**Assembler User Guide**

An assembler is a program that takes basic computer instructions and converts them into a pattern of bits that the computer's processor can use to perform its basic operations.

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| **Instructions Supported** | | |
| **R-Type** | **I-Type** | **J-Type** |
| * add * sub * and * or * nor * sll * jr * slt | * lw * sw * addi * andi * ori * beq | * Jal * J |

**The Expected Output :**

The translated assembly code into machine code .

**Assembler Standards :**

* ONLY supported instructions and 32 registers are used
* ONLY one instruction is written per line .
* Insruction general form :  
  **- R-Type :**
* Instruction name - space –register-comma-register-comma-register  
  Exception for jr : jr-space-register
* **I-Type:**
* Instruction name-space-register-comma-register-comma-immediate
* (loads/stores/beq)Instruction name-space-register-offset(register)
* **J-Type:**
* Instruction name-space-label
* Label name should be written in the same line of the first instruction in which it jumps/branches to .  
  ex: label : add $s1,$s2,$s1