ISA Description

Kyle Lemmon

ADD	R_{src}	R_{dest}	R_{dest}+= R_{src}	
ADDI	imm	R_{dest}	R_{dest}+= R_{src}	
SUB	R_{src}	R_{dest}	R_{dest}-= R_{src}	
SUBI	imm	R_{dest}	R_{dest}-= imm	
CMP	R_{src}	R_{dest}	R_{dest}− R_{src}	Sets comparison flags based on this op.
CMPI	imm	R_{dest}	R_{dest}− imm	Same as CMP.
AND	R_{src}	R_{dest}	R_{dest}&= R_{src}	Bitwise and.
ANDI	imm	R_{dest}	R_{dest}&= imm	Bitwise and.
OR	R_{src}	R_{dest}	R_{dest}|= R_{src}	Bitwise or.
ORI	imm	R_{dest}	R_{dest}|= imm	Bitwise or.
XOR	R_{src}	R_{dest}	R_{dest}ˆ= R_{src}	Bitwise xor.
XORI	imm	R_{dest}	R_{dest}ˆ= imm	Bitwise XOR
MOV	R_{src}	R_{dest}	R_{dest}= R_{src}	Set dest equal to src
MOVI	imm	R_{dest}	R_{dest}= imm	Set dest equal to imm
LSH	R_{amount}	R_{dest}	R_{dest}<< R_{amount}	Amt can be ±15
LSHI	imm	R_{dest}	R_{dest}<< imm	imm can be ±15
LUI	imm	R_{dest}	R_{dest}= (R_{dest}& 0xff) | (imm<< 8)	
LOAD	R_{dest}	R_{addr}	R_{dest}= mem[R_{addr}]	
STOR	R_{src}	R_{addr}	mem[R_{addr}] = R_{dest}	
J[cond]	R_{target}		jump_if_[cond](R_{target})	
B[cond]	disp		relative_jump_if_[cond](R_{target})	
JAL	R_{link}	R_{target}	jump_link(R_{target})	
LDSD	R_{block}	R_{offset}		Loads 256W from sd card at address (R_{block}*BS) + R_{offset}into map
STSD	R_{block}	R_{offset}		Stores 256W from mmap to addr (R_{block}*BS) + R_{offset}