cs281: Introduction to Computer Systems

Datapath Instruction Chart

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Instruction	PCIncSrc	valCsrc	valAsrc	valBsrc	dstEsrc	dstMsrc	aluAsrc	aluBsrc	setCC	aluOp	dmemAddr	dmemData	dmemWrite	newPC
subl %edx, %ebx	01	X	0	0	00	1	00	0	1	1	X	X	0	00
OPl rA,rB	+2		rA	rB	rB	F	valA	valB	yes	OP			no	valP
rrmovl %edx, %eax	01	X	0	X	00	1	00	1	0	0	X	X	0	00
rrmovl rA,rB	+2		rA		rB	F	valA	0	no	add			no	valP
irmovl $0x100,%esp	11	1	X	0	00	1	01	1	0	0	X	X	0	00
irmovl V,rB	+6	V		rB	rB	F	valC	0	no	add			no	valP
rrmovl %esp, 2(%eax)	11	1	0	0	11	1	01	0	0	0	0	0	1	00
rmmovl rA,D(rB)	+6	D	rA	rB	F	F	valC	valB	no	add	valE	valA	yes	valP
mrmovl 8(%eax), %ecx	11	1	X	0	11	0	01	0	0	0	0	X	0	00
mrmovl D(rB),rA	+6	D		rB	F	rA	valC	valB	no	add	valE		no	valP
pushl %edx	01	X	0	1	01	1	11	0	0	0	0	0	1	00
pushl rA	+2		rA	esp	esp	F	-4	valB	no	add	valE	valA	yes	valP
popl %eax	01	X	1	1	01	0	10	0	0	0	1	X	0	00
popl rA	+2		esp	esp	esp	rA	4	valB	no	add	valA		no	valP
je 0x04	10	0	X	X	11	1	X	X	0	X	X	X	0	01
jXX Dest	+5	Dest			F	F			no				no	valC
cmovle %eax, %edx	01	X	0	X	00	1	00	1	0	0	X	X	0	00
cmovXX rA, rB	+2		rA		rB	F	valA	0	no	add			no	valP
call 0x41	10	0	X	1	01	1	11	0	0	0	0	1	1	01
call Dest	+5	Dest		esp	esp	F	-4	valB	no	add	valE	valP	yes	valC
ret	00	X	1	1	01	1	10	0	0	0	1	X	0	10
ret	+1		esp	esp	esp	F	4	valB	no	add	valA		no	valM
nop	00	X	X	X	11	1	X	X	0	X	X	X	0	00
nop	+1				F	F			no				no	valP
halt	00	X	X	X	11	1	X	X	0	X	X	X	0	00
halt	+1				F	F			no				no	valP