Architettura CPU con registri ad uso generale

REGISTERS

0000	0.......0
0001	1.......0
...	....
1111	0.......0

mdr
...
mar

OUT

ALU

IN1

IN2

INTERNAL
CPU
BUS

CONTROL
UNIT

Control
Paths
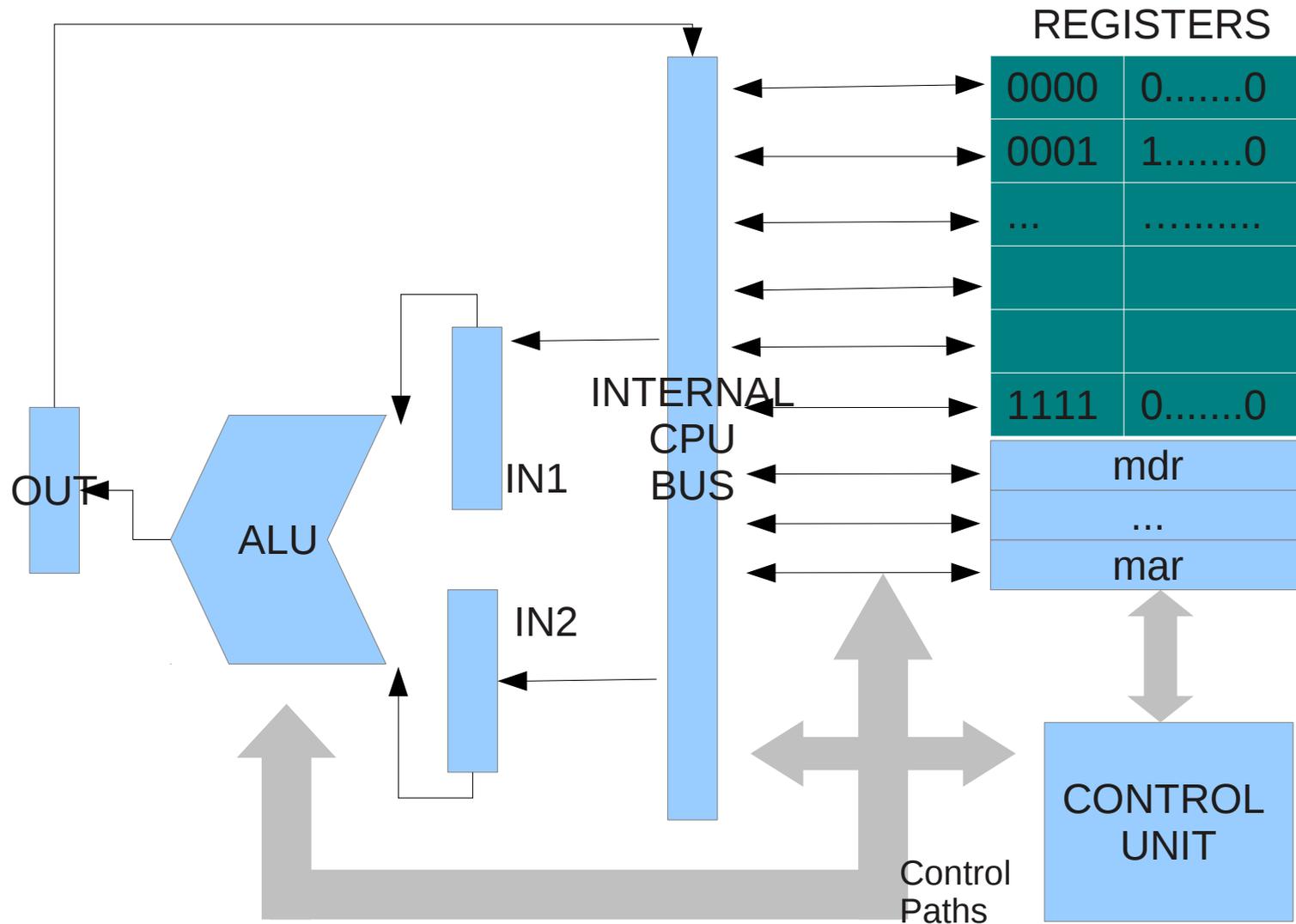
Wombat2 instructions

INSTRUCTION	MEANING	COMMENTS
readR $reg1	Read n → $reg1	Input from keyboard in $reg1
writeR $reg1	$reg1 → output	Write value of $reg1
multiplyR $reg1 $reg2 $reg3	$reg1 * $reg2 → $reg3	Multiply contents of two registers
divideR $reg1 $reg2 $reg3	$reg1 / $reg2 → $reg3	Divide contents of two registers
subtractR $reg1 $reg2 $reg3	$reg1 - $reg2 → $reg3	Subtract contents of two registers
addR $reg1 $reg2 $reg3	$reg1 + $reg2 → $reg3	Add contents of two registers
loadR $reg1 $addr	Mem[addr] → $reg1	Load word from memory in $reg1
storeR $reg1 $addr	$reg1 → Mem[addr]	Store word in memory from $reg1
jumpzR $reg1 $addr	If $reg1==0 jump to $addr	Conditional jump ($reg1==0)
jumpnR $reg1 $addr	If $reg1<0 jump to $addr	Conditional jump ($reg1<0)