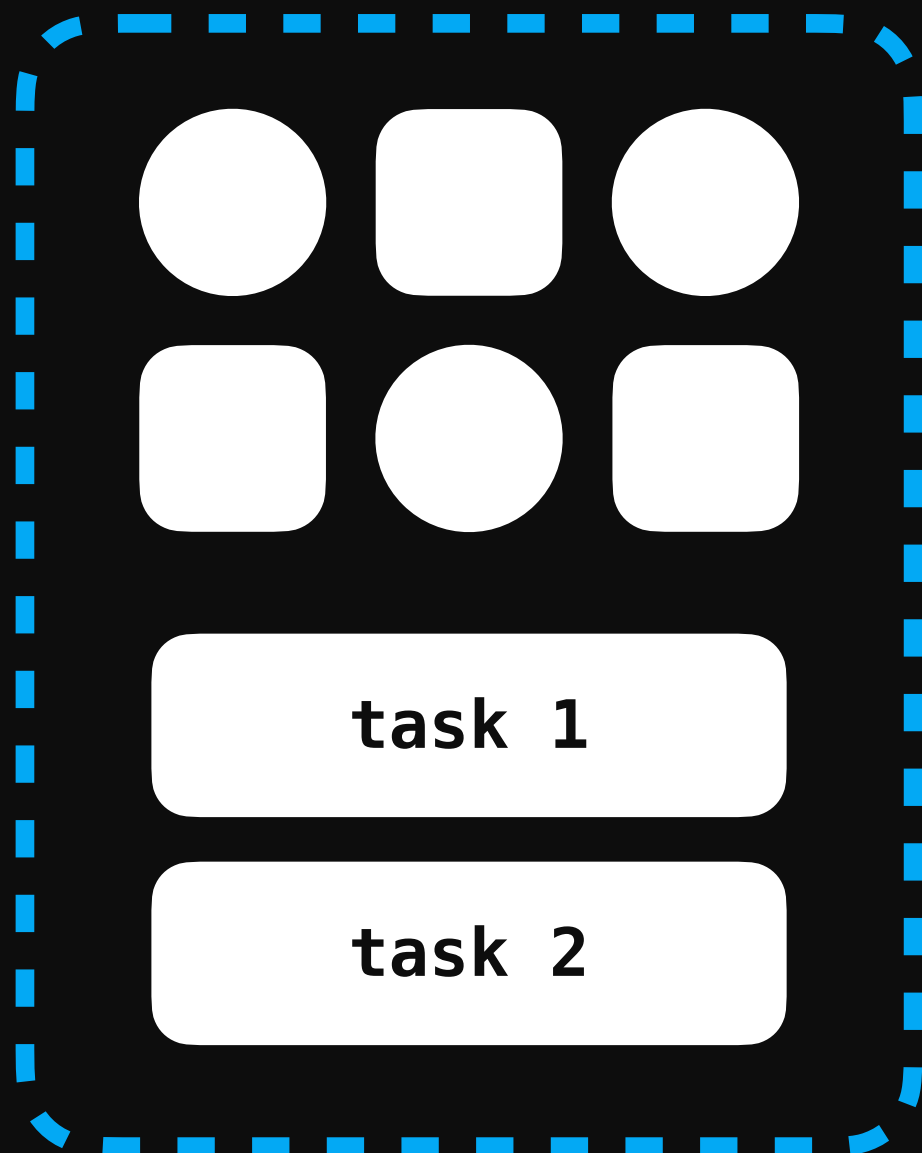
CPU



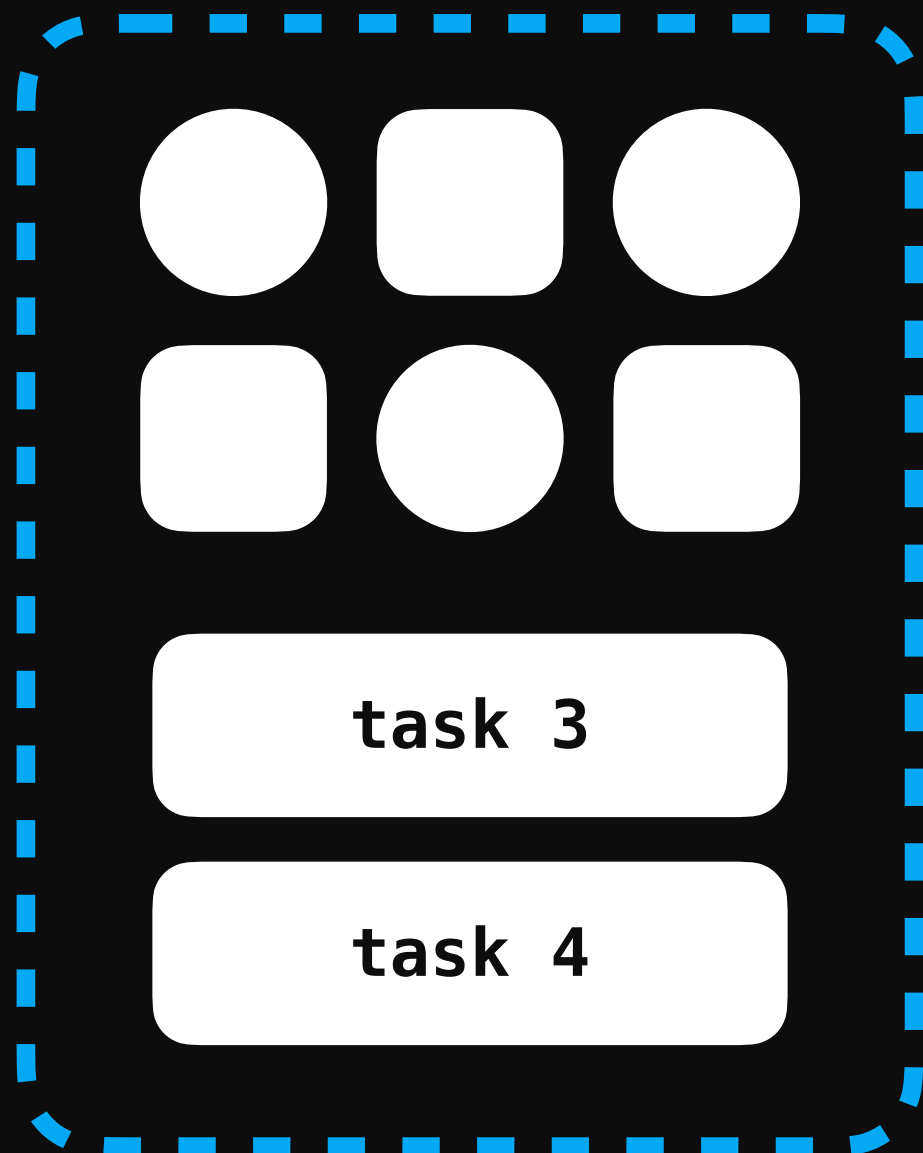
OS Kernel



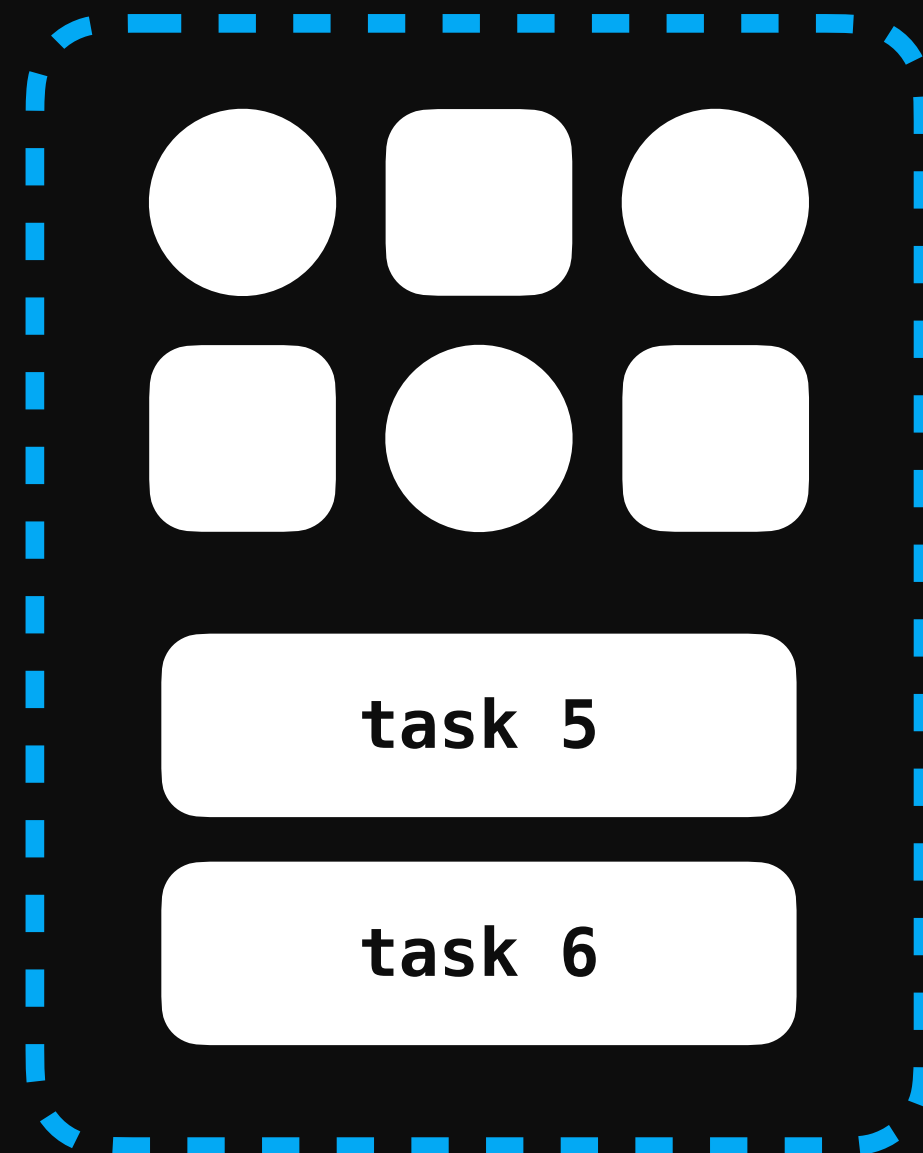
