CPU Instructions:

000	load #	Loads what is at Address into A register
001	store #	Stores A register at Address
010	nand #	NANDs A register and what is at Address and stores into A register
011	while[ ]	Jump if A register is not 0
100	jump #	Jumps to what is at Address
101	in	Stores input register into A register
110	out	Loads A register into Output register
111	halt	Stops clock of computer

Control Unit:

Inputs									Outputs															
Name	Instruction			Step			Not 0 Flag	User Input Flag	HT	MI	RI	RO	II/ CE	IO	AI	AO		BO	BI	UO	OI	CI	CO	RS
fetch	x	x	x	0	0	0	x	0	0	1	0	0	0	0	0	0		0	0	0	0	0	1	0
	x	x	x	0	0	1	x	0	0	0	0	1	1	0	0	0		0	0	0	0	0	0	0
load #	0	0	0	0	1	0	x	0	0	1	0	0	0	1	0	0		0	0	0	0	0	0	0
	0	0	0	0	1	1	x	0	0	0	0	1	0	0	1	0		0	0	0	0	0	0	1
store #	0	0	1	0	1	0	x	0	0	1	0	0	0	1	0	0		0	0	0	0	0	0	0
	0	0	1	0	1	1	x	0	0	0	1	0	0	0	0	1		0	0	0	0	0	0	1
nand #	0	1	0	0	1	0	x	0	0	1	0	0	0	1	0	0		0	0	0	0	0	0	0
	0	1	0	0	1	1	x	0	0	0	0	1	0	0	0	0		0	1	0	0	0	0	0
	0	1	0	1	0	0	x	0	0	0	0	0	0	0	1	0		1	0	0	0	0	0	1
while [ ]	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	1
	0	1	1	0	1	0	1	0	0	0	0	0	0	1	0	0		0	0	0	0	1	0	1
jump #	1	0	0	0	1	0	x	0	0	1	0	0	0	1	0	0		0	0	0	0	0	0	0
	1	0	0	0	1	1	x	0	0	0	0	1	0	0	0	0		0	0	0	0	1	0	1
in	1	0	1	0	1	0	x	0	0	0	0	0	0	0	1	0		0	0	1	0	0	0	1
out	1	1	0	0	1	0	x	0	0	0	0	0	0	0	0	1		0	0	0	1	0	0	1
halt	1	1	1	0	1	0	x	0	1	0	0	0	0	0	0	0		0	0	0	0	0	0	0
cpu interrupt	x	x	x	0	0	0	x	1	0	1	0	0	0	0	0	0		0	0	0	0	0	0	0
	x	x	x	0	0	1	x	1	0	0	1	0	0	0	0	1		0	0	0	0	0	0	0
	x	x	x	0	1	0	x	1	0	0	0	0	0	0	1	0		0	0	0	0	0	1	0
	x	x	x	0	1	1	x	1	0	0	0	0	0	0	0	0		0	0	1	0	1	0	1