



Single Cycle Datapath

From Kris D Schindler

Single Cycle Datapath Design

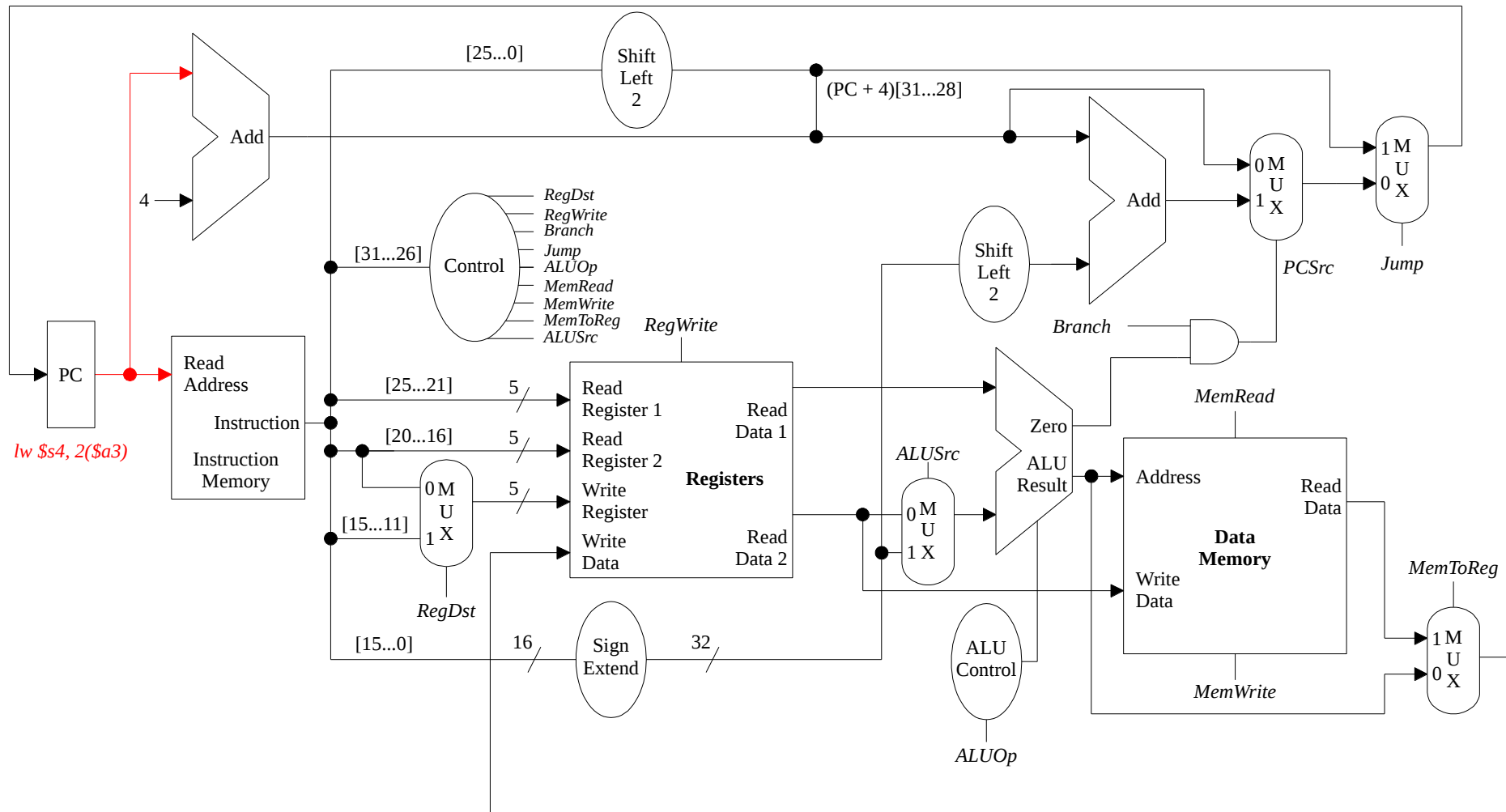
● Instruction Examples

☞ `lw $s4, 2($a3)`

☞ `add $s0, $s4, $a0`

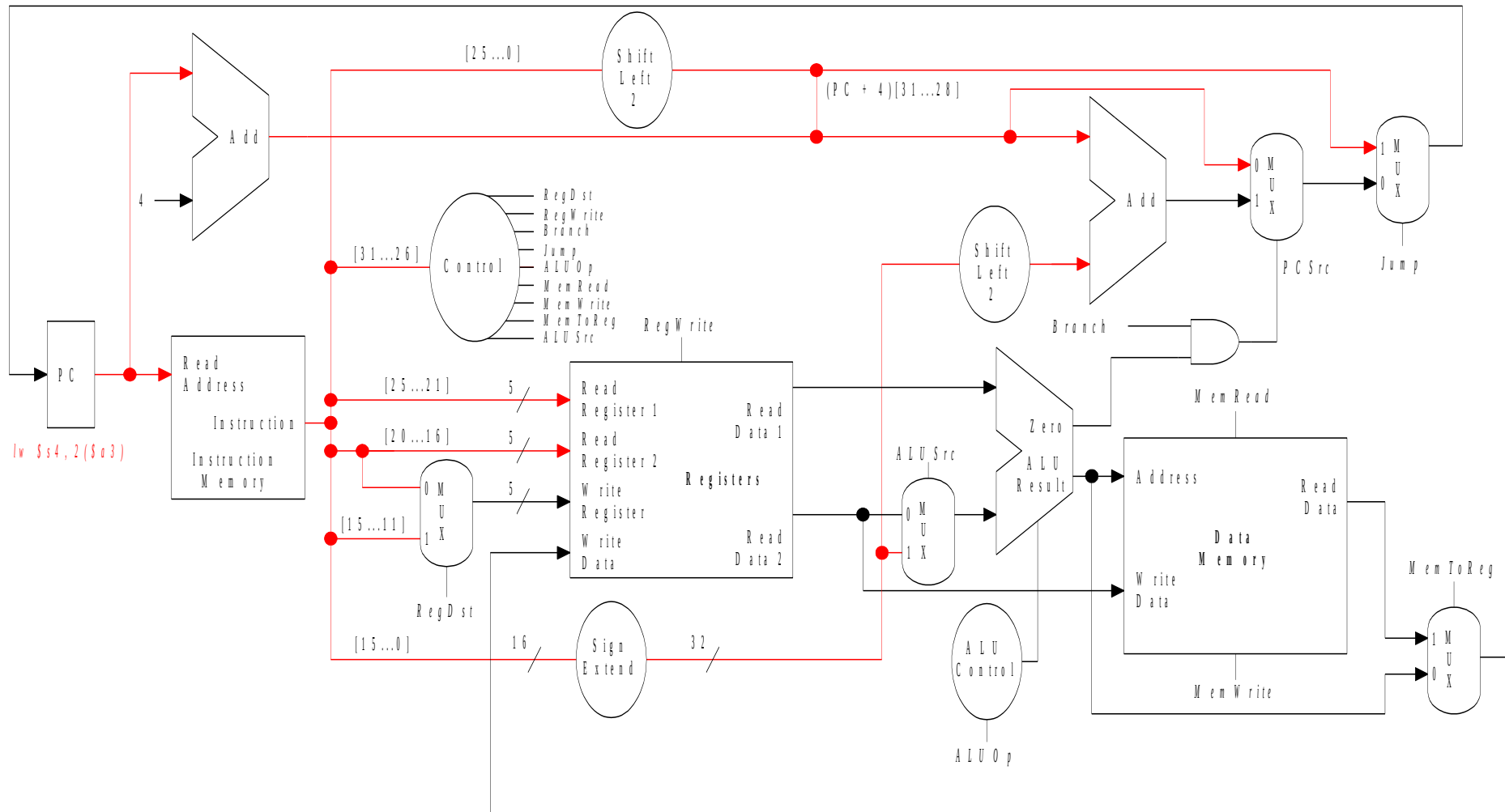
Single Cycle Datapath Design

● Consider *lw \$s4, 2(\$a3)*



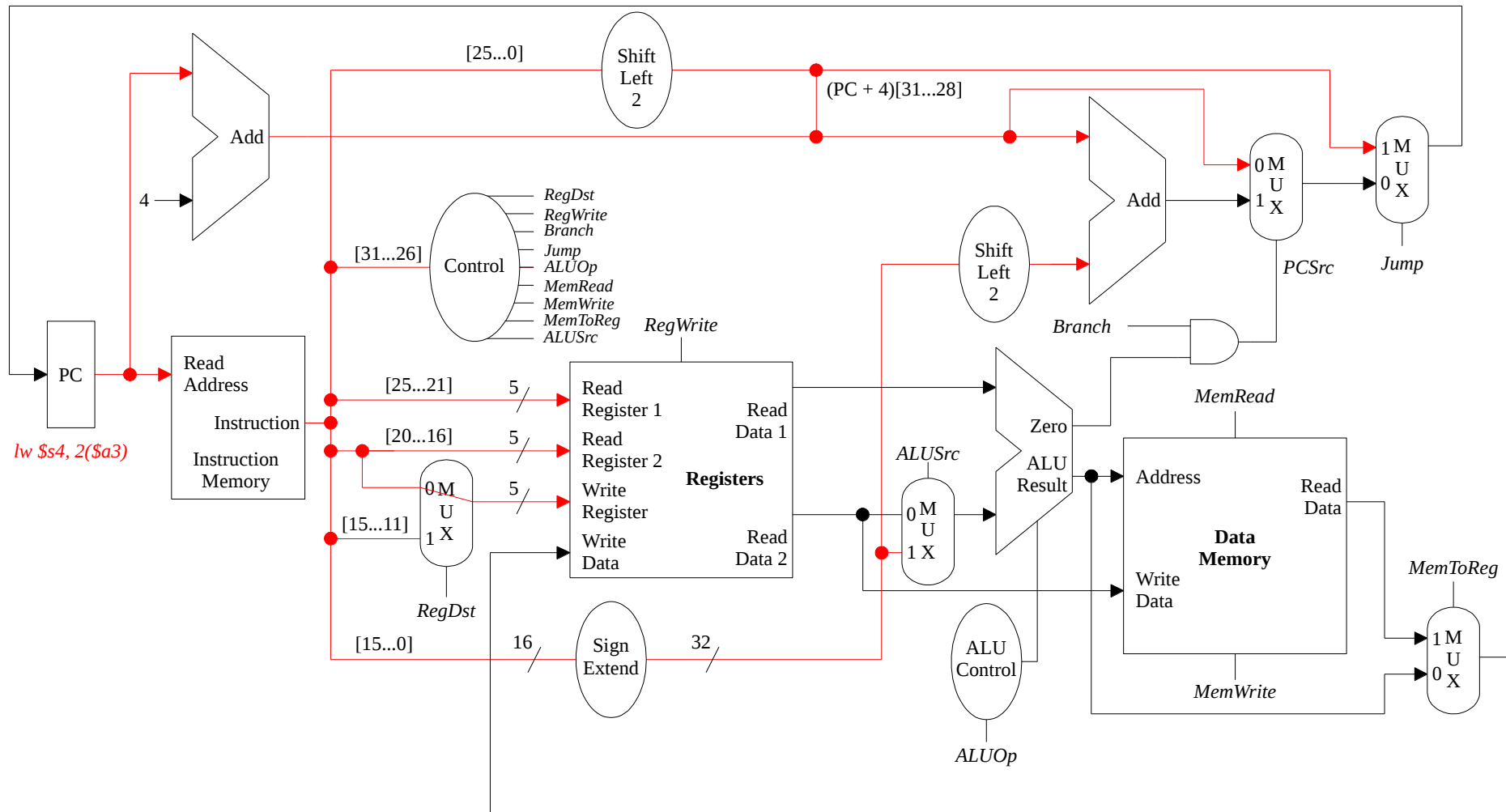
