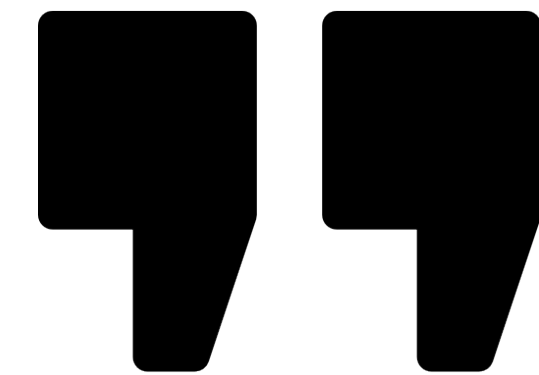
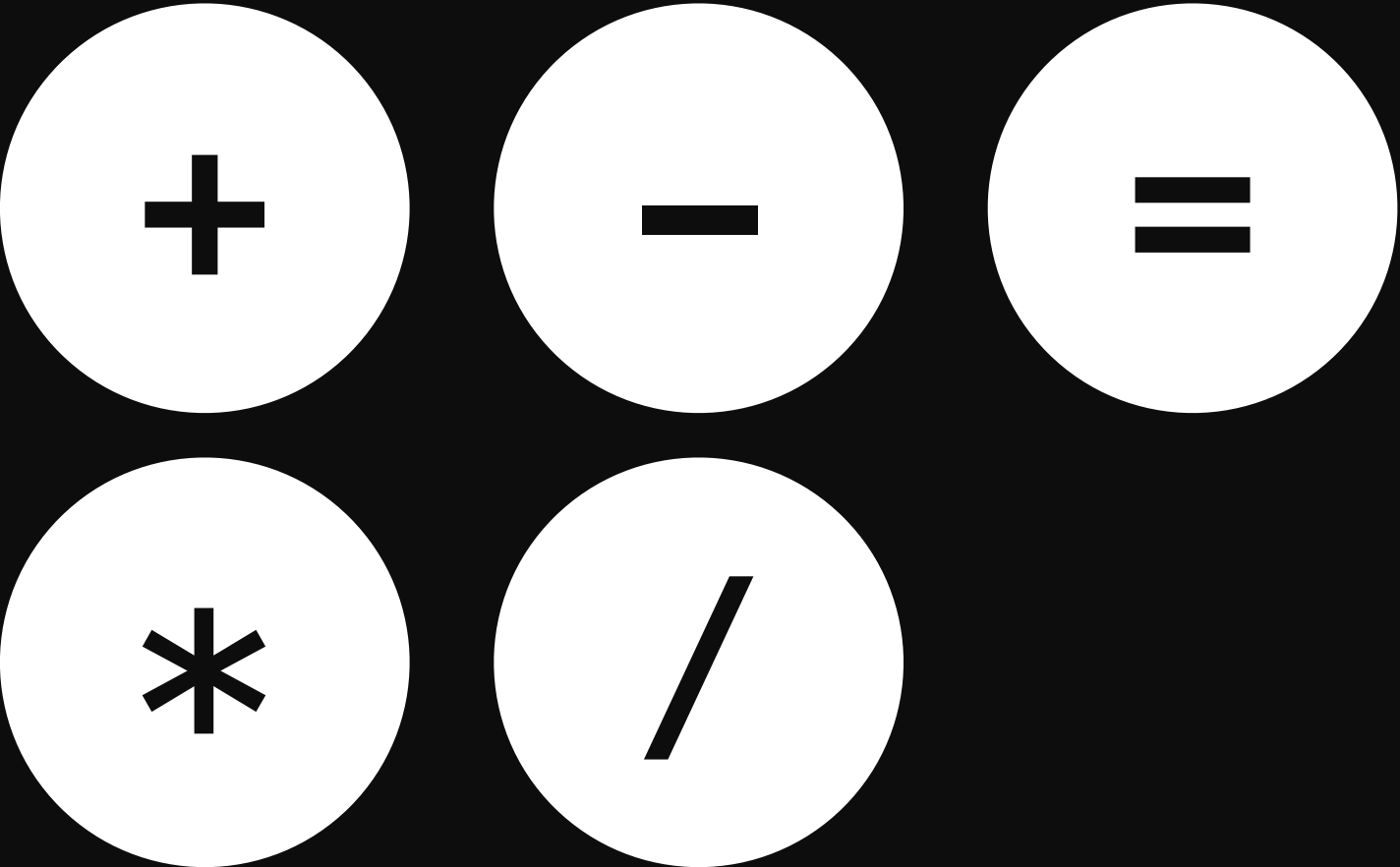


