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Time Spent: 20 minutes

1. 32’b101100\_00110\_00001\_01010\_00000\_000000
   1. rs = 5’b00110
   2. rt = 5’b00001
   3. rd = 5’b01010
   4. rest = 11’b00000\_000000
   5. op = 6’b101100
      1. RegDst = 1
      2. ALUSrc = 0
      3. ALUControl[2:0] = 110
      4. MemtoReg = 0
2. 32’b100100\_00011\_00100\_01010\_00000\_000000
   1. rs = 5’b00011
   2. rt = 5’b00100
   3. rd = 5’b01010
   4. rest = 11’b00000\_000000
   5. op = 6’b100100
      1. RegDst = 1
      2. ALUSrc = 0
      3. ALUControl[2:0] = 010
      4. MemtoReg = 0
3. 32’b010100\_00000\_01000\_0000\_0000\_0000\_0010
   1. rs = 5’b00000
   2. rt = 5’b01000
   3. imm = 16’b0000\_0000\_0000\_0010
   4. op = 6’b010100
      1. RegDst = 0
      2. ALUSrc = 1
      3. ALUControl[2:0] = 010 (addition)
      4. MemtoReg = 0
4. 32’b010101\_00000\_00111\_0000\_0000\_0000\_0010
   1. rs = 5’b00000
   2. rt = 5’b00111
   3. imm = 16’b0000\_0000\_0000\_0010
   4. op = 6’b010101
      1. RegDst = 0
      2. ALUSrc = 1
      3. ALUControl[2:0] = 010 (addition)
      4. MemtoReg = 1