Single Cycle Datapath Design

- Consider *lw \$s4, 2(\$a3)*



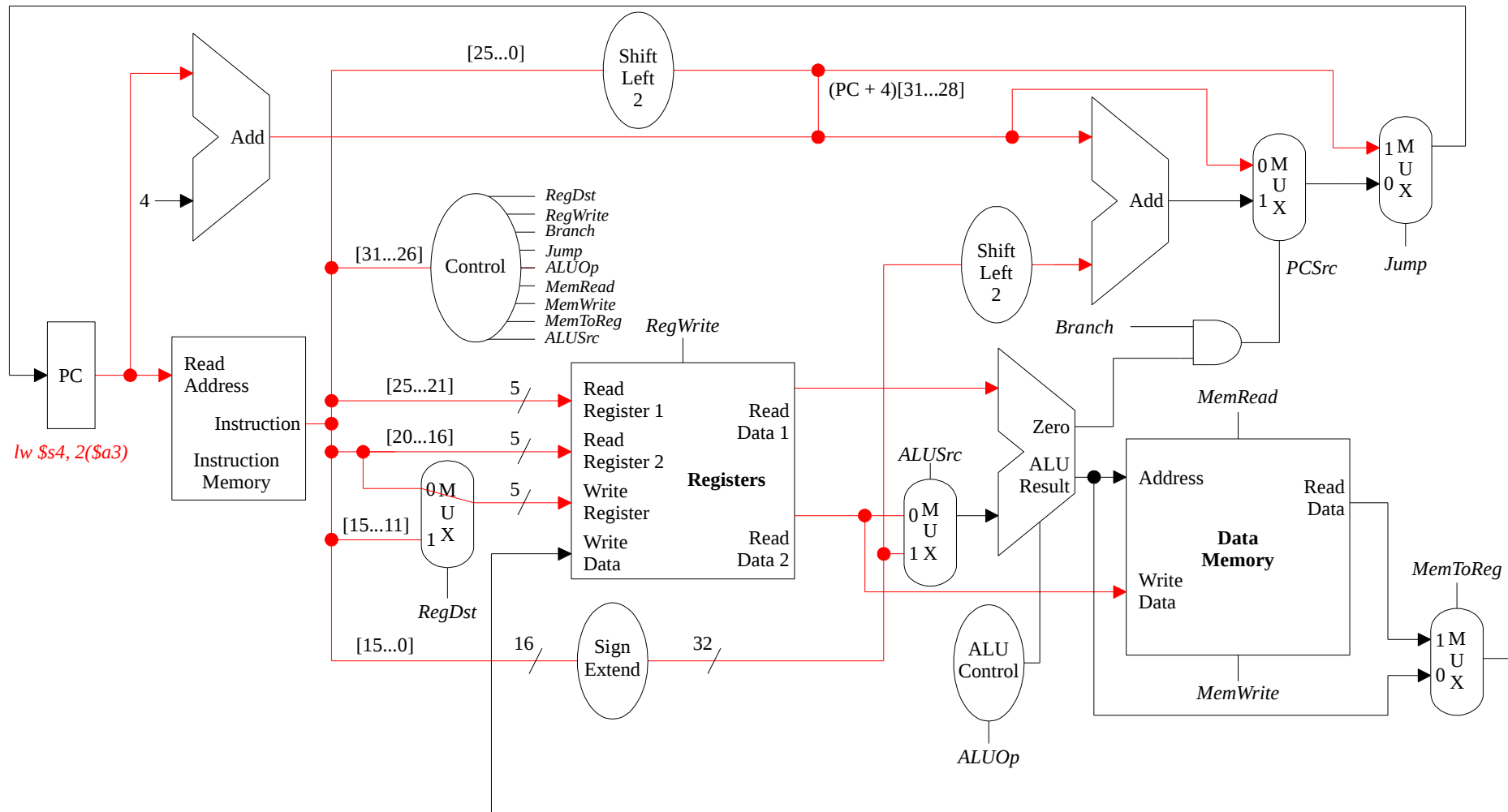
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● Consider *lw \$s4, 2(\$a3)*



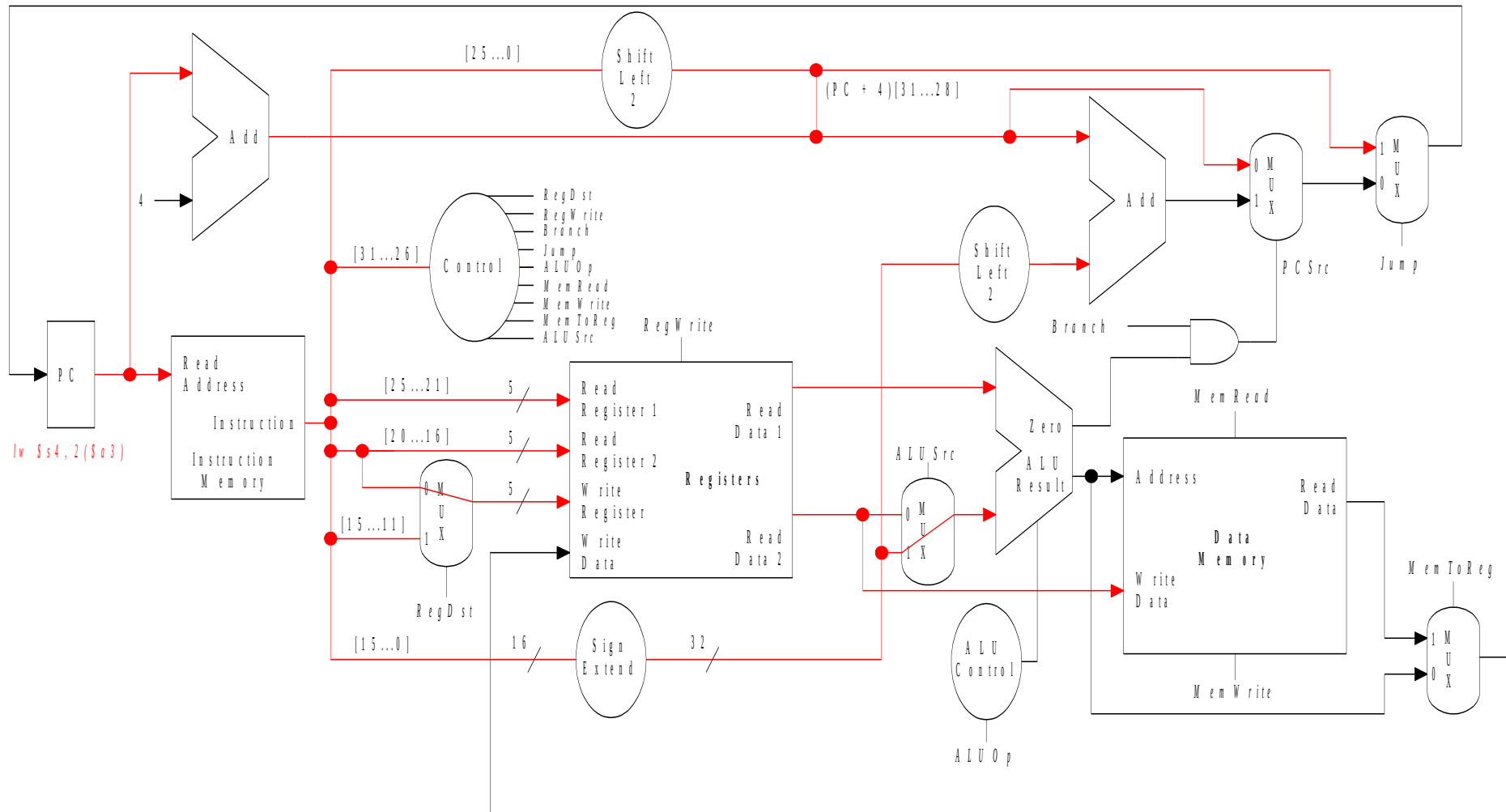
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● Consider *lw \$s4, 2(\$a3)*



