## Instructions and Formats

## **RISC-U**

beq

jal

jalr

Id

sd

sltu

ecall

lui

addi

add

sub

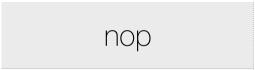
multu

divu

remu

**Formats** R-format **I-format** S-format **B-format** J-format

**U-format** 



### special case of addi

# 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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### **RISC-U**

lui	beq	
addi	jal	
add	jalr	
sub	ld	
multu	sd	
divu	sltu	
remu	ecall	

#### **Formats**

R-format
<u>I-format</u>
<u>S-format</u>
<u>B-format</u>
<u>J-format</u>
<u>U-format</u>

special case of addi

nop