Within the **DEFINED CONTEXT**, something is **Atomic**, IF it **WILL HAPPEN** in its **ENTIRETY**, without anything else **HAPPENING SIMULTANEOUSLY** in the **SAME CONTEXT**.



operand operation operand result

operand operation result



`i++`

`get value of i`

`increment value of i`

`store value of i`

INDIVISIBLE

UNINTERRUPTIBLE

Go Routine 1

read DATA

write DATA

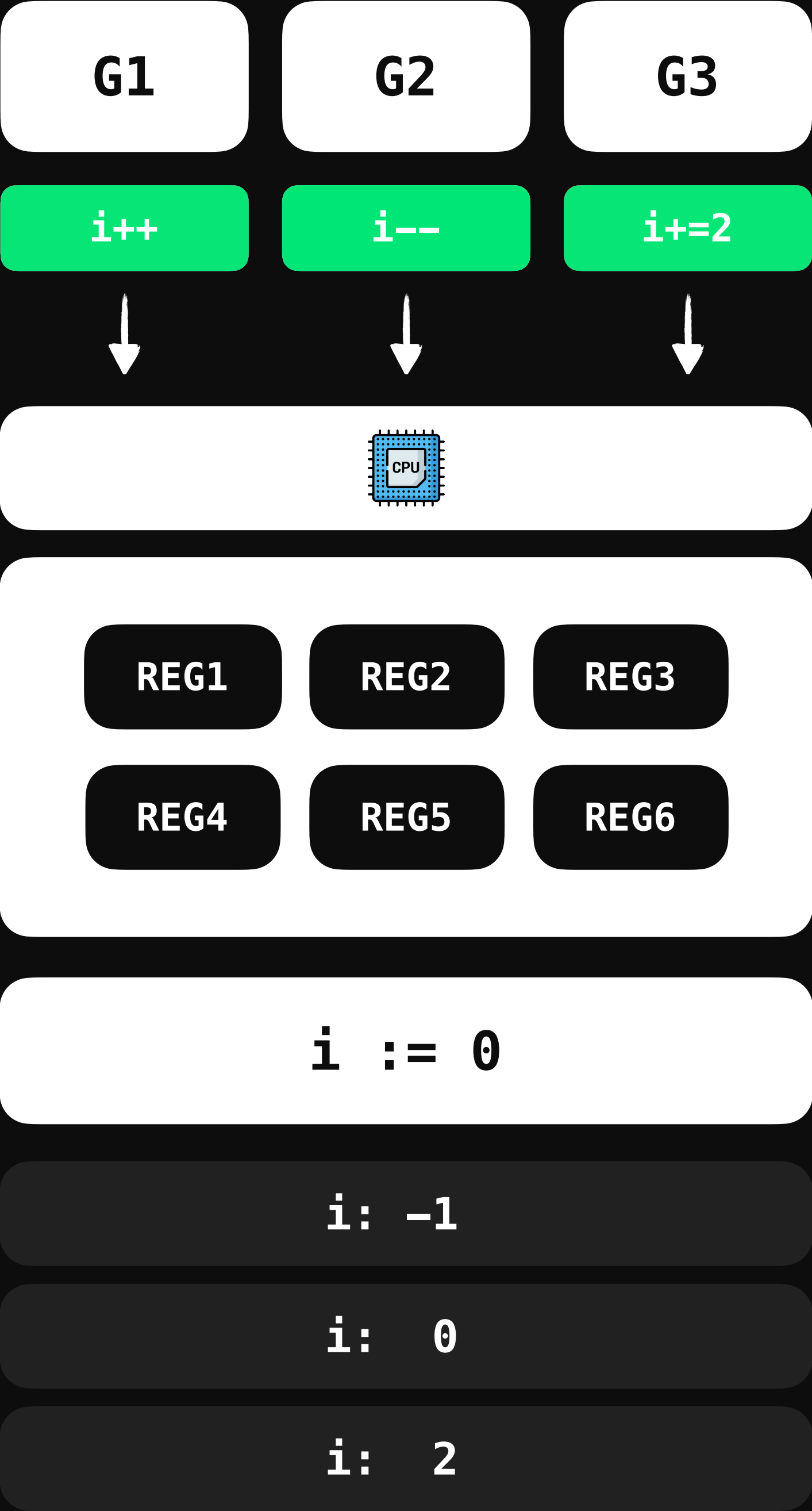
LOCK

