

Operation	Mnemonic	Opcode	Operand 1	Operand 2 (A)	Operand 3 (B)	Control Bit	Description
No Op	nop	00000	00000	00000	00	0	No operation is done but the clock still ticks and the program counter still increments
ADD	add	00001	0XXXX	0XXXX	XX	X	Op1 = Op2 + Op3 :: (Control bit determines if flag register is written to or not)
ADD + Carry	adc	00010	0XXXX	0XXXX	XX	X	Op1 = Op2 + Op3 + 1 :: (Control bit determines if flag register is written to or not)
Increment	inc	00011	0XXXX	0XXXX	-	X	Op1 = Op2 + 1 :: (Control bit determines if flag register is written to or not)
SUB	sub	00100	0XXXX	0XXXX	XX	X	Op1 = Op2 - Op3 :: (Control bit determines if flag register is written to or not)
SUB - Carry	sbc	00101	0XXXX	0XXXX	XX	X	Op1 = Op2 - Op3 - 1 :: (Control bit determines if flag register is written to or not)
Decrement	dec	00110	0XXXX	0XXXX	-	X	Op1 = Op2 - 1 :: (Control bit determines if flag register is written to or not)
AND	and	00111	0XXXX	0XXXX	XX	X	Op1 = Bitwise AND of Op2 and Op3 :: (Control bit determines if flag register is written to or not)
OR	orr	01000	0XXXX	0XXXX	XX	X	Op1 = Bitwise OR of Op2 and Op3 :: (Control bit determines if flag register is written to or not)
XOR	xor	01001	0XXXX	0XXXX	XX	X	Op1 = Bitwise XOR of Op2 and Op3 :: (Control bit determines if flag register is written to or not)
NAND	nnd	01010	0XXXX	0XXXX	XX	X	Op1 = Bitwise NAND of Op2 and Op3 :: (Control bit determines if flag register is written to or not)
NOR	nor	01011	0XXXX	0XXXX	XX	X	Op1 = Bitwise NOR of Op2 and Op3 :: (Control bit determines if flag register is written to or not)
XNOR	xnr	01100	0XXXX	0XXXX	XX	X	Op1 = Bitwise XNOR of Op2 and Op3 :: (Control bit determines if flag register is written to or not)
Set User Flag	suf	01101	-	-	-	-	Sets the User Flag to a value of 1
Clear User Flag	cuf	01110	-	-	-	-	Sets the User Flag to a value of 0
Jump Flag Test	jft	01111	XXXXX	0XXXX	-	X	Jump to Op1 if (Flag Register AND Op2) = non-zero :: (Control bit determines if Return Register is written to or not)
Jump if A>B	jgt	10000	XXXXX	0XXXX	XX	X	Jump to Op1 if Op2 > Op3 :: (Control bit determines if Return Register is written to or not)
Jump if A=B	jet	10001	XXXXX	0XXXX	XX	X	Jump to Op1 if Op2 = Op3 :: (Control bit determines if Return Register is written to or not)
Jump if A<B	jlt	10010	XXXXX	0XXXX	XX	X	Jump to Op1 if Op2 < Op3 :: (Control bit determines if Return Register is written to or not)
Jump	jmp	10011	XXXXX	-	-	X	Unconditional Jump to Op1 :: (Control bit determines if Return Register is written to or not)
Return	ret	10100	-	-	-	-	Jump to address stored in the Return Register
Load Literal	lit	10101	0XXXX	XXXXXXXX			Save the 8 bit literal to Op1
Move	mov	10110	0XXXX	0XXXX	-	-	Move Op2 to Op1
Halt	hlt	10111	-	-	-	-	Stops the clock
Jump if A>=B	jge	11000	XXXXX	0XXXX	XX	X	Jump to Op1 if Op2 >= Op3 :: (Control bit determines if Return Register is written to or not)