

	JaID	JaIrD	RegReadD[1:0]	MemToRegD	RegWrite[2:0]	MemWrite[3:0]	LoadNpcD	AluControlD[3:0]	BranchType[2:0]	Alu2srcD[1:0]	Alu1srcD	ImmTypeD
LB	0	0	10	1	LB	0000	0	ADD	NOBRANCH	10	0	ITYPE
LH	0	0	10	1	LH	0000	0	ADD	NOBRANCH	10	0	ITYPE
LW	0	0	10	1	LW	0000	0	ADD	NOBRANCH	10	0	ITYPE
LBU	0	0	10	1	LBU	0000	0	ADD	NOBRANCH	10	0	ITYPE
LHU	0	0	10	1	LHU	0000	0	ADD	NOBRANCH	10	0	ITYPE
SB	0	0	11	0	NOREGWRITE	0001	0	ADD	NOBRANCH	10	0	STYPE
SH	0	0	11	0	NOREGWRITE	0011	0	ADD	NOBRANCH	10	0	STYPE
SW	0	0	11	0	NOREGWRITE	1111	0	ADD	NOBRANCH	10	0	STYPE

ADD	0	0	11	0	LW	0000	0	ADD	NOBRANCH	00	0	/
SUB	0	0	11	0	LW	0000	0	SUB	NOBRANCH	00	0	/
OR	0	0	11	0	LW	0000	0	OR	NOBRANCH	00	0	/
XOR	0	0	11	0	LW	0000	0	XOR	NOBRANCH	00	0	/
AND	0	0	11	0	LW	0000	0	AND	NOBRANCH	00	0	/
SLL	0	0	11	0	LW	0000	0	SLL	NOBRANCH	00	0	/
SRL	0	0	11	0	LW	0000	0	SRL	NOBRANCH	00	0	/
SRA	0	0	11	0	LW	0000	0	SRA	NOBRANCH	00	0	/
SLT	0	0	11	0	LW	0000	0	SLT	NOBRANCH	00	0	/
SLTU	0	0	11	0	LW	0000	0	SLTU	NOBRANCH	00	0	/

ADDI	0	0	10	0	LW	0000	0	ADD	NOBRANCH	10	0	ITYPE
ORI	0	0	10	0	LW	0000	0	OR	NOBRANCH	10	0	ITYPE
XORI	0	0	10	0	LW	0000	0	XOR	NOBRANCH	10	0	ITYPE
ANDI	0	0	10	0	LW	0000	0	AND	NOBRANCH	10	0	ITYPE
SLLI	0	0	10	0	LW	0000	0	SLL	NOBRANCH	01	0	/
SRLI	0	0	10	0	LW	0000	0	SRL	NOBRANCH	01	0	/
SRAI	0	0	10	0	LW	0000	0	SRA	NOBRANCH	01	0	/
SLTI	0	0	10	0	LW	0000	0	SLT	NOBRANCH	10	0	ITYPE
SLTIU	0	0	10	0	LW	0000	0	SLTU	NOBRANCH	10	0	ITYPE

LUI	0	0	00	0	LW	0000	0	LUI	NOBRANCH	10	0	UTYPE
AUIPC	0	0	00	0	LW	0000	0	ADD	NOBRANCH	10	1	UTYPE

BEQ	0	0	11	0	NOREGWRITE	0000	0	/	BEQ	00	0	BTYPE
-----	---	---	----	---	------------	------	---	---	-----	----	---	-------

BNE	0	0	11	0	NOREGWRITE	0000	0	/	BNE	00	0	BTYPE
BLT	0	0	11	0	NOREGWRITE	0000	0	/	BLT	00	0	BTYPE
BGE	0	0	11	0	NOREGWRITE	0000	0	/	BGE	00	0	BTYPE
BLTU	0	0	11	0	NOREGWRITE	0000	0	/	BLTU	00	0	BTYPE
BGEU	0	0	11	0	NOREGWRITE	0000	0	/	BGEU	00	0	BTYPE

JAL	1	0	00	0	LW	0000	1	ADD	NOBRANCH	/	/	/
JALR	0	1	10	0	LW	0000	1	ADD	NOBRANCH	10	0	ITYPE

NOP	0	0	00	0	NOREGWRITE	0000	0	ADD	NOBRANCH	00	0	/
-----	---	---	----	---	------------	------	---	-----	----------	----	---	---