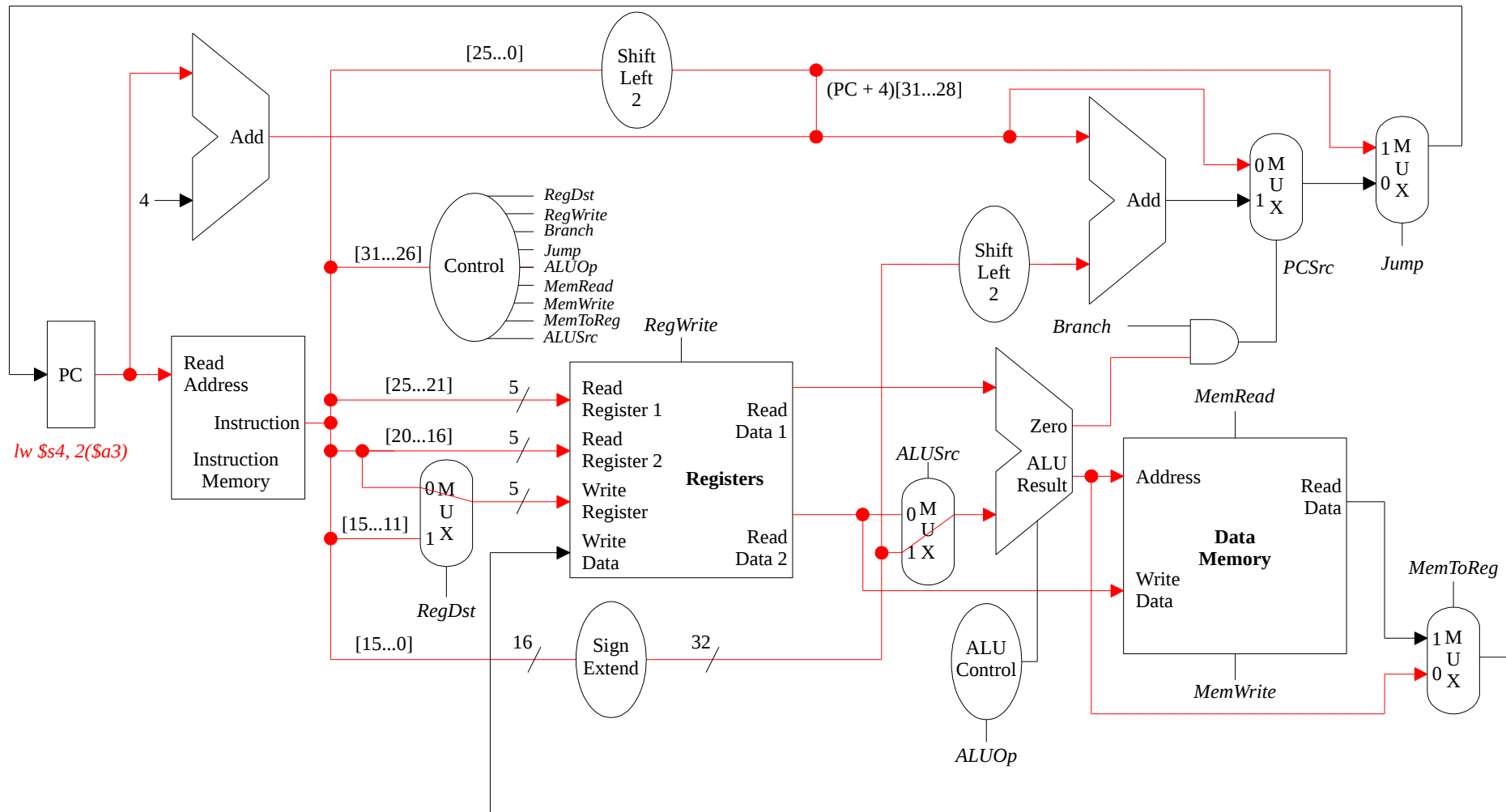
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- Consider *lw \$s4, 2(\$a3)*



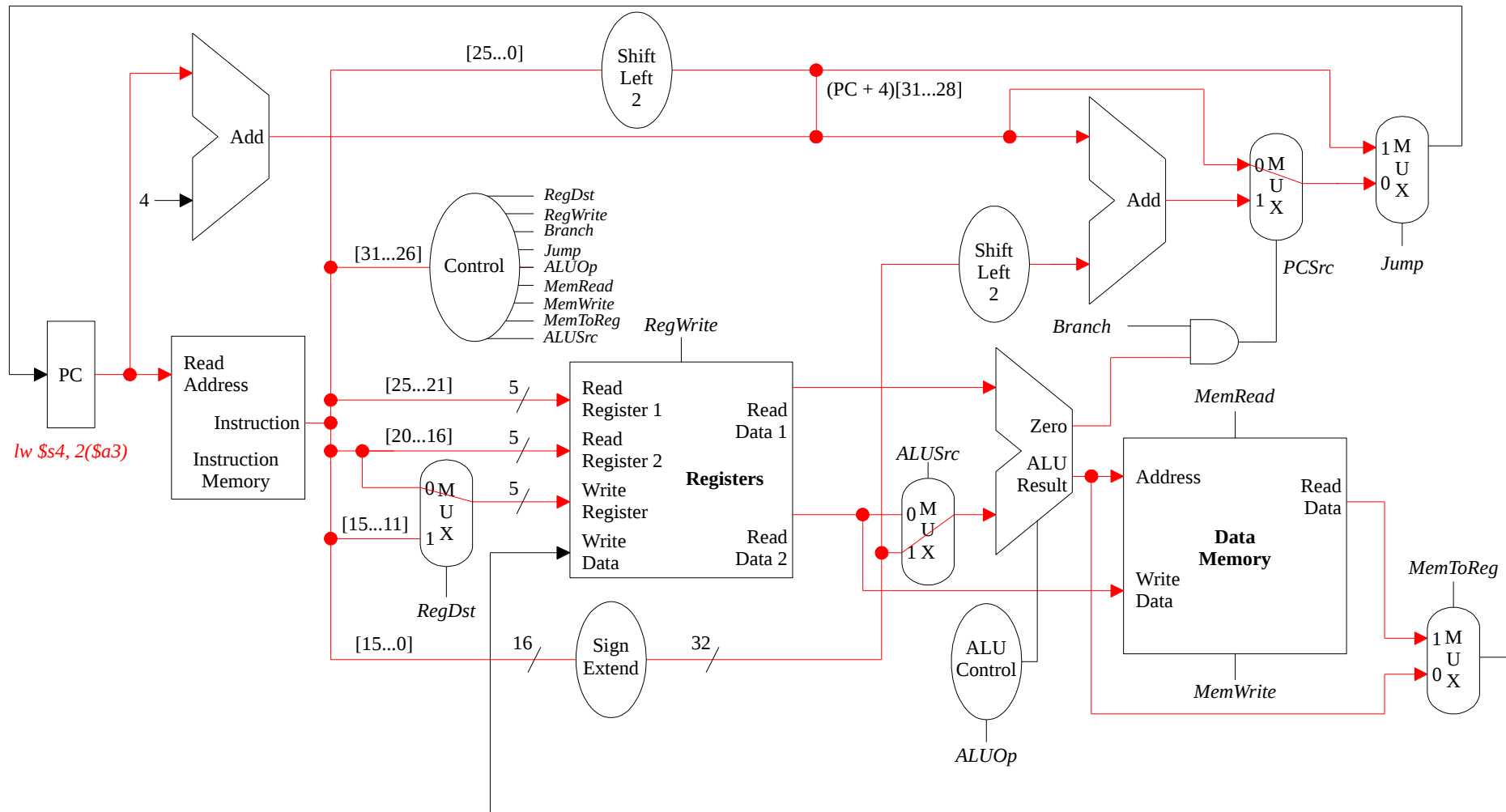
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● Consider *lw \$s4, 2(\$a3)*



