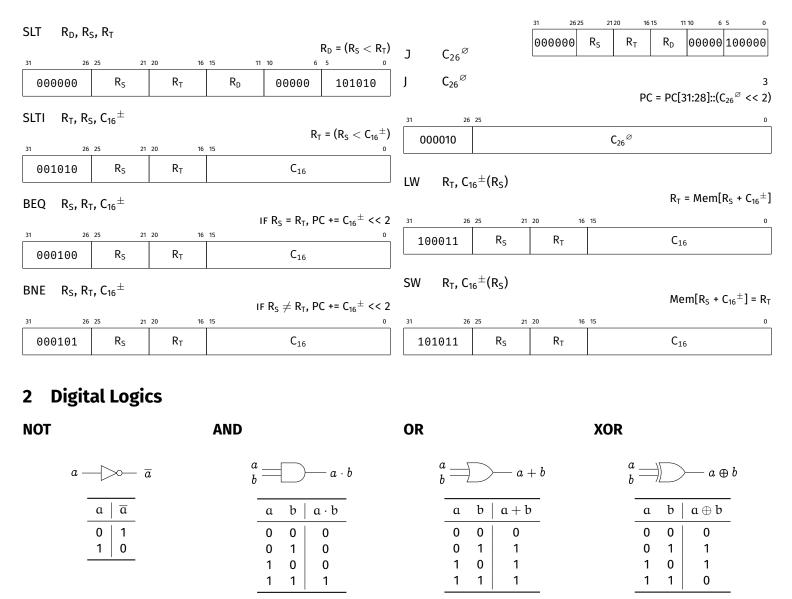
1 MIPS Instructions

ADD R _D , R _S , R _T ADD R _D , R _S , R _T	i Mira iliatiu	CUOIIS							
Start Star	ADD P. P. P.			AND R _D , R	R _S , R _T				$R_D = R_S \& R$
ADD R ₀ , R _S , R _T 000000 R _S R _T R ₀ 00000 100000 000000 R _S R _T R ₀ 00000 100000 000000 R _S R _T R ₀ 00000 100000 000000 R _S R _T R ₀ 00000 100000 000000 R _S R _T R ₀ 00000 100000 000000 R _S R _T R ₀ 00000 100000 000000 R _S R _T R ₀ 00000 100010 000000 R _S R _T R ₀ R ₀ R _S R _T R ₀ 00000 100010 000000 R _S R _T R ₀ R _S R _T R ₀ R _S R _T R _S	ADD ND, NS, NT			31 26	5 25 21	1 20 16 1	15	11 10 6	
ADD R ₀ , R ₅ , R ₇ ADD R ₀ , R ₅ , R ₇	XXX			000000	R _s	R _T	R_D	00000	100100
ADDI R ₁ , R ₅ , R ₇ R ₀ = R ₅ + R ₇ R ₀ 00000 100000 00000 R ₅ R ₇ R ₀ 00000 100000 R ₇ R ₇ = R ₅ + C ₁₆ 000000 R ₇ R ₇ = R ₇ + C ₁₆ 000000 R ₇ R ₈ = R ₈ + C ₁₆ 000000 R ₈ R ₇ R ₈ R ₈ = R ₈ + C ₁₆ 000000 R ₈ R ₇ R ₈]	s, C ₁₆			-	R _T = R _S & C ₁₆
901100 Rs R _T C ₁₆ 000000 Rs R _S R _T R ₀ 00000 100000 OR R ₀ , R _S , R _T ADDI R _T , R _S , C ₁₆ R _T = R _S + C ₁₆ R _T = R _S + C ₁₆ OR R ₀ , R _S , R _T OR R ₀ , R _S , R _T R ₀ = R _S R _T OR R ₀ , R _S , R _T OR R ₀ , R _S , R _T R ₀ = R _S R _T OR R ₀ , R _S , R _T R ₀ = R _S R _T OR R ₀ , R _S , R _T R ₀ = R _S R _T OR R ₀ , R _S , R _T R ₀ = R _S R _T OR R ₀ , R _S , R _T R ₀ = R _S R _T OR R ₀ , R _S , R _T R ₀ = R _S R _T OR R ₀ , R _S , R _T R ₀ = R _S R _T OR R ₀ , R _S , R _T R ₀ = R _S R _T OR R ₀ , R _S , R _T R ₀ = R _S R _T OR R ₀ , R _S , R _T R ₀ = R _S R _T OR R ₀ , R _S , R _T R ₀ = R _S R _T OR R ₀ , R _S , R _T R ₀ = R _S R _T OR R ₀ , R _S , R _T R ₀ = R ₀ R _T R ₀ OR R ₀ , R _S , R _T R ₀ = R ₀ R _T R ₀ OR R ₀ , R _S , R _T R ₀ = R ₀ R _T R ₀ OR R ₀ , R _S , R _T R ₀ = R ₀ R _T R ₀ OR R ₀ , R _S , R _T R ₀ = R ₀ R _T R ₀ OR R ₀ , R _S , R _T R ₀ = R ₀ R _T R ₀ OR R ₀ , R _S , R _T R ₀ = R ₀ R _T R ₀ OR R ₀ , R _S , R _T R ₀ = R ₀	ADD R_D , R_S , R_T			31 26	5 25 21	1 20 16 1	15		. 5 .6
ADDI R _T , R _S , C ₁₆ R _T = R _S + C ₁₆ R _T = R _S + C ₁₆ R _T = R _S + C ₁₆ ORI R _T , R _S , C ₁₆ ORI R _T , R _S , C ₁₆ SUB R _D , R _S , R _T R _D = R _S - R _T NOR R _D , R _S , R _T ORI R _T , R _S , C ₁₆ NOR R _D , R _S , R _T R _T = R _S C ₁₆ NOR R _D , R _S , R _T NOR R _D , R _S , R _T R _T = R _S C ₁₆ NOR R _D , R _S , R _T SUB R _D , R _S , R _T R _T = R _S C ₁₆ NOR R _D , R _S , R _T NOR R _D , R _S , R _T R _D = R _S - R _T OO1101 R _S R _T = C ₁₆ << 16 NOR R _D , R _S , R _T R _D = R _S - R _T NOR R _D , R _S , R _T R _T = R _S - R _T NOR R _D , R _S , R _T R _T = R _S - C ₁₆ NOR R _D , R _S , R _T R _T = R _S - R _T NOR R _D , R _S , R _T R _T = R _S - R _T NOR R _D , R _S - R _T NOR R _D , R _S - R _T NOR R _D , R _S - R _T NOR R _D , R _S - R _T NOR R _D , R _S - R _T NOR R _D , R _S - R _T NOR R _D , R _S - R _T NOR R _D , R _S - R _T NOR R _D , R _S - R _T NOR	31 26 25 21	20 16 15 1:		001100	Rs	R _T		C ₁₆	
ADDI RT, RS, C16 RT = RS + C16 ± RT =	000000 R _S	R _T R _D	00000 100000	OR R _D , R	R _S , R _T				
R _T = R _S + C ₁₆ ± 0000000 R _S R _T C ₁₆ SUB R _D , R _S , R _T R _D = R _S - R _T R _D = R _S - R _T ORI R _T , R _S , C ₁₆ ORI R _T , R _S , C ₁₆ ORI R _T , R _S , C ₁₆ ORI R _T , R _S , C ₁₆ NOR R _D , R _S , R _T R _D = R _S - R _T OUITIN 000000 R _S R _T R _D = R _S - R _T OUITIN 000000 R _S R _T R _D = R _T C ₁₆ SUB R _D , R _S , R _T R _D = R _T C ₁₆ NOR R _D , R _S , R _T R _D = R _T C ₁₆ NOR R _D , R _S , R _T R _D = R _T C ₁₆ SUB R _D , R _T , C ₅ R _D = R _T C ₁₆ NOR R _D , R _S , R _T R _D = R _D R _T SUB R _D , R _T , C ₅ R _D = R _T	ADDI R _T , R _S , C ₁₆								
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			$R_T = R_S + C_{16}$						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	31 26 25 21	20 16 15	0	000000	K _S	K _T	κ _D	00000	100101
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		R _T	C ₁₆	ORI R _T , R	s, C ₁₆				$R_T = R_S \mid C_{16}^{\kappa}$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	SUB R_D , R_S , R_T			31 26	5 25 21	1 20 16 1	15		C