THREAD 1



THREAD 2



THREAD 3



Load__

int32

Add__

int64

Store__

uint32

Swap__

uint64

CompareAndSwap__

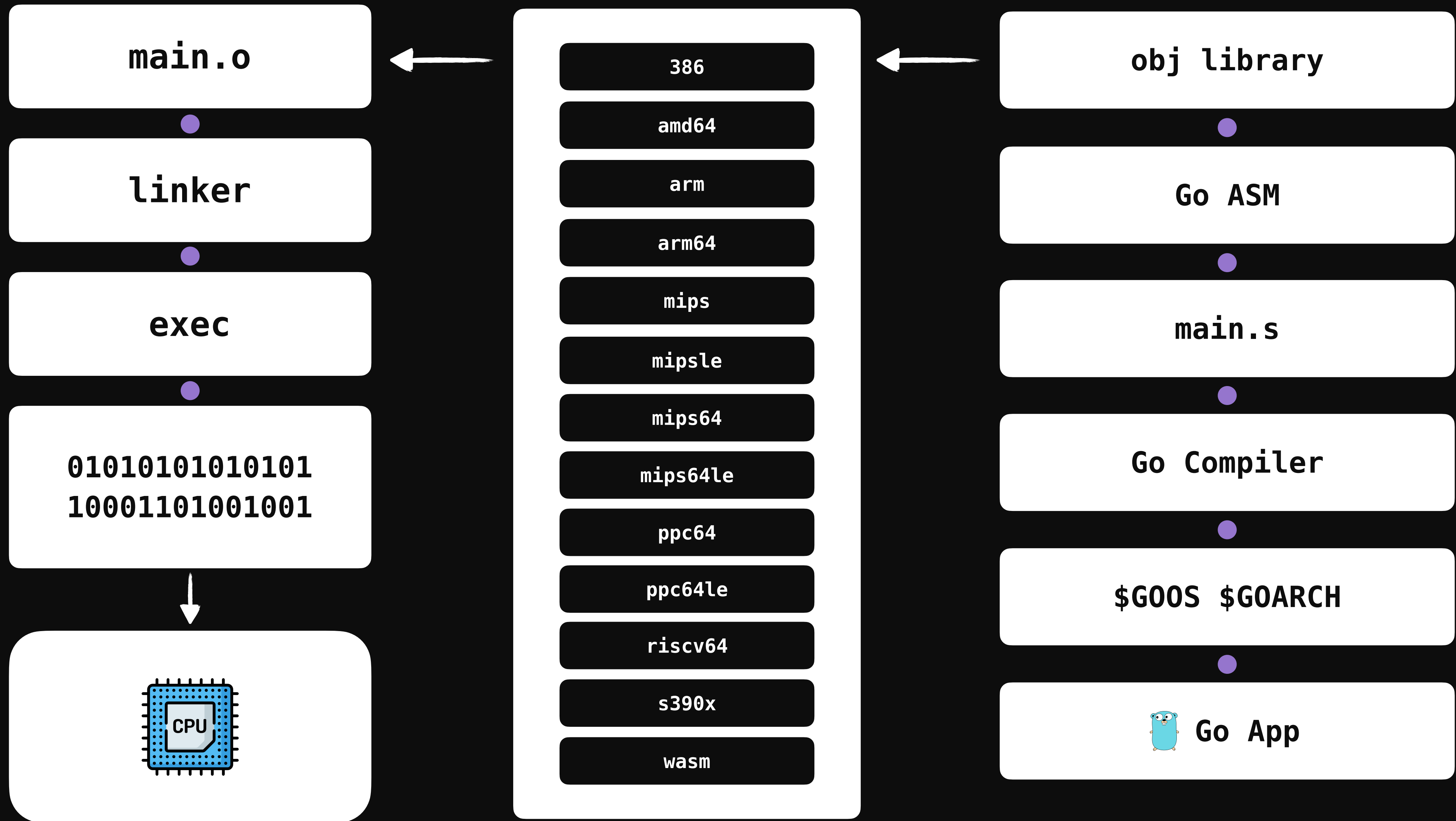
uintptr

Pointer

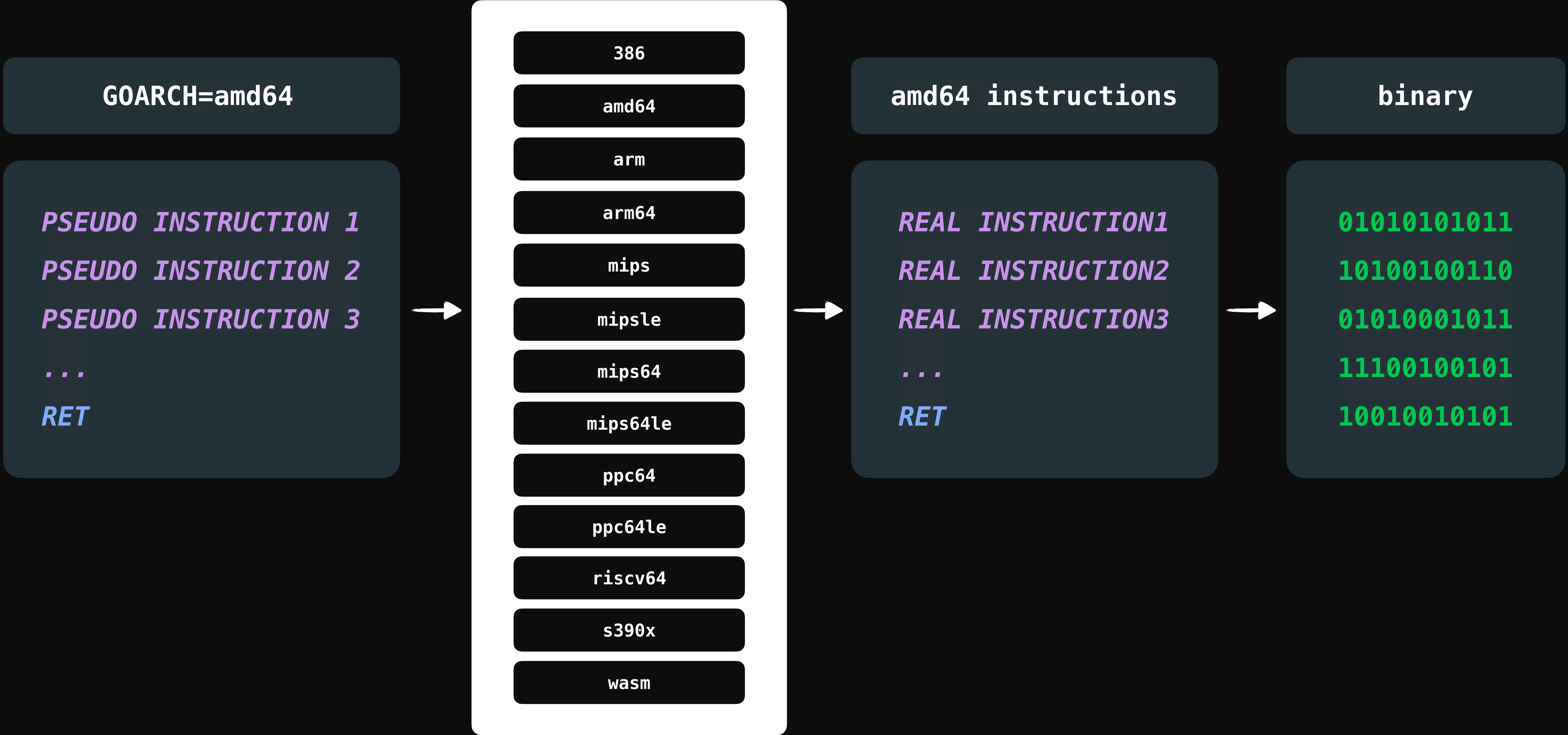
`atomic.Value`

`Store()`

`Load()`











Mostly works with numbers



`atomic.Value` is generic



`atomic.Value` has limited context



`atomic.Value` is not always atomic