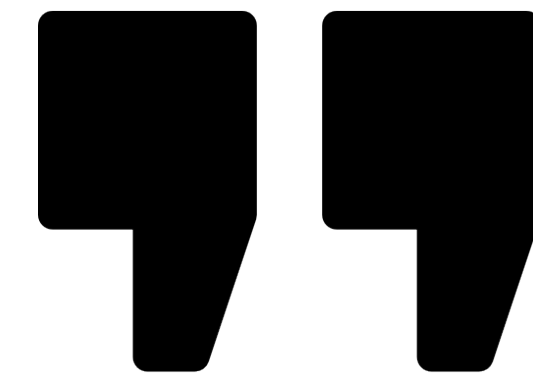
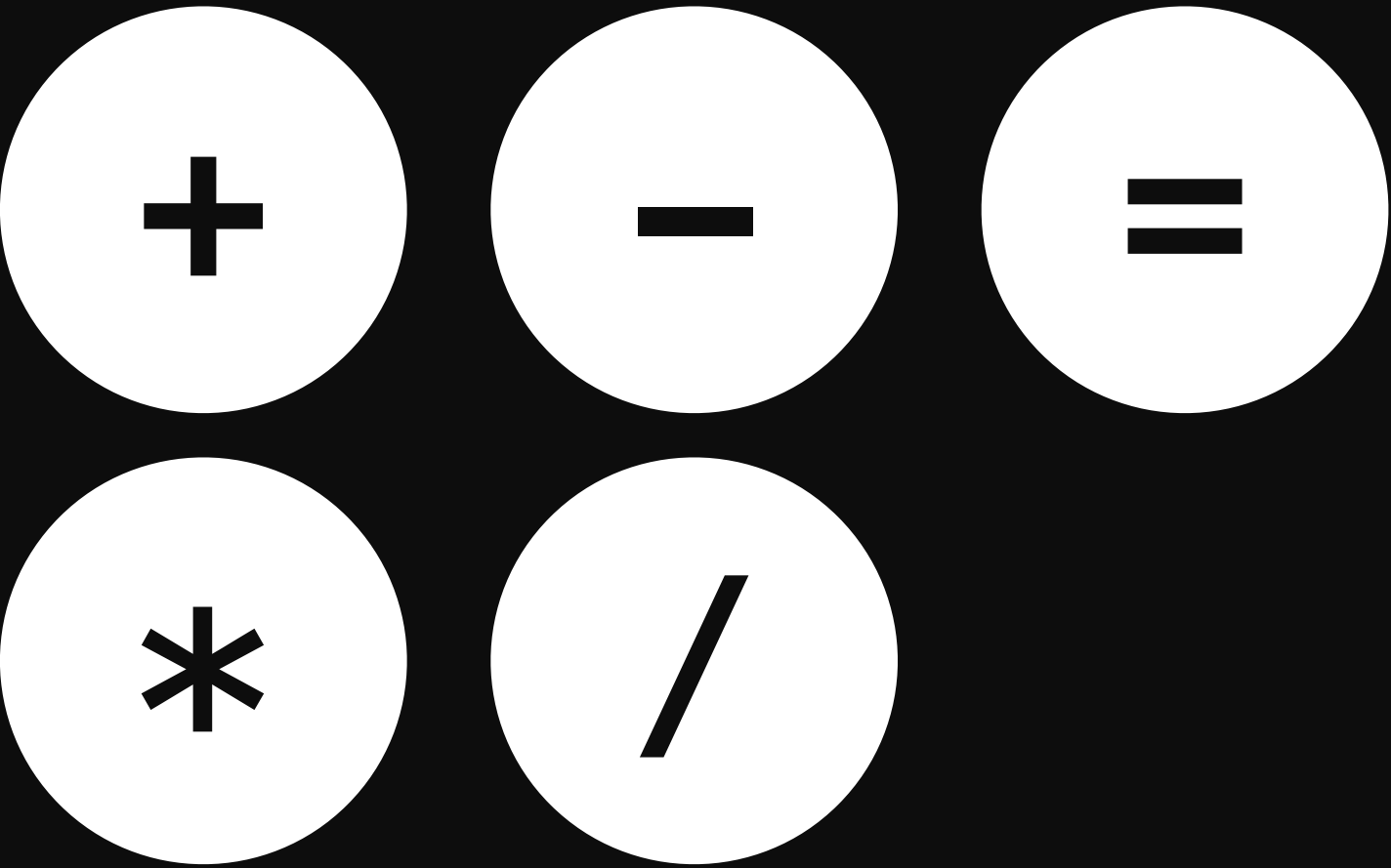
