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

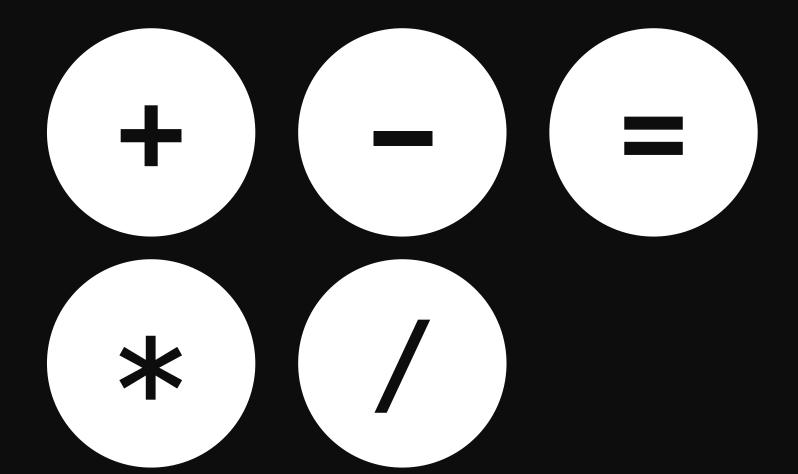
operand

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

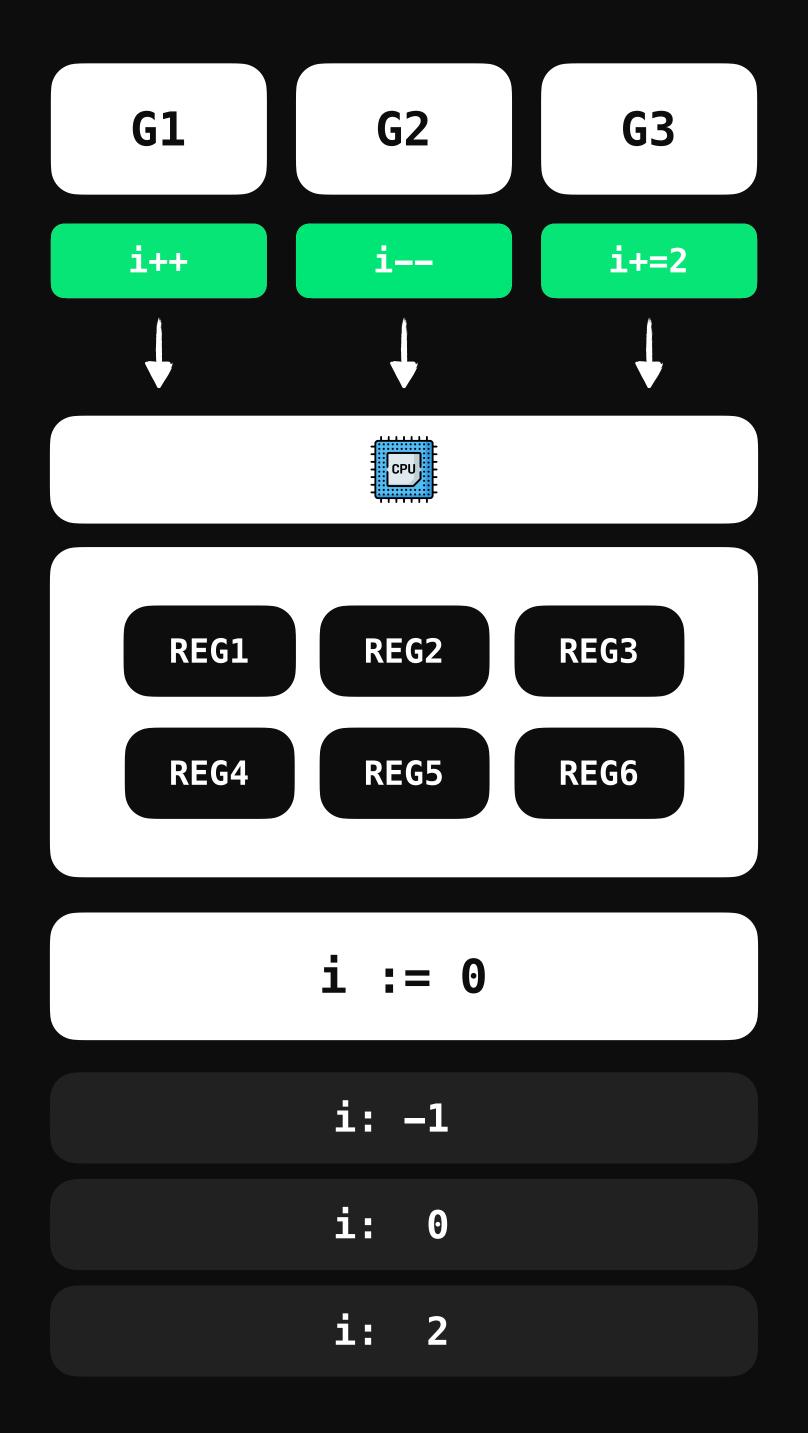
LOCK

DATA

UNLOCK

Go Routine 2

write DATA



Load\_\_\_

int32

Add\_\_\_

int64

Store\_\_\_

uint32

Swap\_\_\_

uint64

