				Inputs				Control Outputs										Input Bits				Output Bits	
INUM	Instruction	Mnemonic	Format	opcode	funct3	funct7	funct6	RFW	ALUOp	ALUSrcA	ALUSrcB	PCsel	WDsel	BROp	MST	MLD	MSZ	opcode	funt3	funct7	funct6	Project06	v2.0 raw
0	addi	ADDI	I	0010011	000	xxxxxxx	xxxxxx	1	0000	0	001	00	00	00	0	0	00	0b0010011	0b000	0bxxxxxxx	0bxxxxxx	0b1000000010000000000	0x40400
1	add	ADDR	R	0110011	000	0000000	xxxxxx	1	0000	0	000	00	00	00	0	0	00	0b0110011	0b000	0b0000000	0bxxxxxx	0b1000000000000000000	0x40000
2	jal	JAL	J	1101111	xxx	xxxxxxx	xxxxxx	1	0000	1	011	01	01	00	0	0	00	0b1101111	0bxxx	0bxxxxxxx	0bxxxxxx	0b1000010110101000000	0x42D40
3	jalr	JALR	I	1100111	000	xxxxxxx	xxxxxx	1	0000	0	001	01	01	00	0	0	00	0b1100111	0b000	0bxxxxxxx	0bxxxxxx	0b1000000010101000000	0x40540
4	mul	MUL	R	0110011	000	0000001	xxxxxx	1	0001	0	000	00	00	00	0	0	00	0b0110011	0b000	0b0000001	0bxxxxxx	0b1000100000000000000	0x44000
5	sub	SUBR	R	0110011	000	0100000	xxxxxx	1	0010	0	000	00	00	00	0	0	00	0b0110011	0b000	0b0100000	0bxxxxxx	0b1001000000000000000	0x48000
6	sll	SLL	R	0110011	001	0000000	xxxxxx	1	0011	0	000	00	00	00	0	0	00	0b0110011	0b001	0b0000000	0bxxxxxx	0b1001100000000000000	0x4C000
7	srl	SRL	R	0110011	101	0000000	xxxxxx	1	0100	0	000	00	00	00	0	0	00	0b0110011	0b101	0b0000000	0bxxxxxx	0b1010000000000000000	0x50000
8	slli	SLLI	I	0010011	001	0000000	shamt	1	0101	0	001	00	00	00	0	0	00	0b0010011	0b001	0b0000000	0bshamt	0b1010100010000000000	0x54400
9	srli	SRLI	I	0010011	101	0000000	shamt	1	0110	0	001	00	00	00	0	0	00	0b0010011	0b101	0b0000000	0bshamt	0b1011000010000000000	0x58400
10	srai	SRAI	I	0010011	101	0100000	shamt	1	0111	0	001	00	00	00	0	0	00	0b0010011	0b101	0b0100000	0bshamt	0b1011100010000000000	0x5C400
11	beq	BEQ	B	1100011	000	xxxxxxx	xxxxxx	0	0000	1	010	10	01	00	0	0	00	0b1100011	0b000	0bxxxxxxx	0bxxxxxx	0b0000010101001000000	0x2A40
12	bne	BNE	B	1100011	001	xxxxxxx	xxxxxx	0	0000	1	010	10	01	01	0	0	00	0b1100011	0b001	0bxxxxxxx	0bxxxxxx	0b0000010101001010000	0x2A50
13	blt	BLT	B	1100011	100	xxxxxxx	xxxxxx	0	0000	1	010	10	01	10	0	0	00	0b1100011	0b100	0bxxxxxxx	0bxxxxxx	0b0000010101001100000	0x2A60
14	bge	BGE	B	1100011	101	xxxxxxx	xxxxxx	0	0000	1	010	10	01	11	0	0	00	0b1100011	0b101	0bxxxxxxx	0bxxxxxx	0b0000010101001110000	0x2A70
15	ld	LD	I	0000011	011	xxxxxxx	xxxxxx	1	0000	0	001	00	10	00	0	1	00	0b0000011	0b011	0bxxxxxxx	0bxxxxxx	0b1000000010010000100	0x40484
16	lw	LW	I	0000011	010	xxxxxxx	xxxxxx	1	0000	0	001	00	10	00	0	1	01	0b0000011	0b010	0bxxxxxxx	0bxxxxxx	0b1000000010010000101	0x40485
17	lb	LB	I	0000011	000	xxxxxxx	xxxxxx	1	0000	0	001	00	10	00	0	1	10	0b0000011	0b000	0bxxxxxxx	0bxxxxxx	0b1000000010010000110	0x40486
18	sd	SD	S	0100011	011	xxxxxxx	xxxxxx	0	0000	0	100	00	00	00	1	1	00	0b0100011	0b011	0bxxxxxxx	0bxxxxxx	0b0000000100000001100	0x100C
19	sw	SW	S	0100011	010	xxxxxxx	xxxxxx	0	0000	0	100	00	00	00	1	1	01	0b0100011	0b010	0bxxxxxxx	0bxxxxxx	0b0000000100000001101	0x100D
20	sb	SB	S	0100011	000	xxxxxxx	xxxxxx	0	0000	0	100	00	00	00	1	1	10	0b0100011	0b000	0bxxxxxxx	0bxxxxxx	0b0000000100000001110	0x100E
21	and	AND	R	0110011	111	0000000	xxxxxx	1	1000	0	000	00	00	00	0	0	00	0b0110011	0b111	0b0000000	0bxxxxxx	0b1100000000000000000	0x60000
22	or	OR	R	0110011	110	0000000	xxxxxx	1	1001	0	000	00	00	00	0	0	00	0b0110011	0b110	0b0000000	0bxxxxxx	0b1100100000000000000	0x64000