Asm++ Reference Sheet

Made by Benjamin Widman

Instructions

#a, #b=register, imm=immediate, #cond=result of conditionals

Instruction	Syntax	Type	Code
Add	#a += #b	2R	000
Add immediate (±3)	#a += imm	RI	001
Less than (result in #cond)	#a < #b	2R	010
Move	#a = #b	2R	011
Assign value (±3)	#a = imm	RI	100
System call (±15)	syscall imm	I	101
Jump over (±16)	jump imm	I	110
Jump if #cond is true (±16)	jumpif imm	I	111

Registers	Code
#1	00
#2	01
#3	10
#4	11

Pseudo instruction	Evaluates to:
if #a < #b jump imm (±15)	#a < #b jumpif imm

Instruction formats

2R-type (Two Registers):

Op-code	#a	#b	-
3 bits	2 bits	2 bits	1 bit

RI-type (Register Immediate):

Op-code	#a	imm
3 bits	2 bits	3 bits

I-type (Immediate):

Op-code	imm
3 bits	5 bits

System calls

Function	Value
Print (prints #1)	0
Read (result in #1)	1

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