Adder inputx result inputy

Adder inputx result inputy

Control Unit
opcode branch
pcfromalu
jump
memread
memwrite
regwrite
toreg
alusrc
pcadd
itype
aluop

Immediate Gen instruction sextImm

ALU Control itype operation aluop funct3 funct7

Inst Memory address instruction

Register File
readreg1 readdata1
readreg2 readdata2
writereg
wen
writedata

ALU

operation result inputx inputy

Data Memory address readdata memread memwrite valid maskmode sext

writedata

Si

Single cycle DINO CPU