Arithmetic Instructions

• Set \$rd to 1 if \$rs1 < \$rs2.

- == is implemented using b - a < 1.

- This is the only instruction needed to implement <, >, <=, >=, == and !=.

- How this is done:

sltu	\$rd	\$rs1	\$rs2

In unsigned arithmetic only 0 satisfies this

condition.

Memory Instructions

ld	\$rd	offset(\$rs1)
sd	\$rs2	offset(\$rs1)

- Load into \$rd the value that is stored at the address that is obtained by adding the immediate offset to the content of \$rs1.
- **Store** the content of \$rs2 at the address that is obtained by adding the immediate offset to the content of \$rs1.
- The <u>addressing mode</u> used for these instructions is called register-relative addressing.

Arithmetic Instructions

sltu	\$rd	\$rs1	\$rs2

- Set \$rd to 1 if \$rs1 < \$rs2.
- This is the only instruction needed to implement <, >, <=,
 >=, == and !=.
- How this is done:
 - == is implemented using b a < 1. In unsigned arithmetic only 0 satisfies this

condition.