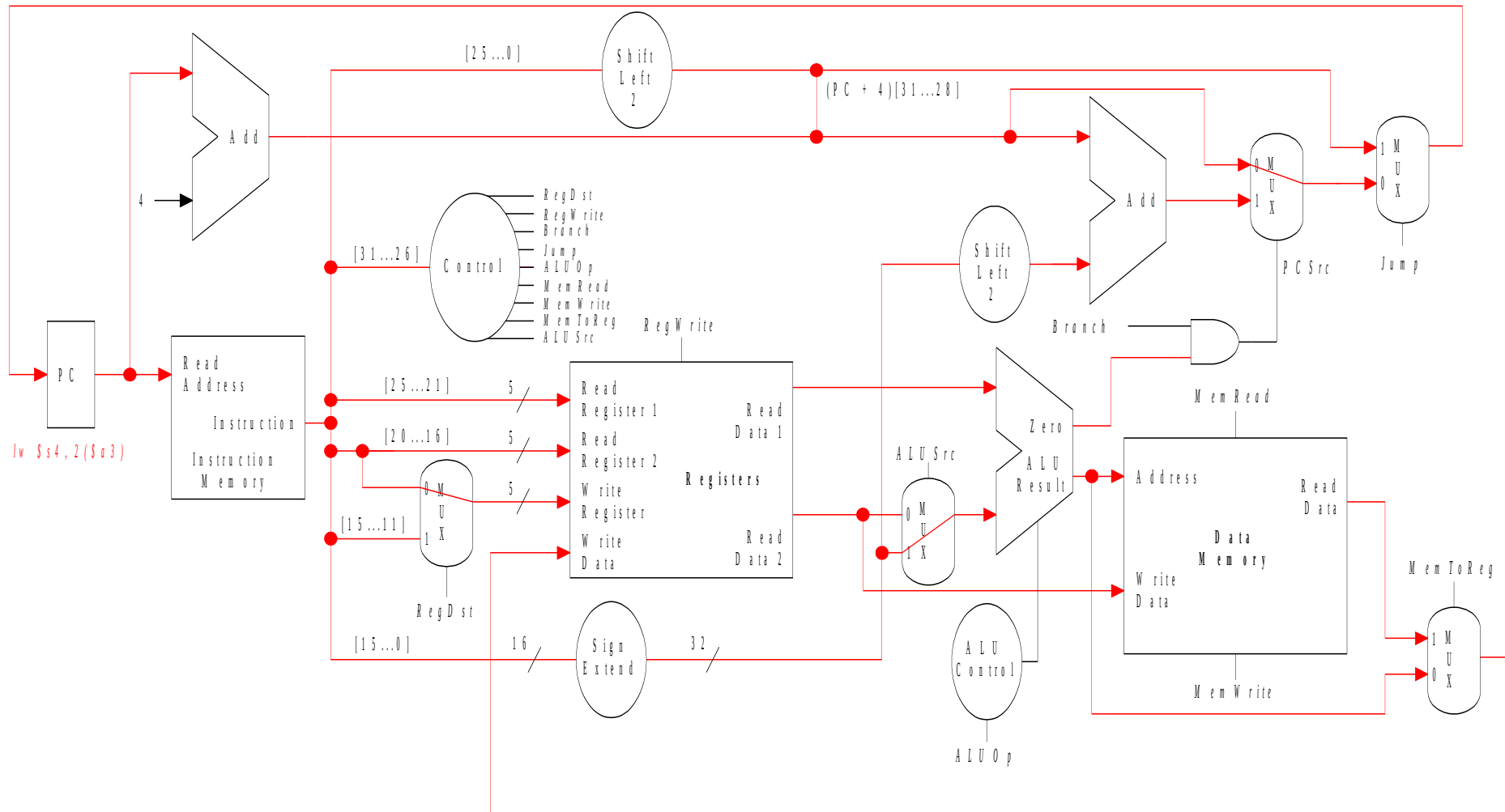
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● Consider *lw \$s4, 2(\$a3)*



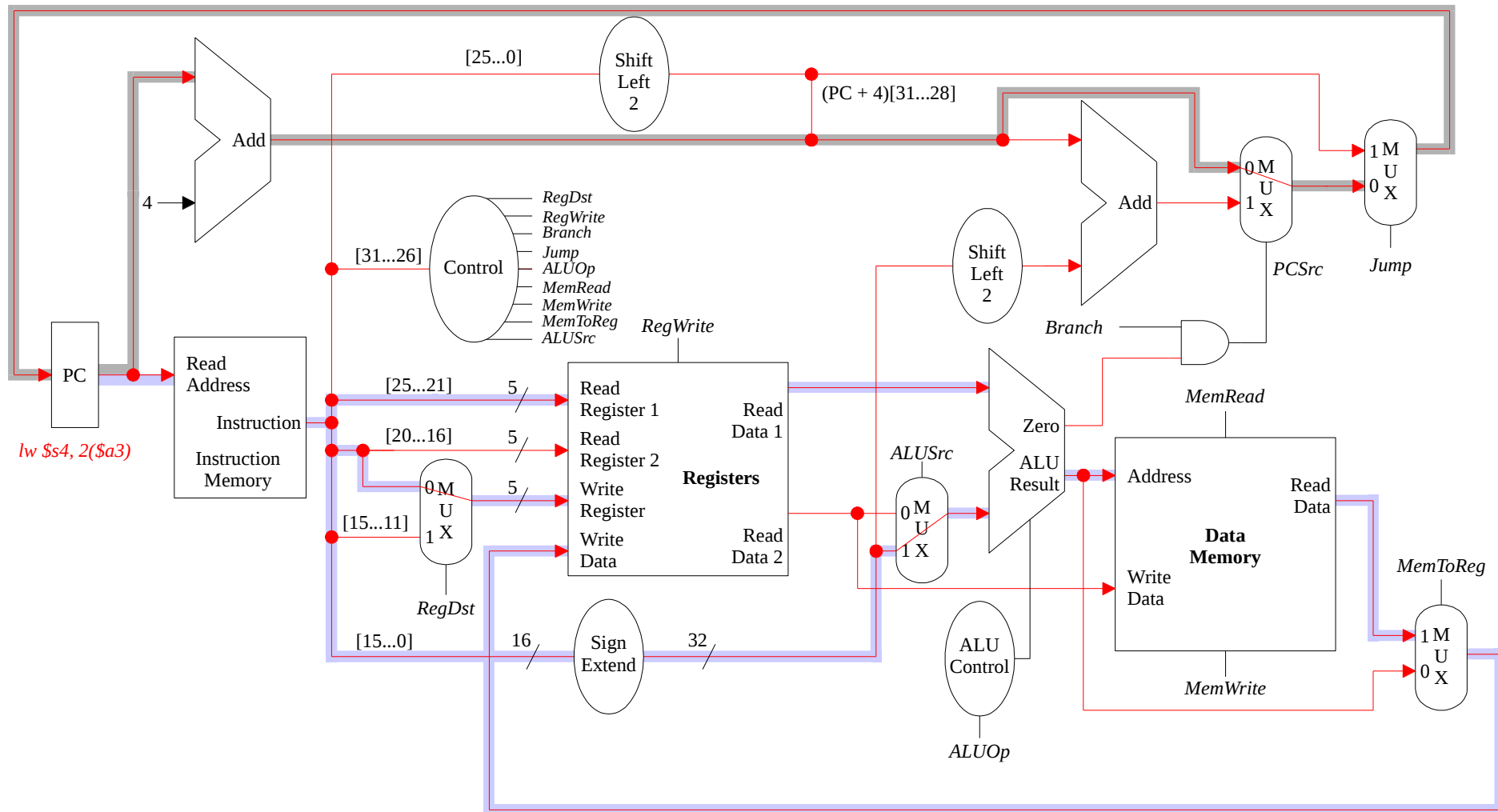
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- Consider *lw \$s4, 2(\$a3)*