DATA

UNLOCK

Go Routine 2

write DATA



Load__

int32

Add__

int64

Store__

uint32

Swap__

uint64

CompareAndSwap__

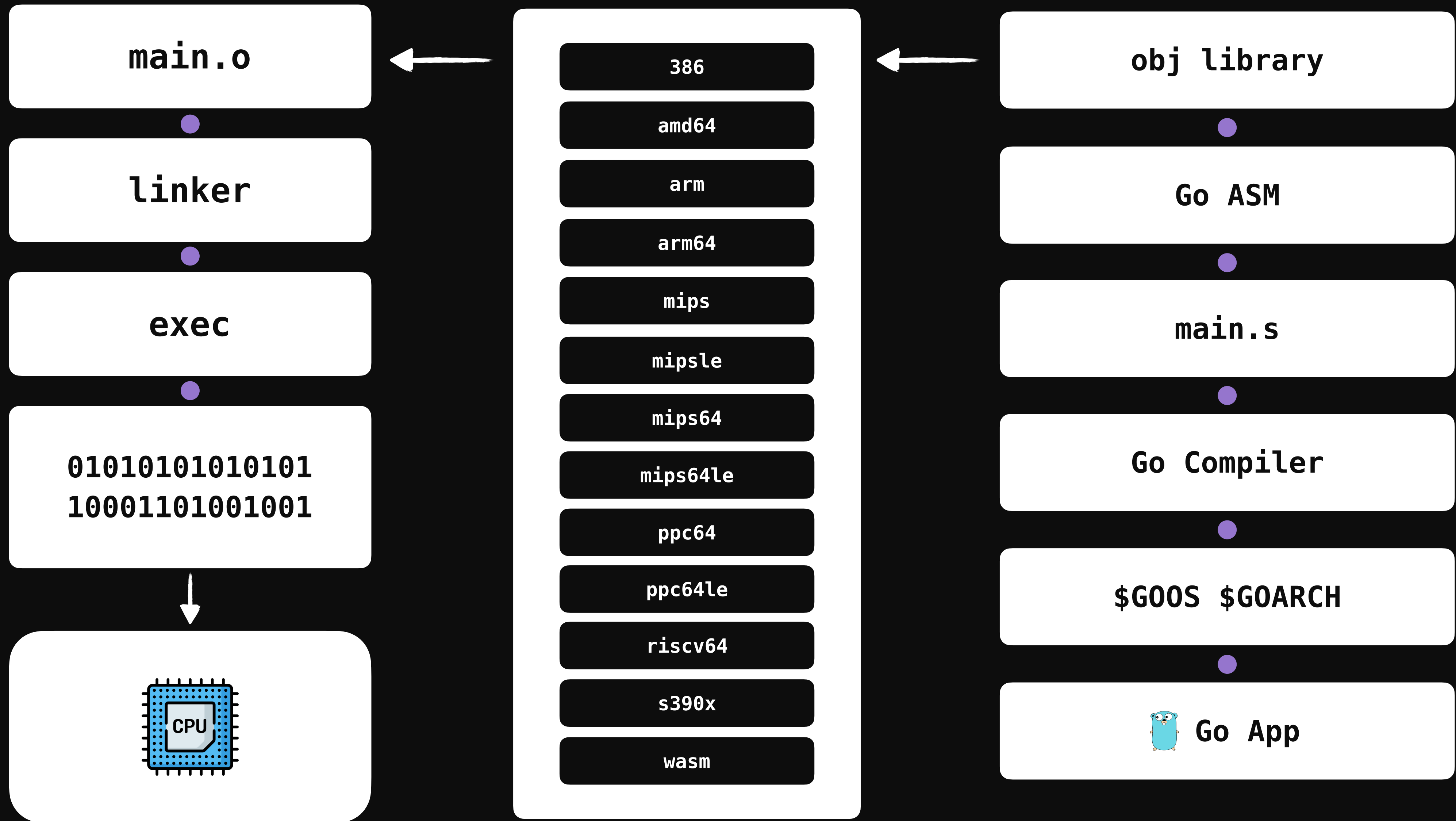
uintptr

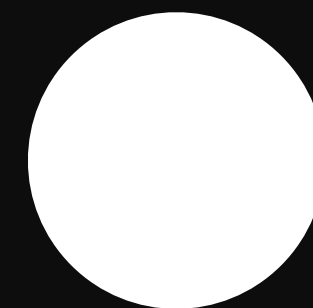
