

Which RISC-V instruction is used to branch if two registers are equal?

BEQ

The BGE instruction in RISC-V can be used to implement a 'less or equal' check by reversing operands.

T

Which RISC-V instruction checks if the value in the first register is less than the value in the second register?

BLT

RISC-V has a specific instruction called 'Branch if Greater Than'.

F

In a conditional statement, why might you choose to use BNE over BEQ?

It eliminates the need for an additional jump instruction.

What does the '.data' directive in RISC-V assembly indicate?

Start of the data segment

The ANDI instruction in RISC-V performs a bitwise AND operation using an immediate value.

T

Which instruction is used for a system call in RISC-V assembly?

Ecall

Global variables in RISC-V assembly can be defined using the .data directive.

T

How is a global array declared and initialized in the data section of RISC-V assembly?

Using '.word' directive

In RISC-V, the ORI instruction can only take two register operands.

F

What does the 'AND' operation in RISC-V assembly perform?

Bitwise conjunction

Which register typically holds the system call number in RISC-V before using 'ecall'?

A7

Which instruction is used for loading a base address of a label into a register in RISC-V?

la

The XOR operation outputs true only when both input bits are the same.

F

The OR operation in RISC-V is used to perform bitwise multiplication.

F

In RISC-V, how can you ensure a function's variables are preserved across function calls?

Use the s registers

What is the primary purpose of functions in RISC-V assembly?

To organize code into manageable, reusable components

Which registers are used to pass the first three arguments to a function in RISC-V?

a0, a1, and a2

What does the 'jal' instruction do in RISC-V assembly?

It jumps to a label and stores the return address in the ra register

The jr ra instruction in RISC-V is used to return control to the caller.

T

Which register is typically used for the return address in RISC-V assembly?

ra

What action is necessary if a function modifies a register used to pass an argument and then calls another function?

Save the register value on the stack before modifying.

Temporary registers in RISC-V need to be preserved across function calls.

F

When would you use a temporary register over a saved register?

For short-lived data within a function.

What role do argument registers (a0-a7) play in a function call?

They pass parameters to functions.

It is not necessary to preserve ra in multiple nested function calls.

F

Saved registers in RISC-V must retain their values across function calls.

T