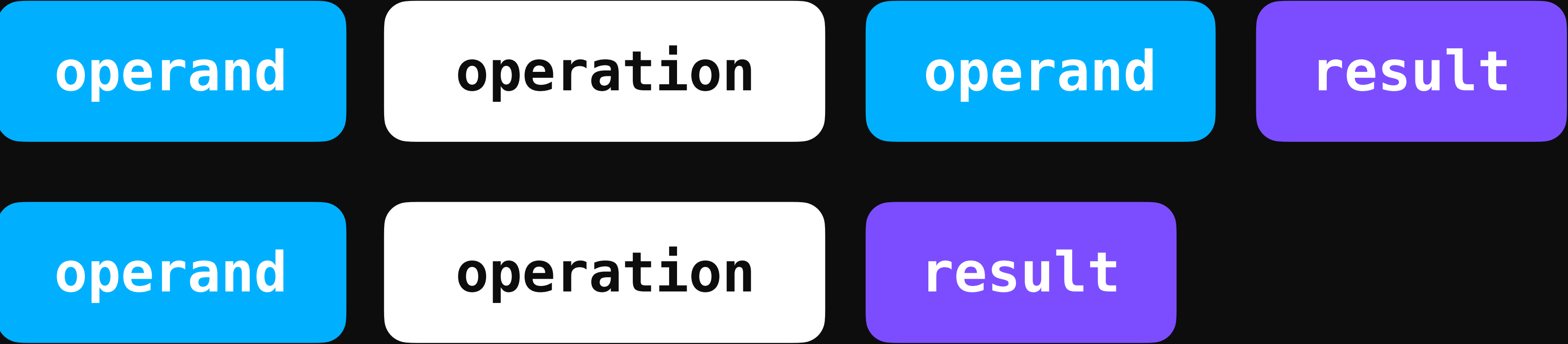