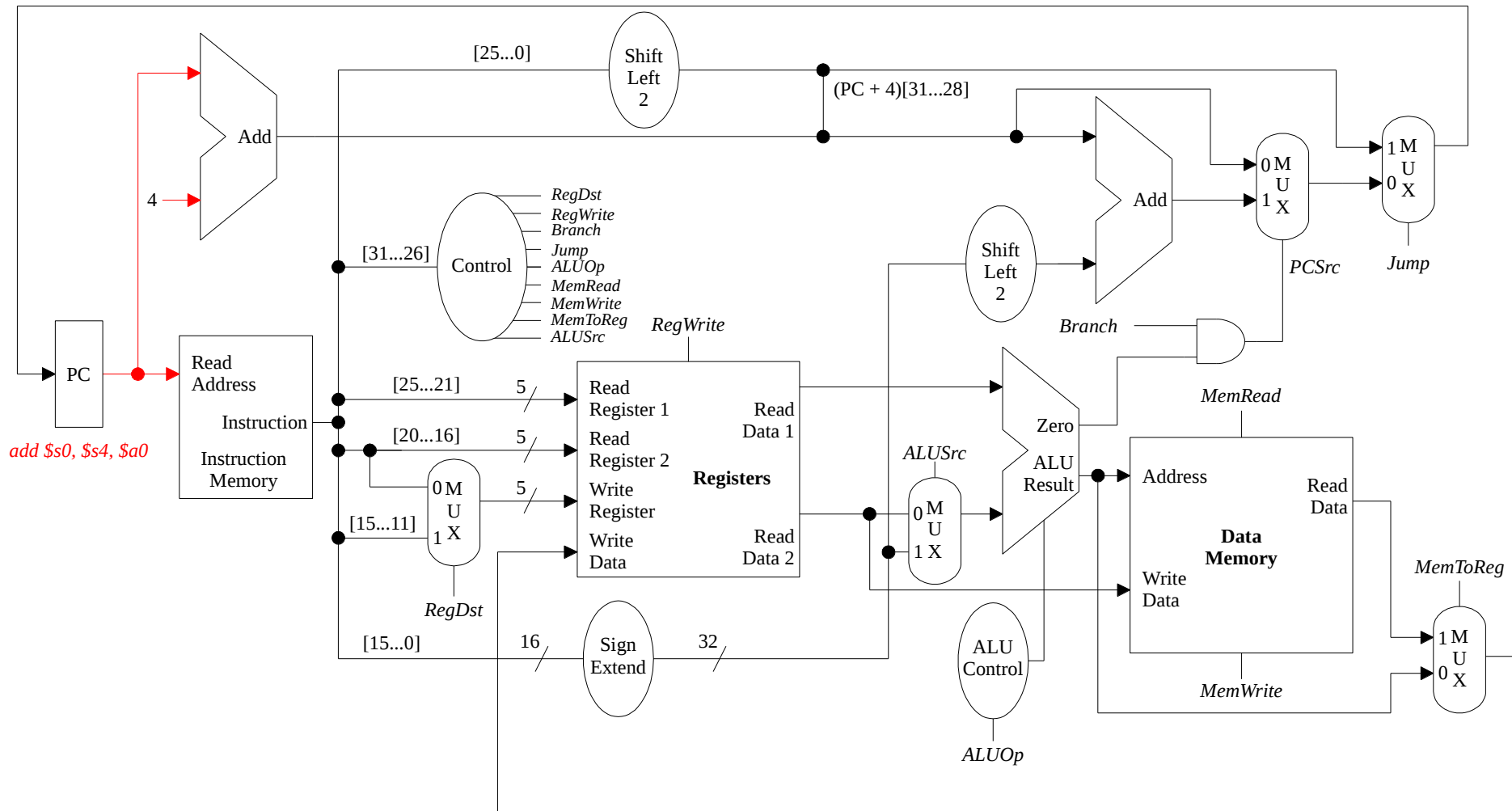
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- Consider *lw \$s4, 2(\$a3)*



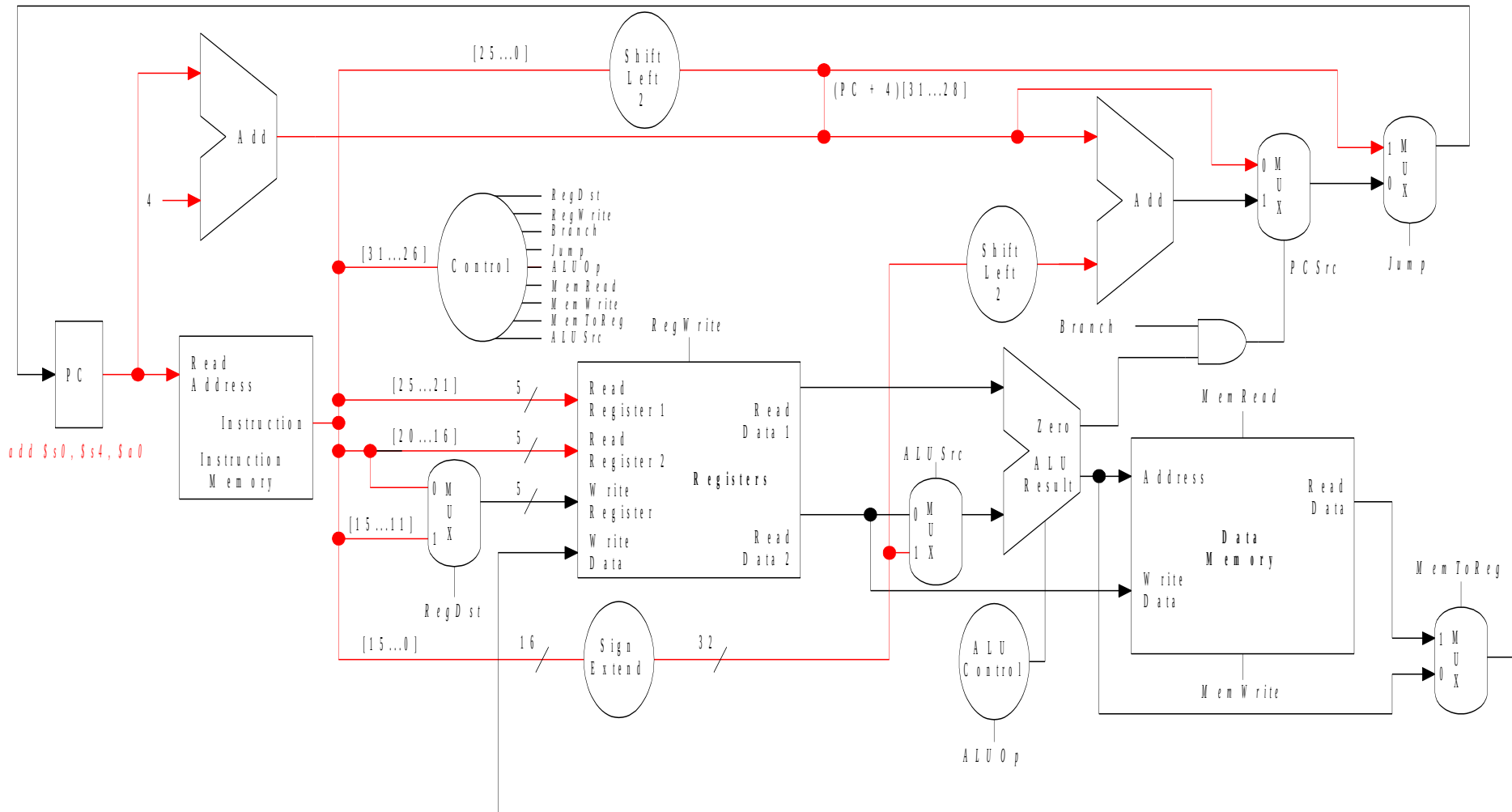
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- Consider *add \$s0, \$s4, \$a0*



