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**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

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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