Within the **DEFINED CONTEXT**, something is **Atomic**, IF it **WILL HAPPEN** in its **ENTIRETY**, without anything else **HAPPENING SIMULTANEOUSLY** in the **SAME CONTEXT**.





**`i++`**

**`get value of i`**

**`increment value of i`**

**`store value of i`**

**INDIVISIBLE**

**UNINTERRUPTIBLE**

Go Routine 1

read DATA

write DATA

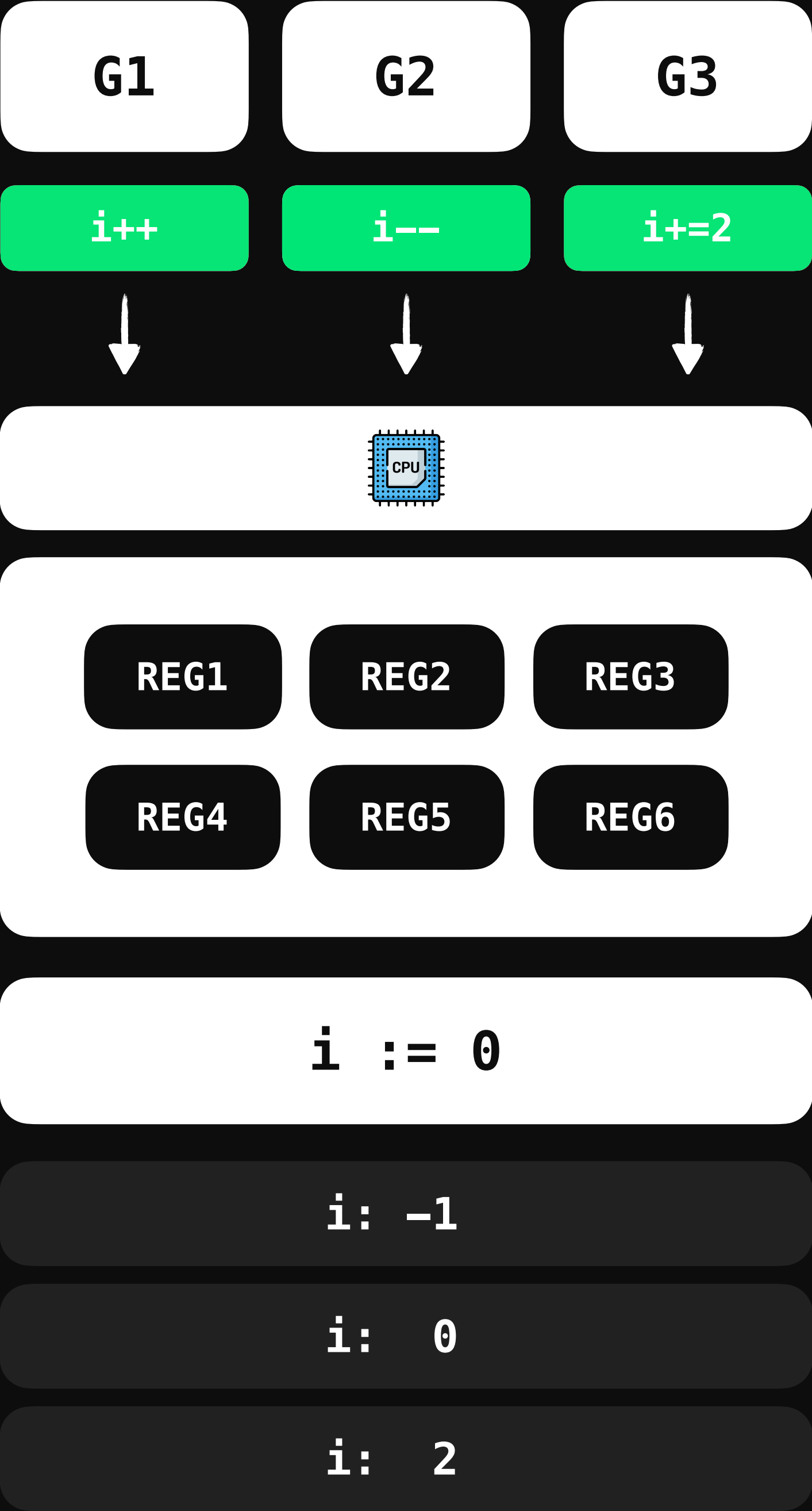
LOCK

DATA

UNLOCK

Go Routine 2

write DATA



**Load\_\_**

**int32**

**Add\_\_**

**int64**

**Store\_\_**

