

---

ADD	: {FMT: "RD,RS1,RS2",	IWORD: "0000 0000 RD	RS1	RS2	000000000000"}}
SUB	: {FMT: "RD,RS1,RS2",	IWORD: "0000 0001 RD	RS1	RS2	000000000000"}}
AND	: {FMT: "RD,RS1,RS2",	IWORD: "0000 0100 RD	RS1	RS2	000000000000"}}
OR	: {FMT: "RD,RS1,RS2",	IWORD: "0000 0101 RD	RS1	RS2	000000000000"}}
XOR	: {FMT: "RD,RS1,RS2",	IWORD: "0000 0110 RD	RS1	RS2	000000000000"}}
NAND	: {FMT: "RD,RS1,RS2",	IWORD: "0000 1100 RD	RS1	RS2	000000000000"}}
NOR	: {FMT: "RD,RS1,RS2",	IWORD: "0000 1101 RD	RS1	RS2	000000000000"}}
XNOR	: {FMT: "RD,RS1,RS2",	IWORD: "0000 1110 RD	RS1	RS2	000000000000"}}
ADDI	: {FMT: "RD,RS1,Imm",	IWORD: "1000 0000 RD	RS1	Imm"	}
SUBI	: {FMT: "RD,RS1,Imm",	IWORD: "1000 0001 RD	RS1	Imm"	}
ANDI	: {FMT: "RD,RS1,Imm",	IWORD: "1000 0100 RD	RS1	Imm"	}
ORI	: {FMT: "RD,RS1,Imm",	IWORD: "1000 0101 RD	RS1	Imm"	}
XORI	: {FMT: "RD,RS1,Imm",	IWORD: "1000 0110 RD	RS1	Imm"	}
NANDI	: {FMT: "RD,RS1,Imm",	IWORD: "1000 1100 RD	RS1	Imm"	}
NORI	: {FMT: "RD,RS1,Imm",	IWORD: "1000 1101 RD	RS1	Imm"	}
XNORI	: {FMT: "RD,RS1,Imm",	IWORD: "1000 1110 RD	RS1	Imm"	}
MVHI	: {FMT: "RD,Imm",	IWORD: "1000 1011 RD	0000	ImmHi"	}
LW	: {FMT: "RD,Imm(RS1)",	IWORD: "1001 0000 RD	RS1	Imm"	}
SW	: {FMT: "RS2,Imm(RS1)",	IWORD: "0101 0000 RS1	RS2	Imm"	}
F	: {FMT: "RD,RS1,RS2",	IWORD: "0010 0000 RD	RS1	RS2	000000000000"}}
EQ	: {FMT: "RD,RS1,RS2",	IWORD: "0010 0001 RD	RS1	RS2	000000000000"}}
LT	: {FMT: "RD,RS1,RS2",	IWORD: "0010 0010 RD	RS1	RS2	000000000000"}}
LTE	: {FMT: "RD,RS1,RS2",	IWORD: "0010 0011 RD	RS1	RS2	000000000000"}}
T	: {FMT: "RD,RS1,RS2",	IWORD: "0010 1000 RD	RS1	RS2	000000000000"}}
NE	: {FMT: "RD,RS1,RS2",	IWORD: "0010 1001 RD	RS1	RS2	000000000000"}}
GTE	: {FMT: "RD,RS1,RS2",	IWORD: "0010 1010 RD	RS1	RS2	000000000000"}}
GT	: {FMT: "RD,RS1,RS2",	IWORD: "0010 1011 RD	RS1	RS2	000000000000"}}
FI	: {FMT: "RD,RS1,Imm",	IWORD: "1010 0000 RD	RS1	Imm"	}
EQI	: {FMT: "RD,RS1,Imm",	IWORD: "1010 0001 RD	RS1	Imm"	}
LTI	: {FMT: "RD,RS1,Imm",	IWORD: "1010 0010 RD	RS1	Imm"	}
LTEI	: {FMT: "RD,RS1,Imm",	IWORD: "1010 0011 RD	RS1	Imm"	}
TI	: {FMT: "RD,RS1,Imm",	IWORD: "1010 1000 RD	RS1	Imm"	}
NEI	: {FMT: "RD,RS1,Imm",	IWORD: "1010 1001 RD	RS1	Imm"	}
GTEI	: {FMT: "RD,RS1,Imm",	IWORD: "1010 1010 RD	RS1	Imm"	}
GTI	: {FMT: "RD,RS1,Imm",	IWORD: "1010 1011 RD	RS1	Imm"	}
BF	: {FMT: "RS1,RS2,Imm",	IWORD: "0110 0000 RS1	RS2	PCRe1"	}
BEQ	: {FMT: "RS1,RS2,Imm",	IWORD: "0110 0001 RS1	RS2	PCRe1"	}
BLT	: {FMT: "RS1,RS2,Imm",	IWORD: "0110 0010 RS1	RS2	PCRe1"	}
BLTE	: {FMT: "RS1,RS2,Imm",	IWORD: "0110 0011 RS1	RS2	PCRe1"	}
BEQZ	: {FMT: "RS1,Imm",	IWORD: "0110 0101 RS1	0000	PCRe1"	}
BLTZ	: {FMT: "RS1,Imm",	IWORD: "0110 0110 RS1	0000	PCRe1"	}
BLTEZ	: {FMT: "RS1,Imm",	IWORD: "0110 0111 RS1	0000	PCRe1"	}
BT	: {FMT: "RS1,RS2,Imm",	IWORD: "0110 1000 RS1	RS2	PCRe1"	}
BNE	: {FMT: "RS1,RS2,Imm",	IWORD: "0110 1001 RS1	RS2	PCRe1"	}
BGTE	: {FMT: "RS1,RS2,Imm",	IWORD: "0110 1010 RS1	RS2	PCRe1"	}
BGT	: {FMT: "RS1,RS2,Imm",	IWORD: "0110 1011 RS1	RS2	PCRe1"	}
BNEZ	: {FMT: "RS1,Imm",	IWORD: "0110 1101 RS1	0000	PCRe1"	}
BGTEZ	: {FMT: "RS1,Imm",	IWORD: "0110 1110 RS1	0000	PCRe1"	}
BGTZ	: {FMT: "RS1,Imm",	IWORD: "0110 1111 RS1	0000	PCRe1"	}
JAL	: {FMT: "RD,Imm(RS1)",	IWORD: "1011 0000 RD	RS1	ShImm"	}

```
// B is implemented using BEQ
BR    : {FMT: "Imm",      ITEXT: ["BEQ  R6,R6,Imm"]}

// NOT is implemented using NAND
NOT   : {FMT: "RD,RS",    ITEXT: ["NAND RD,RS,RS"]}

// BLE/BGE is implemented using LTE/GTE and BNEZ
BLE   : {FMT: "RS1,RS2,Imm", ITEXT: ["LTE  R6,RS1,RS2","BNEZ R6,Imm"]}
BGE   : {FMT: "RS1,RS2,Imm", ITEXT: ["GTE  R6,RS1,RS2","BNEZ R6,Imm"]}

// CALL/RET/JMP is implemented using JAL
CALL  : {FMT: "Imm(RS1)",  ITEXT: ["JAL  RA,Imm(RS1)"]}
RET   : {FMT: "",         ITEXT: ["JAL  R9,0(RA)"]}
JMP   : {FMT: "Imm(RS1)",  ITEXT: ["JAL  R9,Imm(RS1)"]}
```