Pointer

`atomic.Value`

`Store()`

`Load()`





EMPTY REGISTER



FULL REGISTER



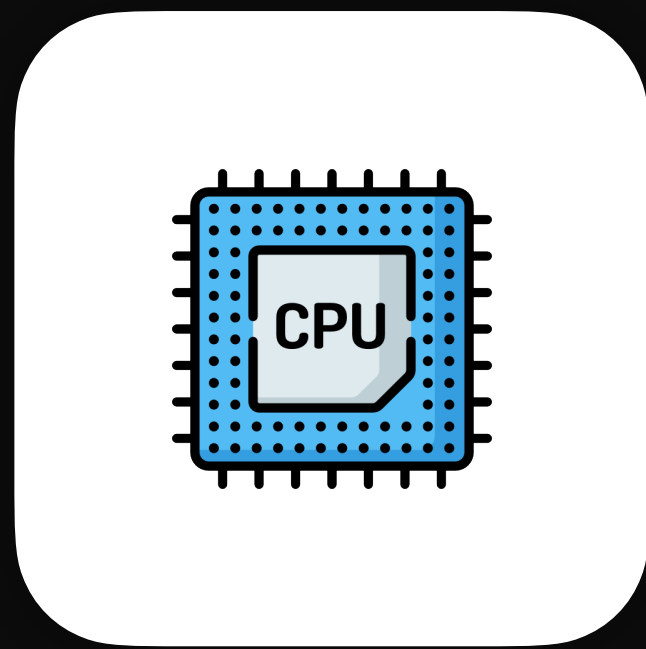
store instructions



store results



manipulate data



CPU



OS Kernel



