**Load and Store Instructions:**

1. LB
2. LH
3. LW
4. LBU
5. LHU
6. SB
7. SH
8. SW

**Arithmetic and Logical Immediate Instructions:**

1. ADDI
2. XORI
3. ORI
4. ANDI
5. SLTI
6. SLTIU

**Shift Instructions:**

1. SLLI
2. SRLI
3. SRAI
4. SLL
5. SRL
6. SRA

**Arithmetic and Logical Instructions:**

1. ADD
2. SUB
3. XOR
4. OR
5. AND
6. SLT
7. SLTU

**Branch Instructions:**

1. BEQ
2. BNE
3. BLT
4. BGE
5. BLTU
6. BGEU

**Control Transfer Instructions:**

1. JAL
2. JALR

**System Instructions:**

1. ECALL
2. EBREAK
3. FENCE

**Upper Immediate Instructions:**

1. LUI
2. AUIPC

| ADDI x31 x0 1  **ADDI x30 x0 2**  //for incrementing or shifting by 1 or comparing  **//ECALL**  **EBREAK**  **FENCE**  LW x1 0(x0)  LH x2 4(x0)  LB x3 8(x0)  LBU x4 12(x0)  LHU x5 16(x0)  **LUI x28 2**  **AUIPC x28 2**  ADD x6 x1 x2  SUB x7 x1 x2  XOR x8 x1 x2  OR x9 x1 x2  AND x10 x1 x2  ADDI x11 x1 4  XORI x12 x1 4  ORI x13 x1 4  ANDI x14 x1 4  SRL x1 x1 x31  SRA x1 x1 x31  **SRAI x1 x1 1**  **SLL x1 x1 x31**  SLLI x1 x1 1  SRLI x1 x1 1  **SLTI x1 x1 4**  **SLTIU x2 x1 4**  BEQ x0 x0 4  ADDI x1 x1 -1  ADDI x1 x1 1  SW x1 0(x0)  SB x1 4(x0)  SH x1 8(x0)  **BNE x31 x30 4**  ADDI x1 x1 -1  ADDI x1 x1 1  **BLT x31 x30 4**  ADDI x1 x1 -1  ADDI x1 x1 1  **BGE x31 x30 4**  ADDI x1 x1 -1  ADDI x1 x1 1  **BLTU x31 x30 4**  ADDI x1 x1 -1  ADDI x1 x1 1  **BGEU x31 x30 4**  ADDI x1 x1 -1  ADDI x1 x1 1  **JAL x29 4**  ADDI x1 x1 -1  ADDI x1 x1 1  **JALR X29 0(x0)** | 00000000000100000000111110010011  00000000001000000000111100010011  00000000000000000000000001110011  00000000000100000000000001110011  00001111111100000000000000001111  00000000000000000010000010000011  00000000010000000001000100000011  00000000100000000000000100000011  00000000110000000100001000000011  00000001000000000101001010000011  00000000000000000010111000110111  00000000000000000010111000010111  00000000001000001000001100110011  01000000001000001000001110110011  00000000001000001100010000110011  00000000001000001110010010110011  00000000001000001111010100110011  00000000010000001000010110010011  00000000010000001100011000010011  00000000010000001110011010010011  00000000010000001111011100010011  00000001111100001101000010110011  01000001111100001101000010110011  01000000000100001101000010010011  00000001111100001001000010110011  00000000000100001001000010010011  00000000000100001101000010010011  00000000010000001010000010010011  00000000010000001011000100010011  00000000000000000000001001100011  11111111111100001000000010010011  00000000000100001000000010010011  00000000000100000010000000100011  00000000000100000000001000100011  00000000000100000001010000100011  00000001111011111001001001100011  11111111111100001000000010010011  00000000000100001000000010010011  00000001111011111100001001100011  11111111111100001000000010010011  00000000000100001000000010010011  00000001111011111101001001100011  11111111111100001000000010010011  00000000000100001000000010010011  00000001111011111110001001100011  11111111111100001000000010010011  00000000000100001000000010010011  00000001111011111111001001100011  11111111111100001000000010010011  00000000000100001000000010010011  00000000010000000000111011101111  11111111111100001000000010010011  00000000000100001000000010010011  00000000000000000000111011100111 |
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