NOR R_D , R_S , R_T $R_D = \sim (R_S \mid R_T \mid R_D \mid 000000 \mid 1001111 \mid 100000 \mid R_T \mid R_D \mid 1100 \mid 1001111 \mid 1000000 \mid R_T \mid R_D \mid 1100 \mid 100110 \mid 10000000000000000000$	31 26 25 21	20 16 15 1		001101	R _S	R _T		C ₁₆	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	000000 R _S	R _T R _D	00000 100010	NOR R _D , R	R _S , R _T				, .
$R_{T} = C_{16} << 16$ $0000000 R_{S} R_{T} R_{D} 000000 100111$ $001111 00000 R_{T} C_{16}$ $XOR R_{D}, R_{S}, R_{T}$ $R_{D} = R_{S} \land R_{S} R_{T} R_{D} 00000 100111$ $R_{D} = R_{S} \land R_{S} R_{T} R_{D} 000000 100111$ $R_{D} = R_{S} \land R_{S} R_{T} R_{D} 000000 100110$ $R_{D} = R_{S} \land R_{S} R_{T} R_{D} 000000 100110$ $R_{D} = R_{T} \Rightarrow C_{16} \Rightarrow C_{1$	LUI R _T , C ₁₆								
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			$R_T = C_{16} << 10$	5 <u> </u>					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	31 26 25 21	20 16 15	0	000000	κ _S	κ _T	K _D	00000	100111
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	001111 00000	R _T	C ₁₆	XOR R _D , R	R _S , R _T				D - D ^ D
$R_{D} = R_{T} << C_{5}^{\varnothing}$ $000000 R_{5} R_{T} R_{D} 00000 R_{S} R_{T} R_{D} R_{D} 00000 R_{S} R_{T} R_{D} 00000 R_{S} R_{T} R_{D} R_{D} 00000 R_{D} R_{D$	SLL R_D , R_T , C_5			31 26	5 25 21	1 20 16 1	15	11 10 6	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	21 26 25 21	20 16 15 1		999999					
$R_{T} = R_{S} \ ^{\circ} C_{16} $					- C			1	
SRL R_D , R_T , C_5 $R_D = R_T^{\varnothing} >> C_5^{\varnothing}$ $11 26 25 21 20 16 15 11 10 6 5 0$ $001110 R_S R_T C_{16}$				- AORI KĮ, K	S, C16				R _T = R _S ^ C ₁₆
31 26 25 21 20 16 15 11 10 6 5 0 0 001110 R _S R _T C ₁₆	SRL R_D , R_T , C_5		D D Ø	31 26	5 25 21	1 20 16 1	15		
	31 26 25 21	20 16 15 1:		001110	R _S	R _T		C ₁₆	
					1				
				_					



NOR

α

0 0

0 1

1 0

1

 $\overline{a \cdot b}$

1

1

1

0

XNOR

α

0

0 1

1

1

 $\overline{a+b}$

1

0

0

0

 $-\overline{a\oplus b}$

 $\overline{\mathfrak{a} \oplus \mathfrak{b}}$

1

0

0

1

NAND

 \mathfrak{a}

0 0

0

1 1

1

0