CompareAndSwap\_\_\_

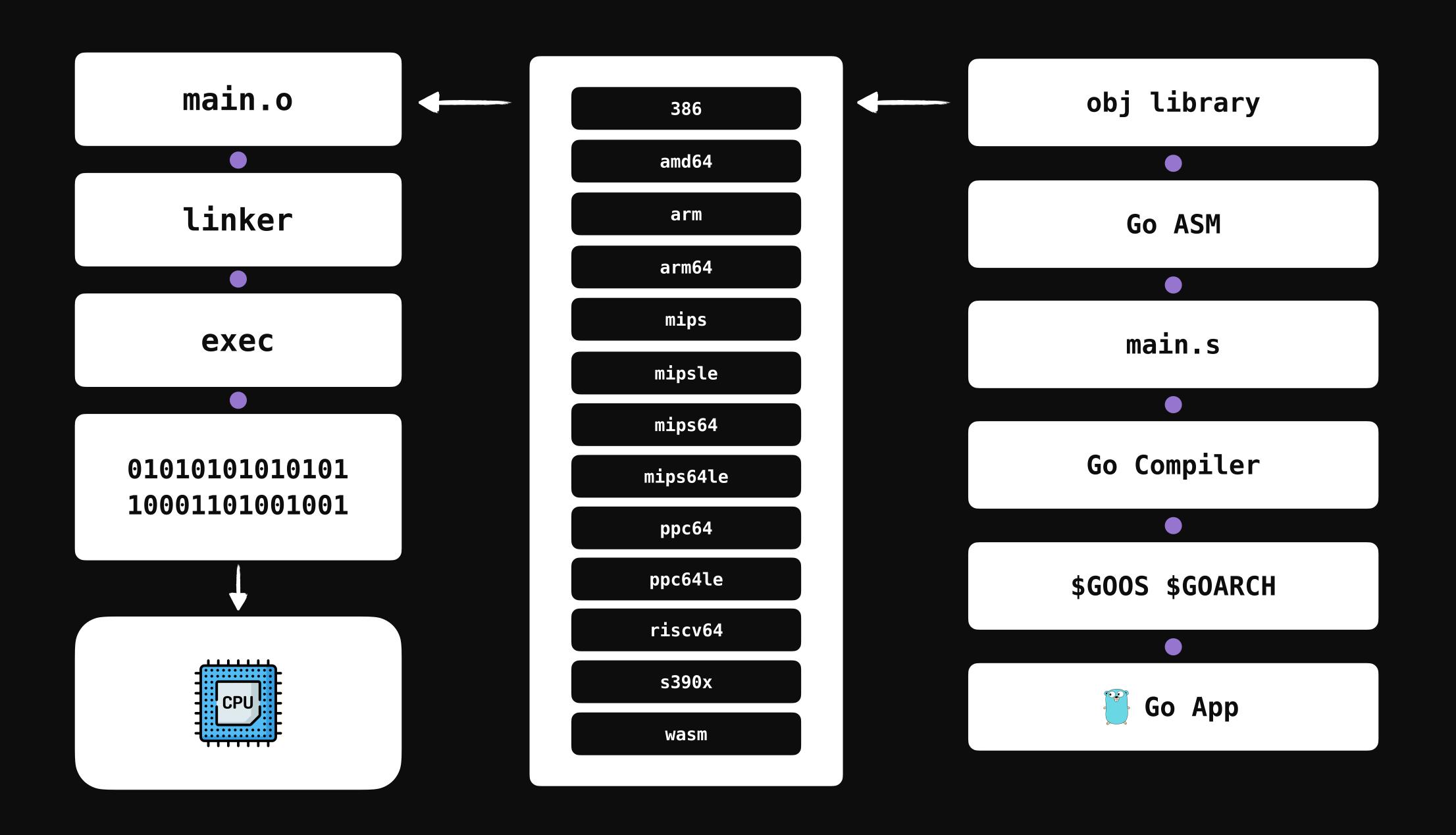
uintptr

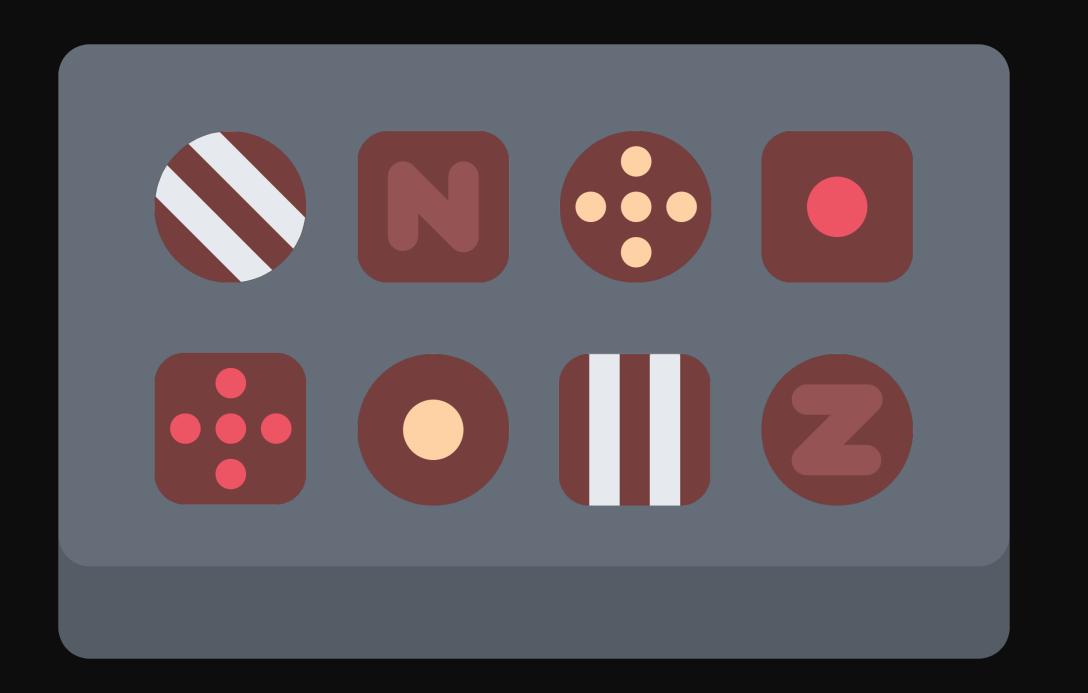
Pointer

atomic.Value

Store()

Load()