**uint32**

**Swap\_\_**

**uint64**

**CompareAndSwap\_\_**

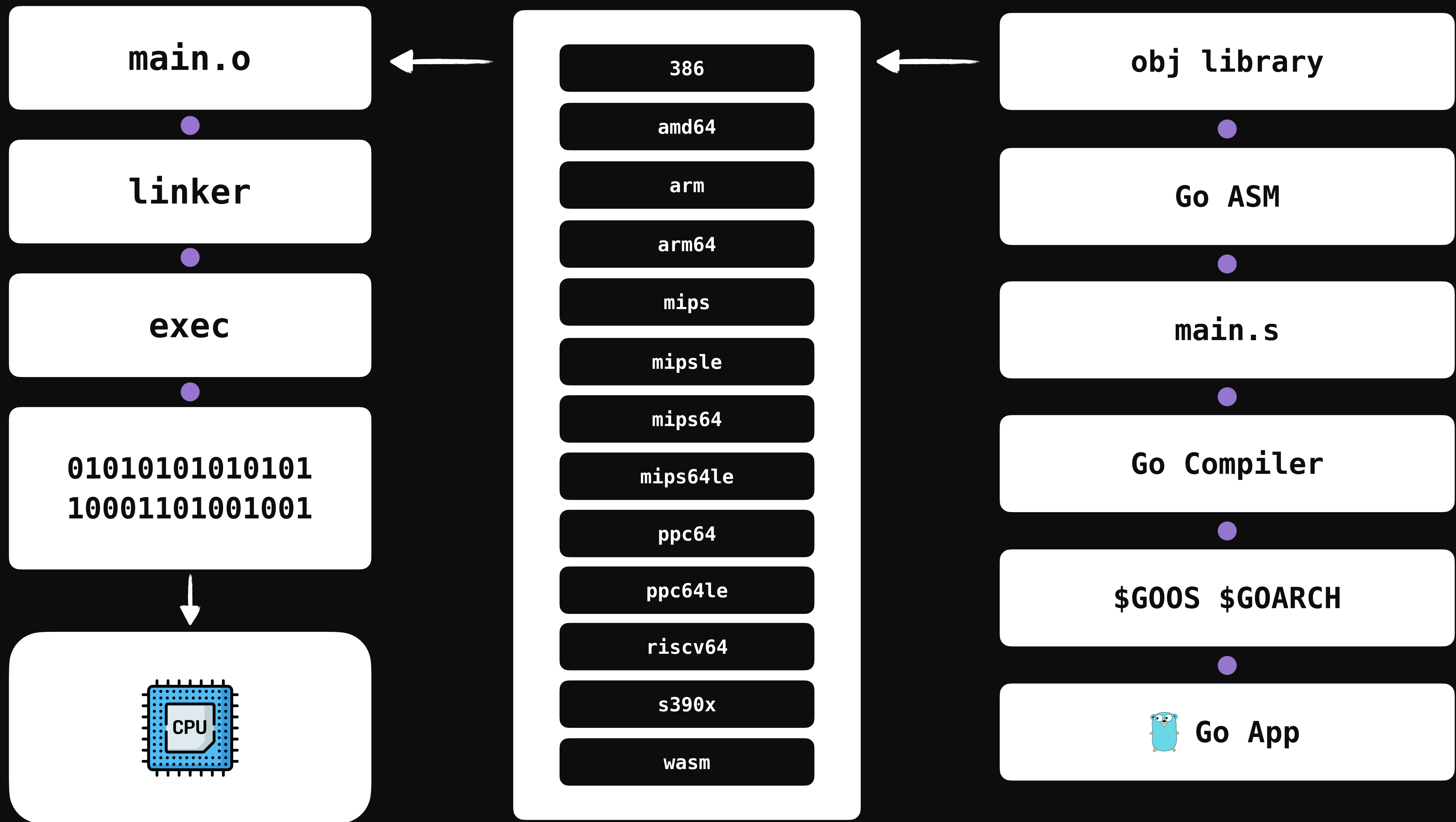
**uintptr**

**Pointer**

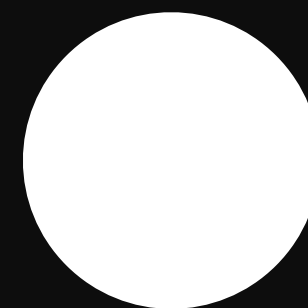
`atomic.Value`

`Store()`

`Load()`







EMPTY REGISTER



FULL REGISTER