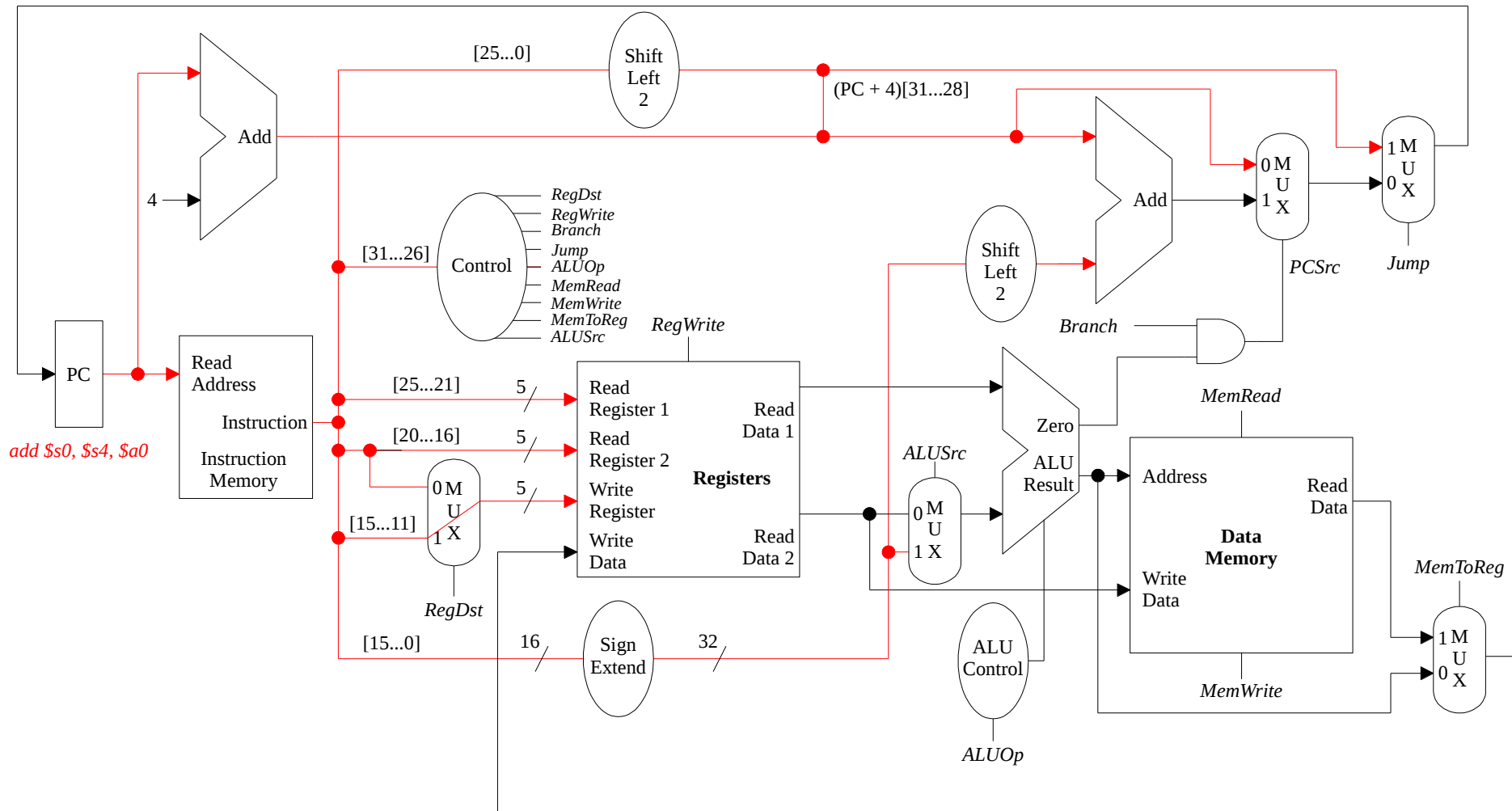
Single Cycle Datapath Design

- Consider *add \$s0, \$s4, \$a0*



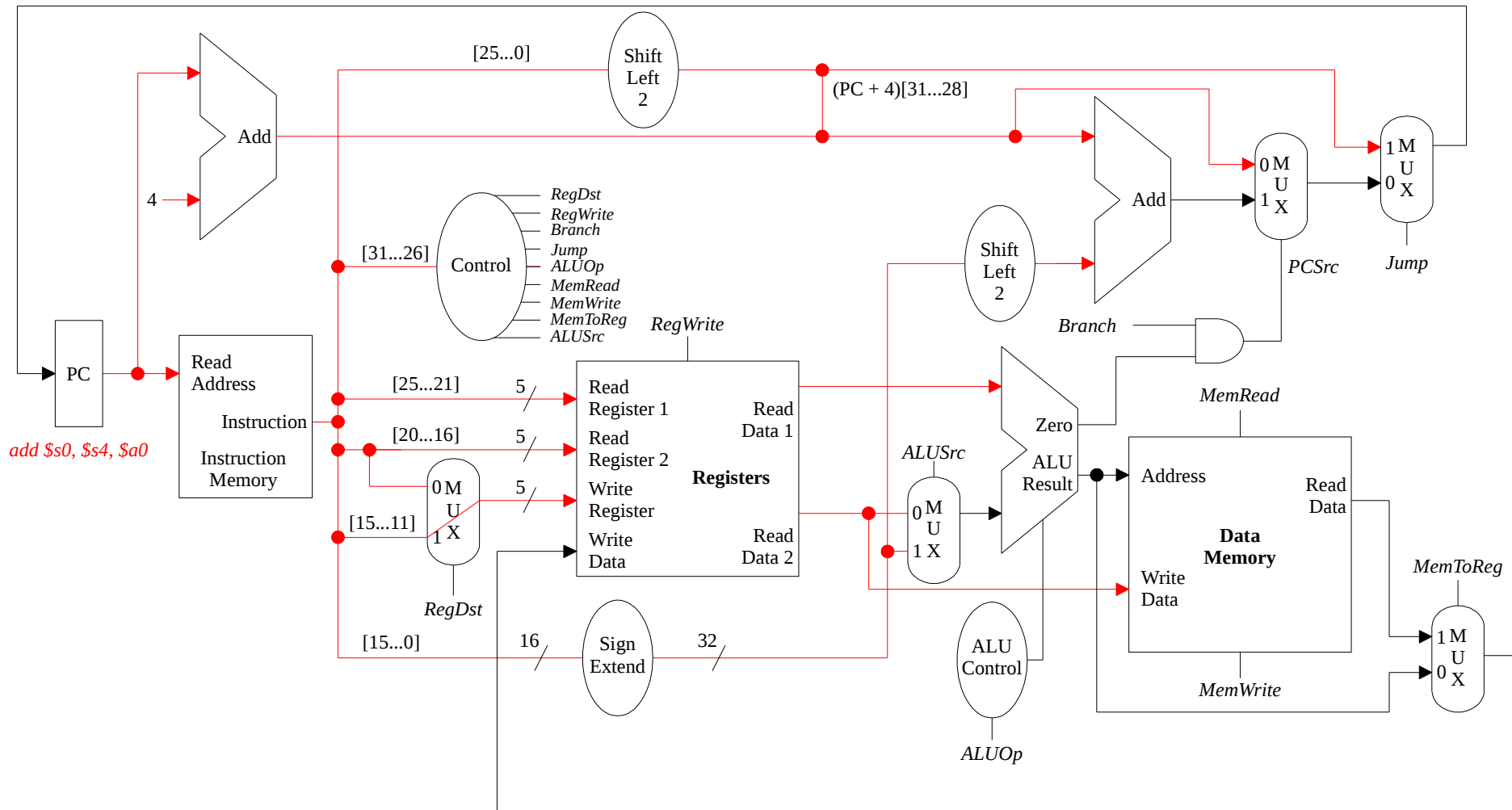
Single Cycle Datapath Design

- Consider *add \$s0, \$s4, \$a0*

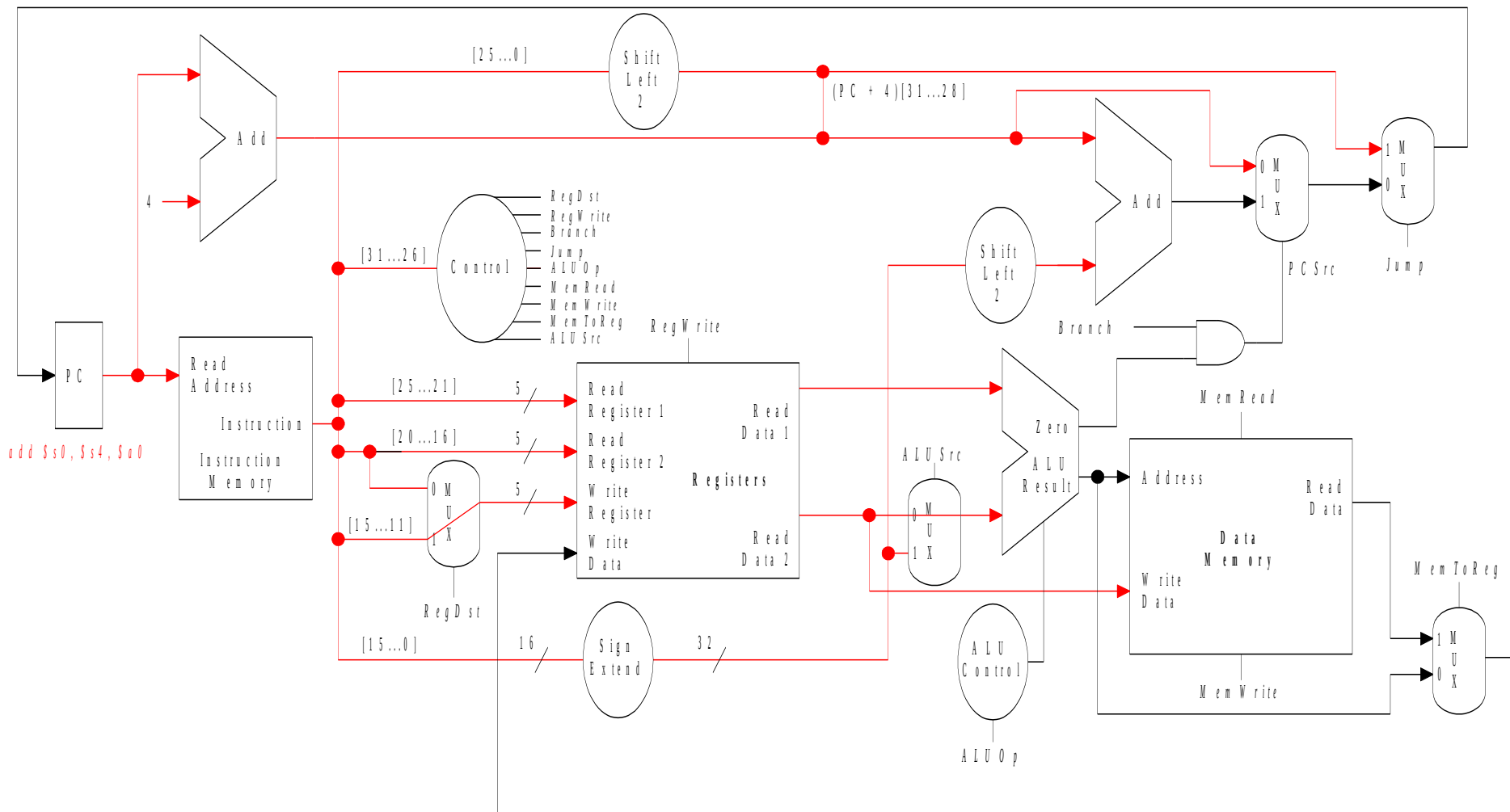


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- Consider *add \$s0, \$s4, \$a0*

