

8 registres : rax, rbx, rcx, rdx, rex, rfx, rhx, rz (registre 0).
registres 16 bits.

rz	000
rax	001
rbx	010
rcx	011
rdx	100
rex	101
rfx	110
rhx	111

Instructions sur 32 bits.

On réduit la taille de RISC-V:

- opcode sur 3 bits
- funct3 sur 3 bits
- funct7 sur 1 bit
- rd, rs2, rs1 sur 3 bits (8 registres)
- imm sur 16 bits

Arithmétique signée seulement : ADD, SUB, XOR, OR, AND, NAND, Shift (left logical, right logical, right arith).

Load, store 32b.

Branch, jump.

imm	funct7	funct3	rs2	rs1	rd	opcode
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Inst	Nom	Opcode	funct3	funct7	Description
add	ADD	011	000	0	rd = rs1 + rs2
sub	SUB	011	000	1	rd = rs1 - rs2
or	OR	011	100	0	rd = rs1 or rs2
xor	XOR	011	110	0	rd = rs1 xor rs2
and	AND	011	101	0	rd = (rs1 and rs2)
nand	NAND	011	100	1	rd = rs1 nand rs2
nor	NOR	011	101	1	rd = rs1 nor rs2
nxor	NXOR	011	110	1	rd = rs1 nxor rs2
sll	Shift left logical	011	011	0	rd = rs1 « rs2
srl	Shift right logical	011	010	0	rd = rs1 » rs2
sra	Shift right Arith	011	010	1	rd = rs1 » rs2
slt	Set less than	011	001	1	rd = (rs1 < rs2)?1:0
addi	ADD	001	000	0	rd = rs1 + imm
subi	SUB	001	000	1	rd = rs1 - imm
ori	OR	001	100	0	rd = rs1 or imm
xori	XOR	001	110	0	rd = rs1 xor imm
andi	AND	001	101	0	rd = rs1 and imm
nandi	NAND	001	100	1	rd = rs1 nand imm
nori	NOR	001	101	1	rd = rs1 nor imm
nxori	NXOR	001	110	1	rd = rs1 nxor imm
slli	Shift left logical	001	011	0	rd = rs1 « imm
srli	Shift right logical	001	010	0	rd = rs1 » imm
srai	Shift right Arith	001	010	1	rd = rs1 » imm
slti	Set less than	001	001	1	rd = (rs1 < imm)?1:0
lw	Load word	000	000	0	rd=M[rs1]
sw	Store word	010	000	0	M[rs1]=rs2
beq	Branch ==	110	000	0	if(rs1 == rs2) PC=imm
bne	Branch !=	110	000	1	if(rs1 != rs2) PC=imm
ble	Branch ≤	110	001	0	if(rs1 ≤ rs2) PC=imm
blt	Branch <	110	001	1	if(rs1 < rs2) PC=imm
bge	Branch ≥	110	011	0	if(rs1 ≥ rs2) PC=imm
bgt	Branch >	110	011	1	if(rs1 > rs2) PC=imm
jal	Jump and link	101	000	0	rd=PC; PC=imm
jalr	Jump and link reg	111	000	0	rd=PC; PC=rs1+imm