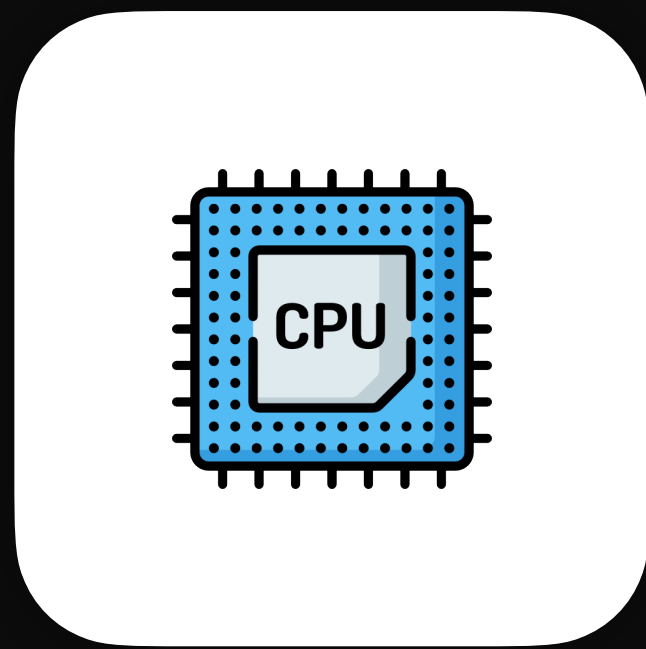
store instructions



store results



manipulate data



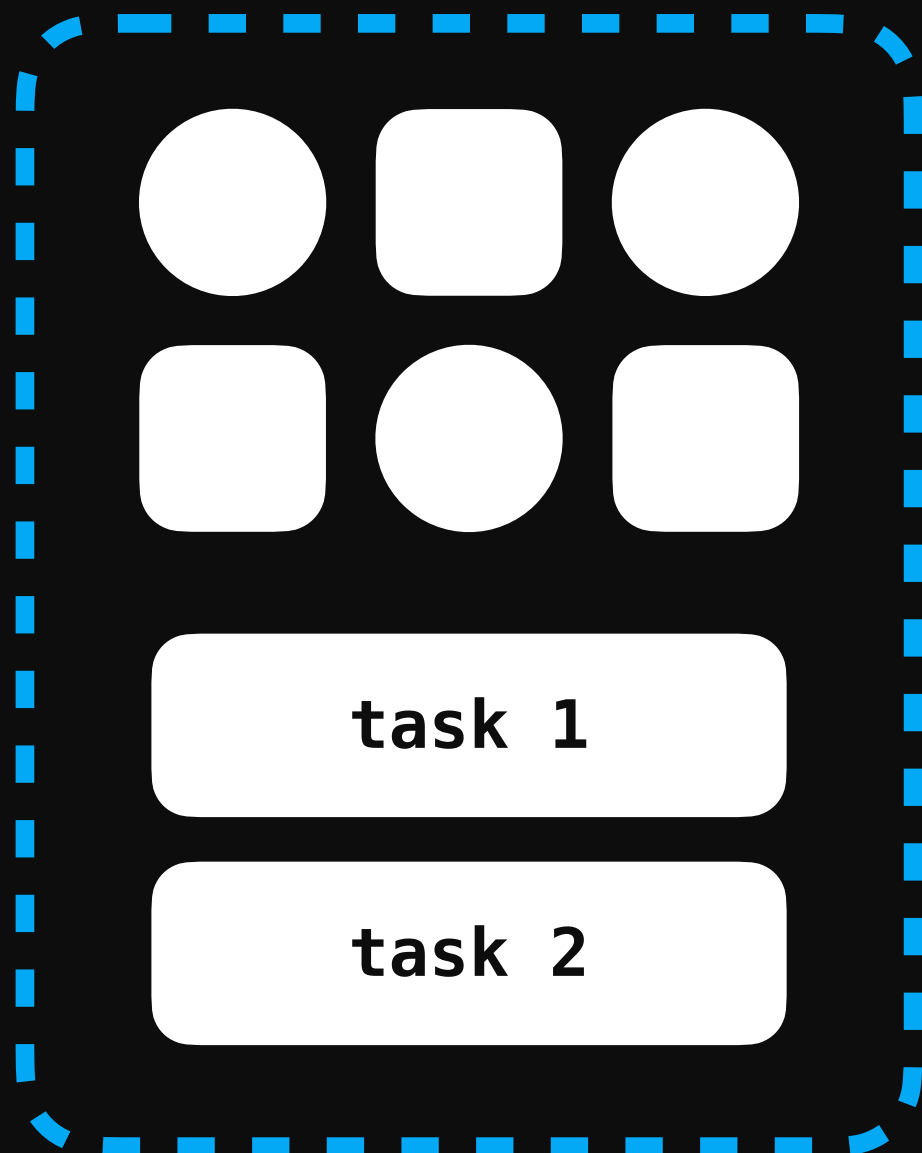
**CPU**



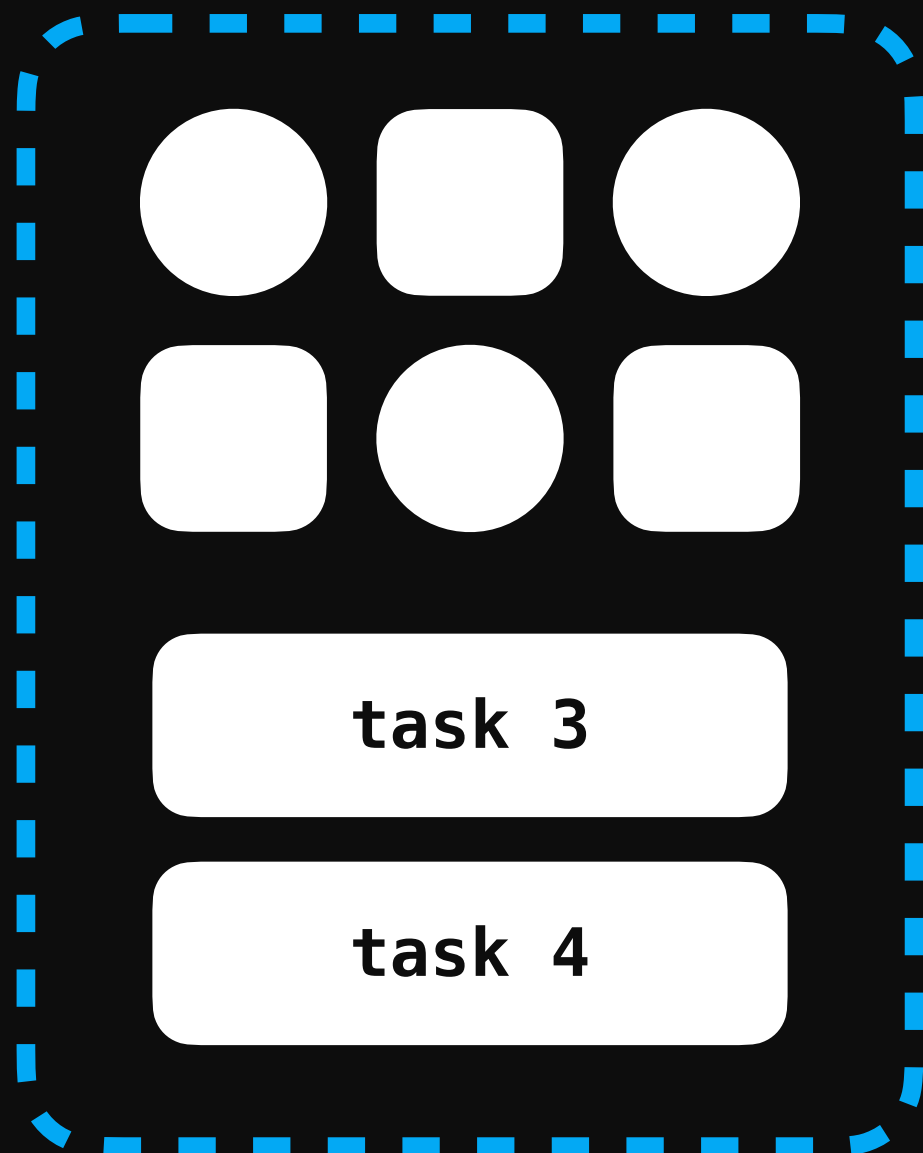
**OS Kernel**



**THREAD 1**



**THREAD 2**



**THREAD 3**