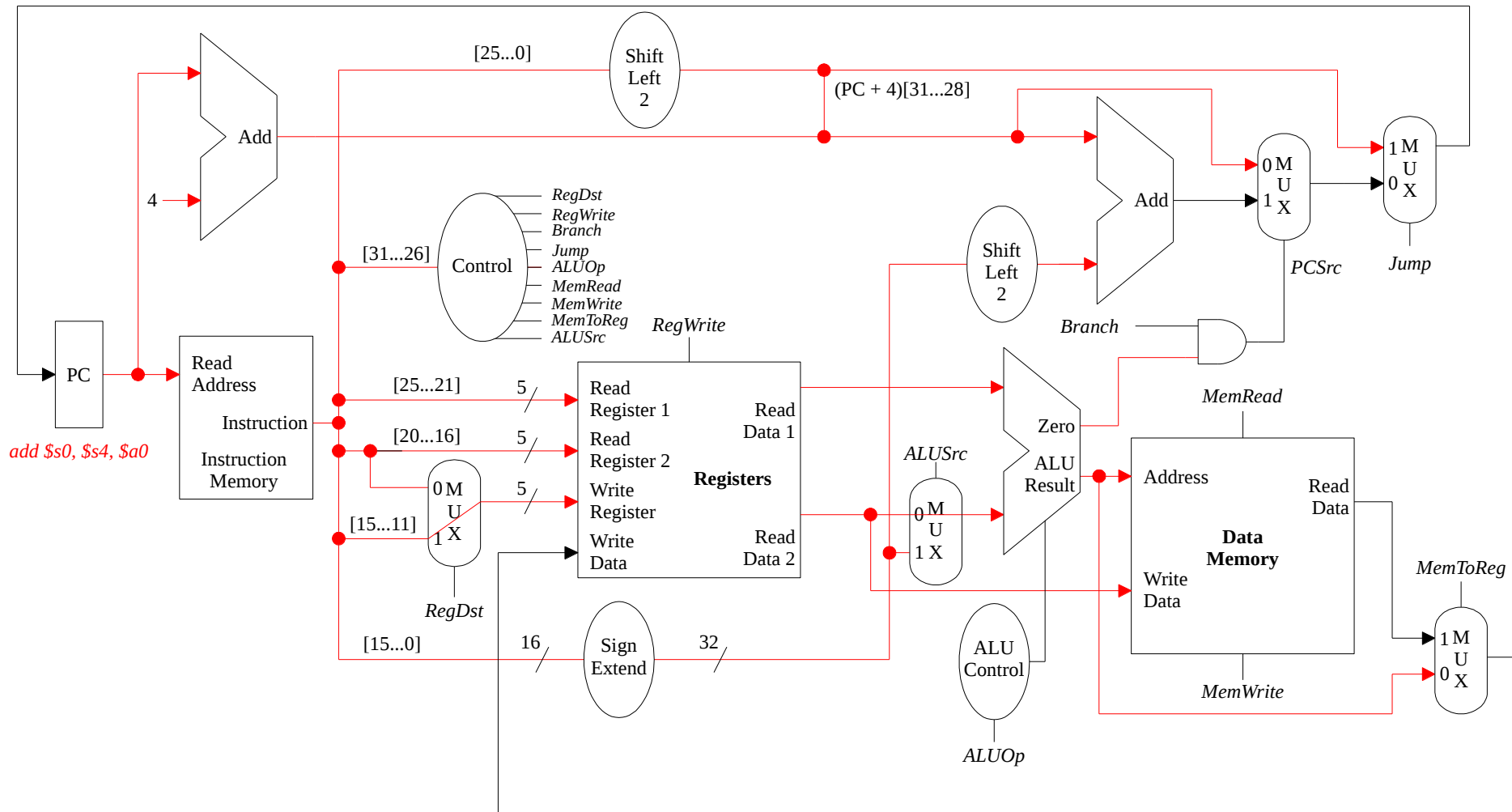


- # Single Cycle Datapath Design



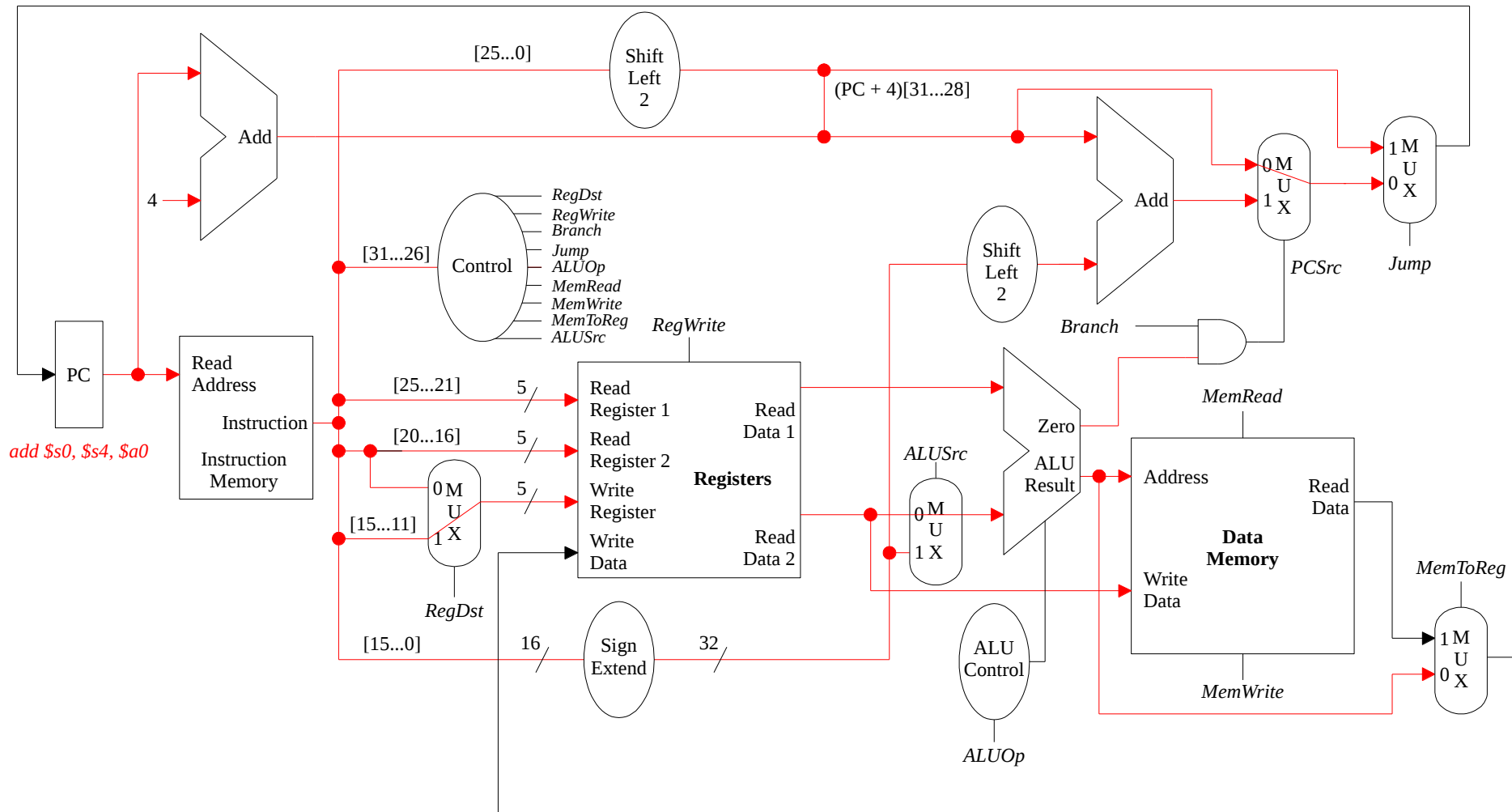
Single Cycle Datapath Design

- Consider *add \$s0, \$s4, \$a0*



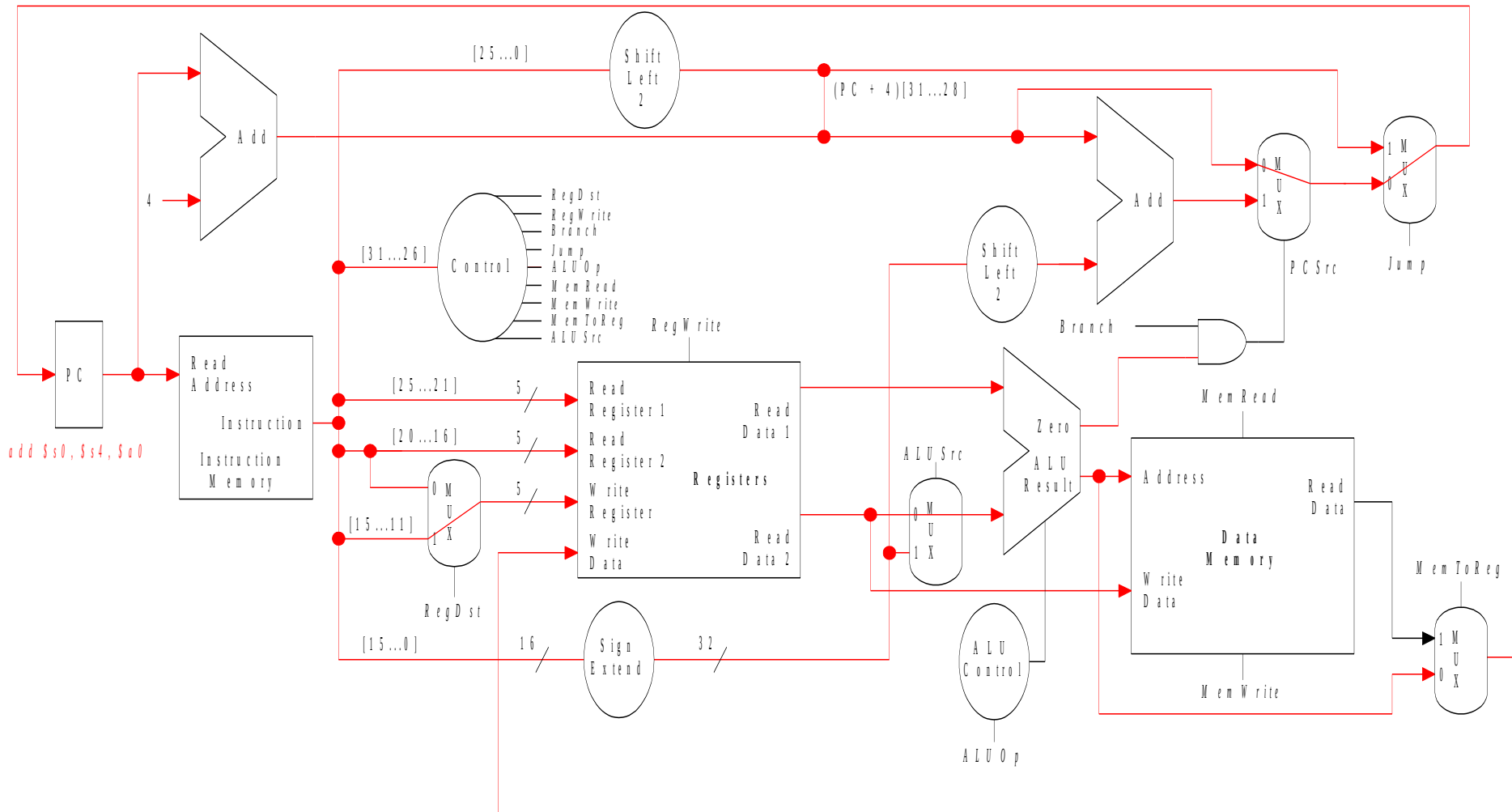
Single Cycle Datapath Design

- Consider *add \$s0, \$s4, \$a0*



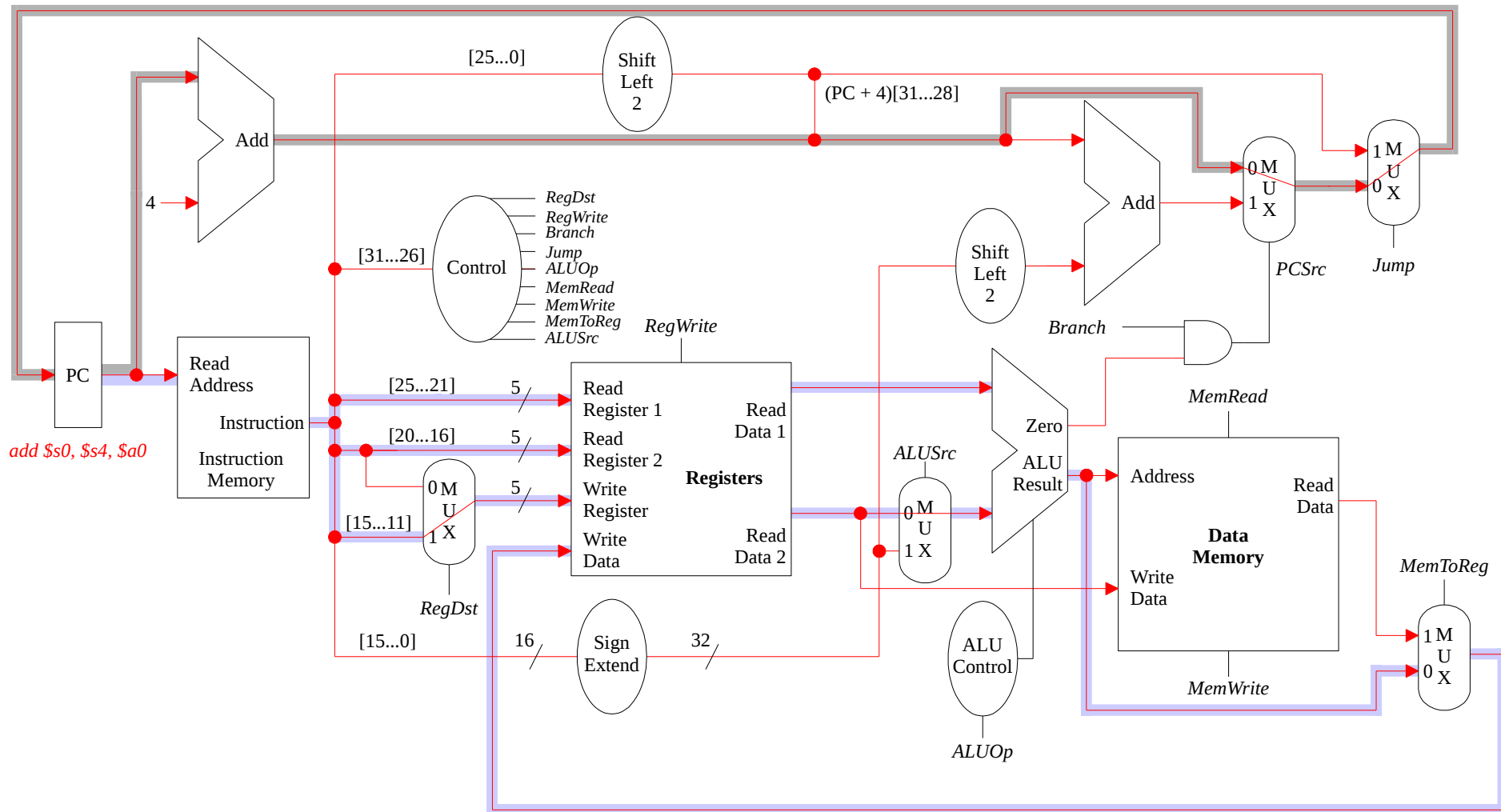
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- Consider *add \$s0, \$s4, \$a0*



Single Cycle Datapath Design

- Consider *add \$s0, \$s4, \$a0*



References

- David A. Patterson and John L. Hennessy, *Computer Organization and Design, The Hardware/Software Interface*, 4th Edition, Elsevier, 2009
- David A. Patterson and John L. Hennessy, *Computer Organization and Design, The Hardware/Software Interface*, 3rd Edition, Morgan Kaufmann Publishers, Inc., 2005
- David A. Patterson and John L. Hennessy, *Computer Organization and Design, The Hardware/Software Interface*, 2nd Edition, Morgan Kaufmann Publishers, Inc., 1998