

Instructions and Forms

RISC-U

lui

beq

addi

jal

add

jalr

sub

ld

multu

sd

divu

sltu

remu

ecall

Formats

R-format

I-format

S-format

B-format

J-format

U-format

no p

special cases of addidi

Immediate Arithmetic Instructions

lui	\$rd	imm	
addi	\$rd	\$rs1	imm

- **Load upper immediate** loads `imm` value shifted by 12 bits into `$rd` and **add immediate** adds `imm` to the content of `$rs1` and stores the result in `$rd`.
- Those two instructions are used to **initialize registers** (`$rs1 = $zero`) and to **load addresses** into a register in order to read values from memory.
- `lui` is used to load the upper and `addi` to load the lower bits - see `load_integer(uint64_t value)`.
- A special case of `addi` is `nop`, with `$zero = $zero + 0`.

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special case of **addi**

nop

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