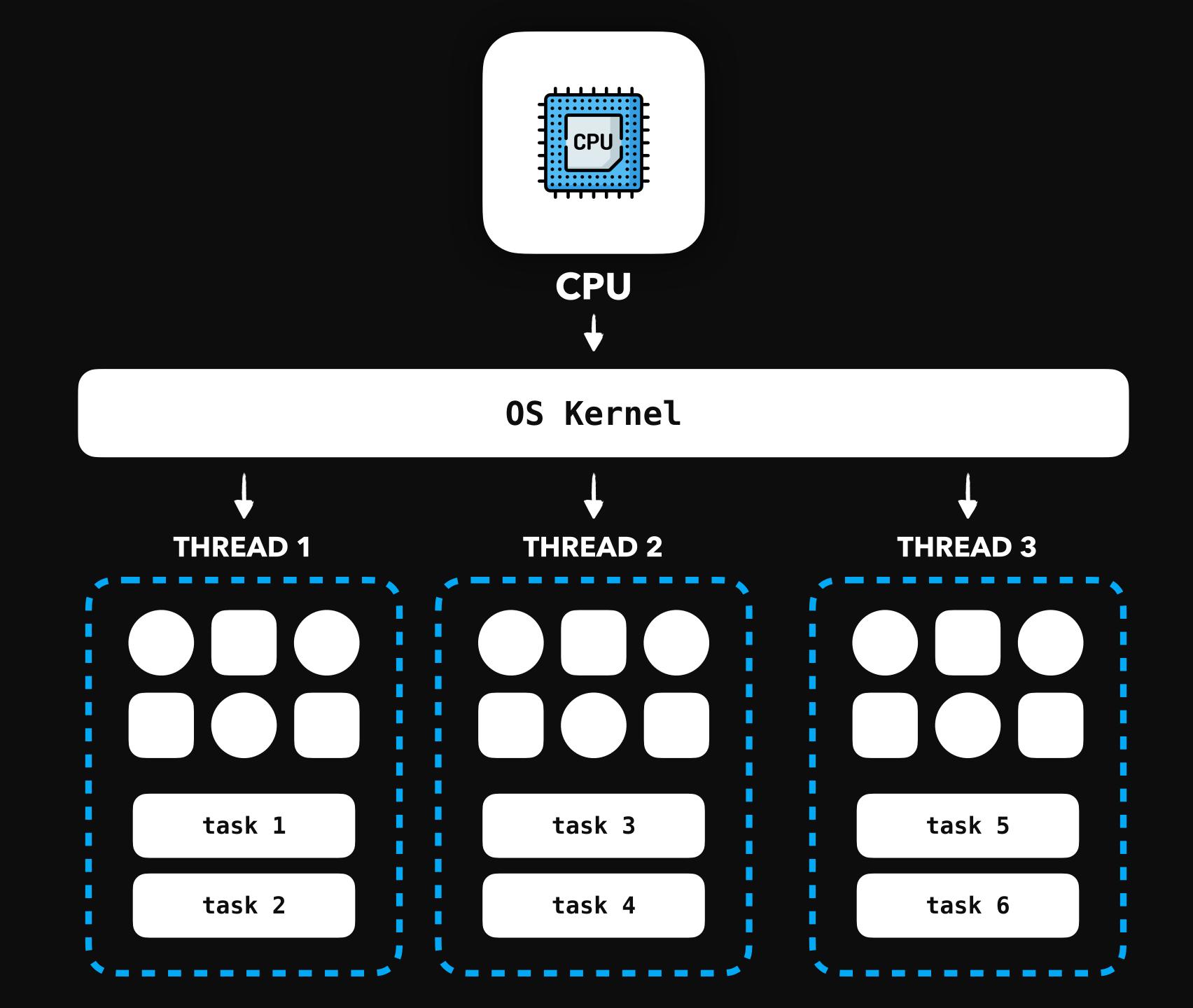


FULL REGISTER

store intructions

store results

manipulate data





## GOARCH=amd64

PSEUDO INSTRUCTION 1

PSEUDO INSTRUCTION 2

PSEUDO INSTRUCTION 3

. . .

RET

386 amd64 arm arm64 mips mipsle mips64 mips64le ppc64 ppc64le riscv64 s390x

wasm

amd64 instructions

REAL INSTRUCTION1
REAL INSTRUCTION2

REAL INSTRUCTION3

RET

. . .

binary

01010101011

10100100110

01010001011

11100100101

10010010101

