OPCODE

0	00000	NOP	
1	00001	AND	$R_z \leftarrow R_x \& R_y$
2	00010	OR	$R_z \leftarrow R_x \mid R_y$
3	00011	ExOR	$R_z \leftarrow R_x \oplus R_y$
4	00100	ADD	$R_z \leftarrow R_x + R_y$
5	00101	ANDI	$R_z \leftarrow R_x$ & Immdata
6	00110	ORI	$R_z \leftarrow R_x \mid$ Immdata
7	00111	ExORI	$R_z \leftarrow R_x \oplus$ Immdata
8	01000	ADDI	$R_z \leftarrow R_x +$ Immdata
9	01001	MOV	$R_z \leftarrow R_x + 0$
10	01010	MOVI	$R_z \leftarrow 0 +$ Immdata
11	01011	LOAD	$R_z \leftarrow$ M[Address]
12	01100	STORE	M[Address] $\leftarrow R_x + 0$
13	01101	JMP	Jump to Code Address
14	01110	JMPZ	Jump if $z = 1$
15	01111	JMPNZ	Jump if $z = 0$
16	10000	JMPC	Jump if $c = 1$
17	10001	JMPNC	Jump if $c = 0$
18	10010	PUSH	Stack $\leftarrow R_x + 0$
19	10011	POP	$R_z \leftarrow$ Stack
20	10100	IN	$R_z \leftarrow$ Port[Address]
21	10101	OUT	Port[Address] $\leftarrow R_x + 0$
22	10110	LOAD Indirect	$R_z \leftarrow$ M[R_x]
23	10111	STORE Indirect	M[R_z] $\leftarrow R_y + 0$
24	11000	SUB	$R_z \leftarrow R_x - R_y$
25	11001	Shift RIGHT	$R_z \leftarrow R_x \gg R_y$
26	11010	Shift LEFT	$R_z \leftarrow R_x \ll R_y$
27	11011	JUMPZ PC Relative	Jump to (PC+offset)
28	11100	JUMPNZ PC Relative	Jump to (PC+offset)