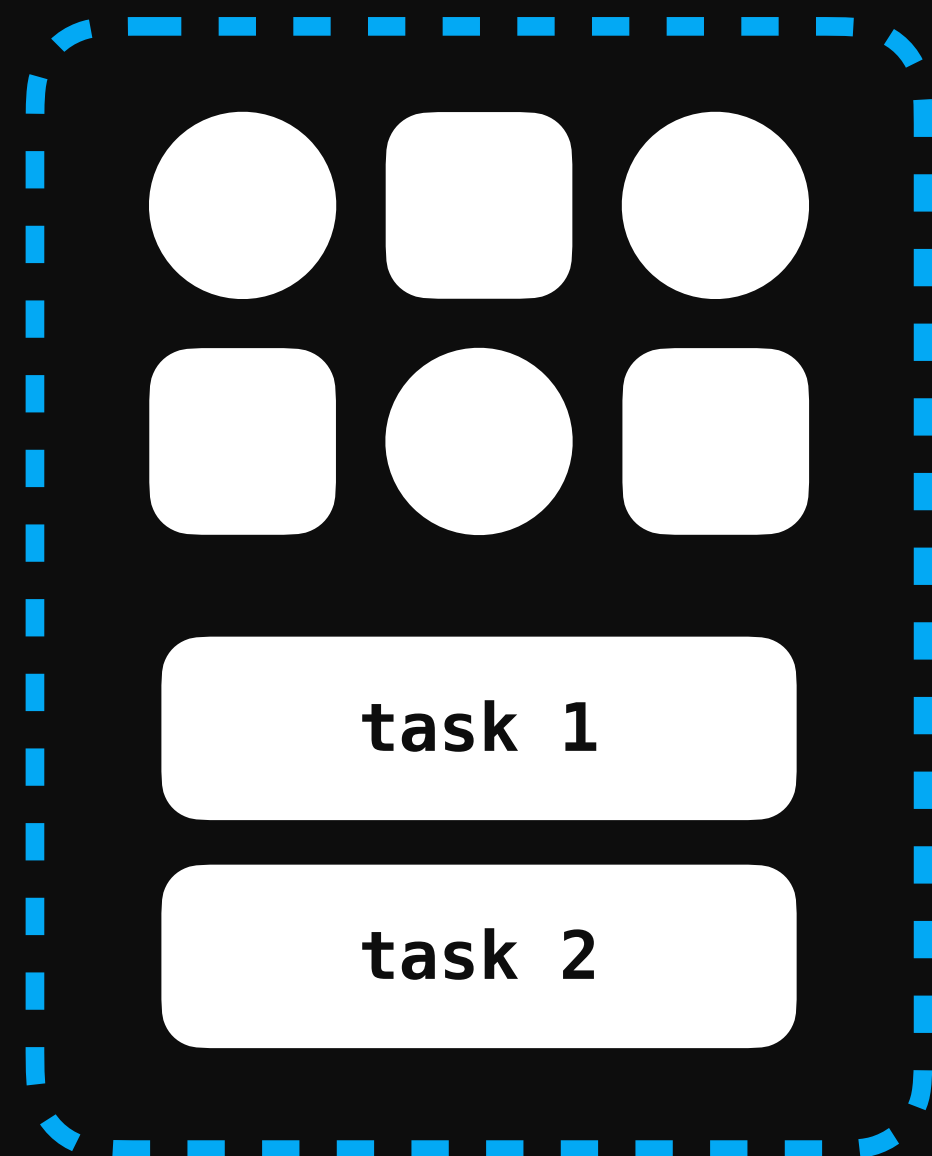
THREAD 1



THREAD 2

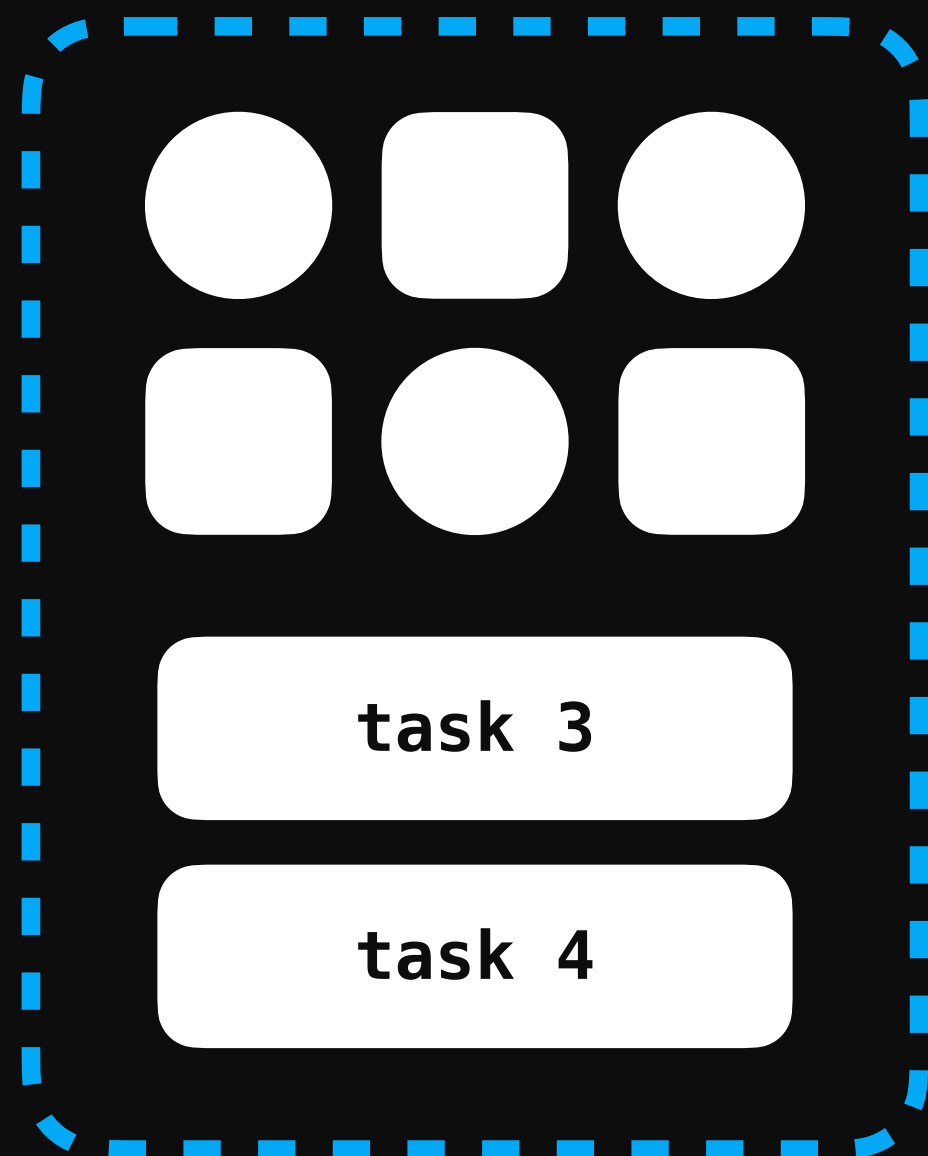


THREAD 3



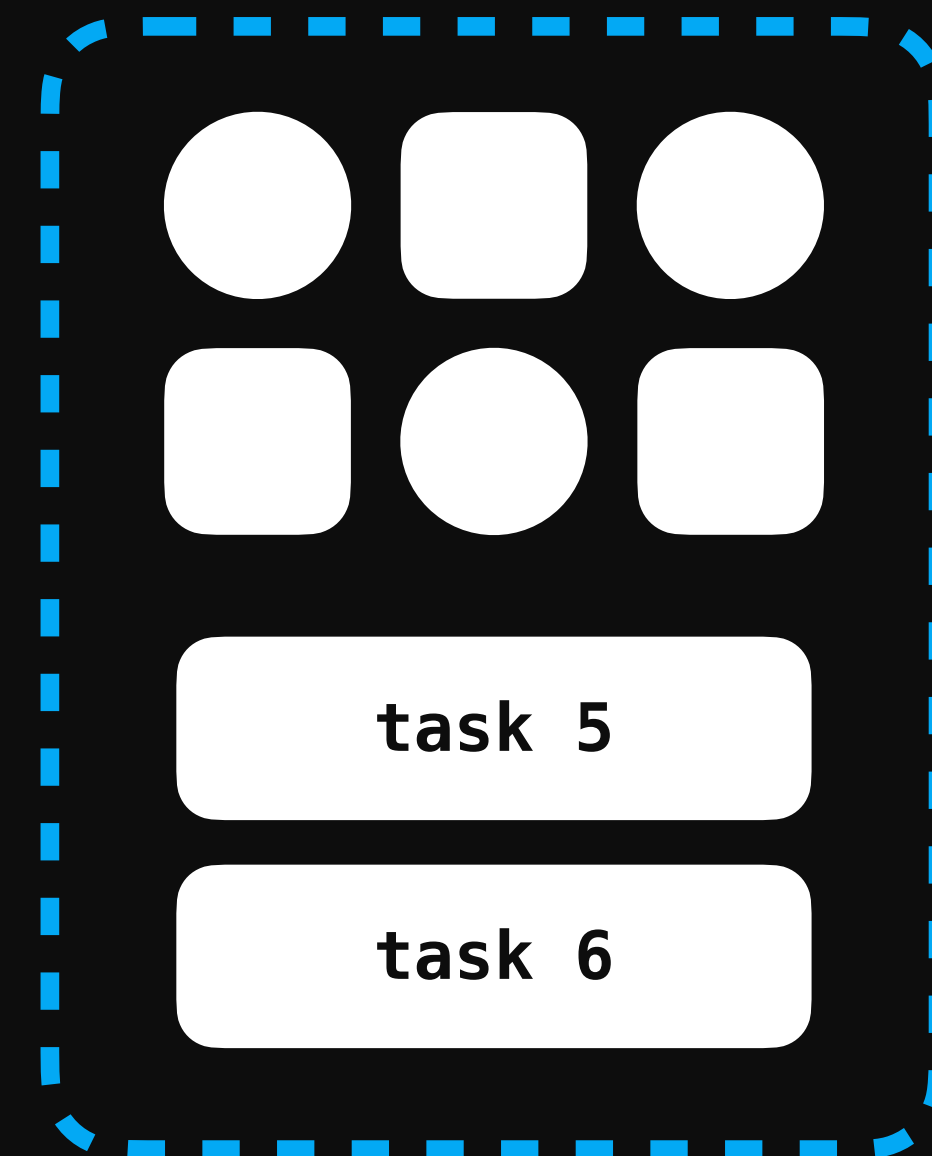
task 1

task 2



task 3

task 4



task 5

task 6



