
CS 152

Computer Architecture and Engineering

Lecture 3 – Single Cycle Wrap-Up

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Last Time: Goal #1, an R-format CPU

Syntax: ADD \$8 \$9 \$10 **Semantics:** \$8 = \$9 + \$10

opcode	rs	rt	rd	shamt	funct
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Sample program:

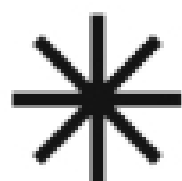
ADD \$8 \$9 \$10

SUB \$4 \$8 \$3

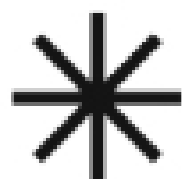
AND \$9 \$8 \$4

...

**How registers
get their initial
values are not
of concern to
us right now.**



**No branches or jumps:
machine only runs
straight line code.**



**No loads or stores:
machine has no use for
data memory, only
instruction memory.**



Last Time: An R-format CPU design

Decode fields to get : ADD \$8 \$9 \$10

