**OPP** **BIN**

add 0000

sub 0001

and 0010

or 0011

xor 0100

cmp 0101

nor 0110

nand 0111

addi 1000

subi 1001

sll 1010

srl 1011

lw 1100

sw 1101

lui 1110

andi 1111

**R - FORMATS**

ADD:

|  |  |
| --- | --- |
| Syntax | add $d, $s, $t |
| Operation | $d = $s + $t |

SUB:

|  |  |
| --- | --- |
| Syntax | sub $d, $s, $t |
| Operation | $d = $s - $t |

AND:

|  |  |
| --- | --- |
| Syntax | and $d, $s, $t |
| Operation | $d = $s && $t |

OR:

|  |  |
| --- | --- |
| Syntax | or $d, $s, $t |
| Operation | $d = $s || $t |

NOR:

|  |  |
| --- | --- |
| Syntax | nor $d, $s, $t |
| Operation | $d = $s nor $t |

XOR:

|  |  |
| --- | --- |
| Syntax | xor $d, $s, $t |
| Operation | $d = $s xor $t |

NAND:

|  |  |
| --- | --- |
| Syntax | nand $d, $s, $t |
| Operation | $d = ($s && $t)’ |

CMP:

|  |  |
| --- | --- |
| Syntax | cmp $d, $s, $t |
| Operation | $d = $s == $t |

**I - Formats**

ADDI:

|  |  |
| --- | --- |
| Syntax | addi $d, $s, immediate |
| Operation | $d = $s + immediate |

SUBI:

|  |  |
| --- | --- |
| Syntax | subi $d, $s, immediate |
| Operation | $d = $s - immediate |

SLL:

|  |  |
| --- | --- |
| Syntax | sll $d, $s, immediate |
| Operation | $d = $s << immediate |

SRL:

|  |  |
| --- | --- |
| Syntax | srl $d, $s, immediate |
| Operation | $d = $s >> immediate |

LW:

|  |  |
| --- | --- |
| Syntax | lw$d, offset($s) |
| Operation | $d = MEM[$s+offset] |

SW:

|  |  |
| --- | --- |
| Syntax | sw $s, offset($d) |
| Operation | MEM[$d + offset] = $s |

LUI:

|  |  |
| --- | --- |
| Syntax | lui $d, MEM[hexa] |
| Operation | $d = MEM[bin] |

ANDI:

|  |  |
| --- | --- |
| Syntax | andi $d, $s, immediate |
| Operation | $d = $s && immediate |