RISC-V RV32I INSTRUCTIONS

RV32I Base Integer Instruction Subset

ABSTRACT
This book discusses the integer, computational, control transfer and load, and store instructions of RV32I base instruction set with working sample code.

VINCENT

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LOADING A PC RELATIVE ADDRESS INTO REGISTER

AUIPC (Add Upper Immediate to PC) can be used for PC relative control flow as well as data access. AUIPC forms a 32bits value with upper 20bits from offset and filling lower 12bits with zeros, then adds this to the address of auipc (program counter value) and stores into destination register.

Syntax

auipc <rd>, <20bits_offset>

Example

```
80000000 <_main>:
80000000:    4291          li    t0,4
80000002:    430d          li    t1,3
80000004:    00008297      auipc t0,0x8
80000008:    839a          mv    t2,t1

8000000a <add_here>:
8000000a:    929a          add   t0,t0,t1
```