Name	Type	Format	Details	Op Code	Function
ADD	Arithmetic	Register	add S_0, S_1, S_2 $S_0 = S_1 + S_2$	0000	000
SUB	Arithmetic	Register	sub S_0, S_1, S_2 $S_0 = S_1 - S_2$	0000	001
AND	Logical	Register	and S_0, S_1, S_2 $S_0 = S_1 \& S_2$	0000	010
OR	Logical	Register	or S_0, S_1, S_2 $S_0 = S_1 \,||\, S_2$	0000	011
NOR	Logical	Register	nor S_0, S_1, S_2 $S_0 = \sim (S_1 \,||\, S_2)$	0000	100
SLT	Conditional	Register	slt S_0, S_1, S_2 if ($S_1 < S_2$) $S_0 = 1$ else $S_0 = 0$	0000	101
SLL	Logical	Immediate	sll S_0, S_1, 2 $S_0 = S_1 << 2$	1000	XXX
ADDi	Arithmetic	Immediate	addi S_0, S_1, 20 $S_0 = S_1 + 20$	0001	XXXX
LW	Data Transfer	Immediate	lw S_0,20(S_1) $S_0 = mem[S_1 + 20]$	0010	XXXX
SW	Data Transfer	Immediate	sw S_0,20(S_1) $mem[S_1 + 20] = S_0$	0011	XXXX
BEQ	Conditional	Immediate	beq S_0, S_1, 25 if($S_0 == S_1$)then goto 25th line else proceed as usual	0100	XXXX
J	Unconditional	Target	j address Go to address	0101	XXXX
Din	Data Transfer	Target	din t_0 t_0 = value from keypad	0110	XXXX
Dout	Data Transfer	Target	dout t_0 Display t_0 to seven segment	0111	XXXX

Register Number	Conventional name	Value of register (3bit)
$1	$s0	000
$2	$s1	001
$3	$s2	010
$4	$s3	011
$ 5	$t0	100
$6	$t1	101
$7	$t2	110
$8	$t3	111

($-32 \leq$ addi ≤ 31) , ($0 \leq$ lw,sw ≤ 63), ($0 \leq$ sll ≤ 63), ($-32 \leq$ beq ≤ 31), ($-2048 \leq$ j ≤ 2047),
($-32768 \leq$ din ≤ 32767)