**Marmara University CSE3215**

**DIGITAL LOGIC DESIGN TERM PROJECT**

Assembly Language – Due To: 01/12/2023

|  |  |
| --- | --- |
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1. **ADD DR, SR1, SR2:**

(opcode ) (DR ) (SR1 ) (SR2 )

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

1. **AND DR, SR1, SR2:**

(opcode ) (DR ) (SR1 ) (SR2 )

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 0 | 0 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

1. **NAND DR, SR1, SR2:**

(opcode ) (DR ) (SR1 ) (SR2 )

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 0 | 1 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

1. **NOR DST, SR1, SR2:**

(opcode ) (DST )(SR1 ) (SR2 )

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 0 | 1 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

1. **ADDI DST, SR1, IMM:**

(opcode )(DST )(SR1 )(IMM )

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

1. **ANDI DST, SR1, IMM:**

(opcode )(DST )(SR1 )(IMM )

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 0 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

1. **LD DST, ADDR:**

(opcode ) (DST ) (ADDR )

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 1 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**7. ST SRC, ADDR:**

(opcode ) (SRC ) (ADDR )

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 1 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**8. CMP OP1, OP2:**

(opcode )(OP1 ) (OP2 )

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**9. JUMP ADDR:**

(opcode ) (ADDR )

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 0 | 0 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**10. JE ADDR:**

(opcode ) (ADDR )

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 0 | 1 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**11.JA ADDR:**

(opcode ) (Empty ) ( ADDR )

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |

**12.JB ADDR:**

(opcode ) (Empty ) ( ADDR )

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |

**13.JAE ADDR:**

(opcode ) (Empty ) ( ADDR )

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |

**14.JBE ADDR:**

(opcode ) (Empty ) ( ADDR )

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |