Computer Organisation & Program Execution 2021

Uwe R. Zimmer - The Australian National University

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Organization & Contents

Uwe R. Zimmer - The Australian National University

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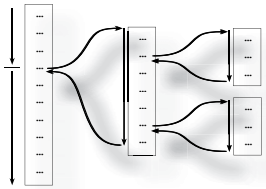
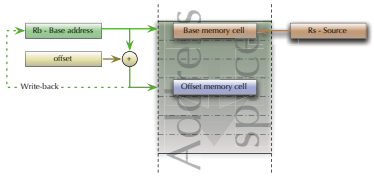
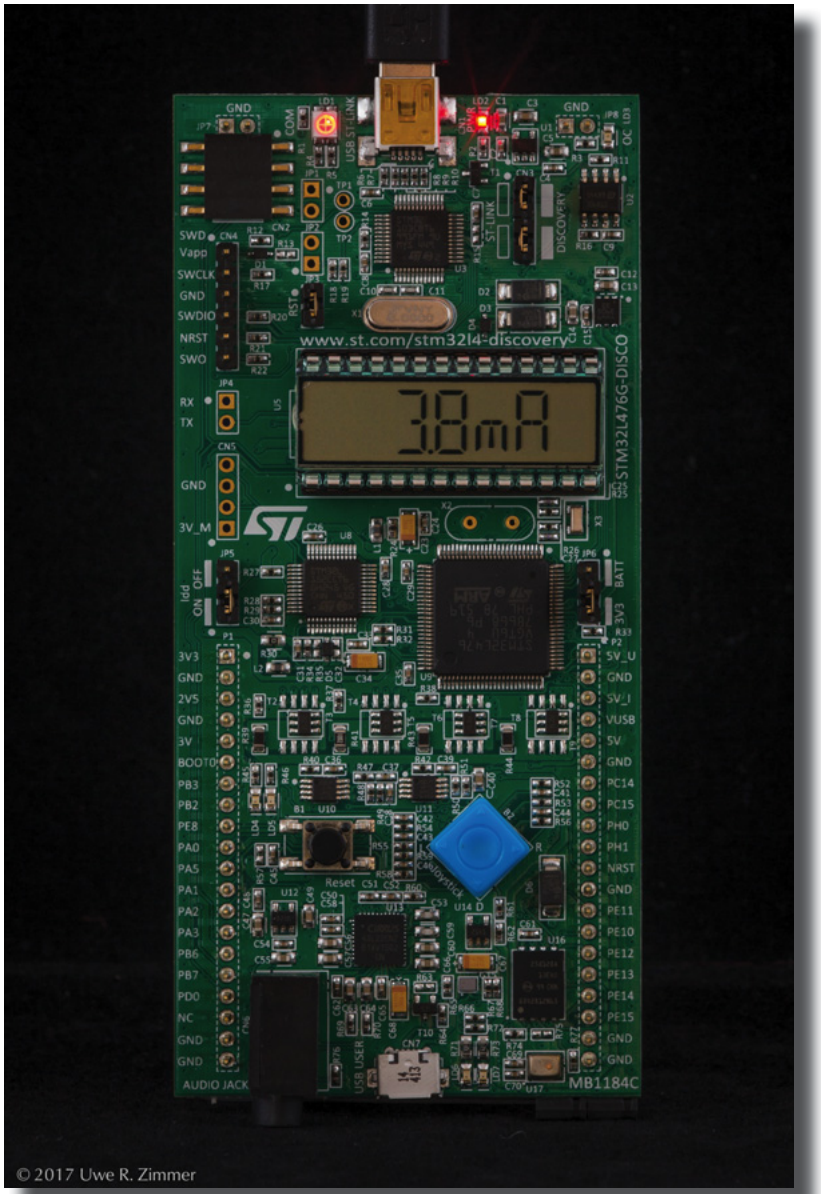
what is offered here?

```
    b       while_condition
while:
    mul     r1, r1
while_condition:
    cmp     r1, #100
    blt     while
```







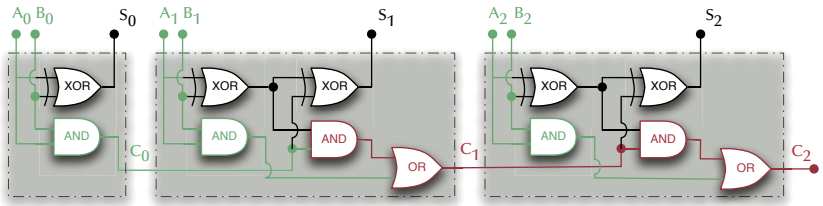
Fundamentals, Overview & Hands-on Experience

of

Computer Architecture

ADDS <Rd>, <Rn>, <Rm>

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
0	0	0	1	1	0	0	Rm			Rn			Rd		
Op Code							Arguments								



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who could be interested in this?

anybody who …

… wants to know why and how computer science

immediately connects and translates to the physical world.

… would like to see **immediate real-world involvement** in their work.

… would like to understand what

really happens if you run a high level program.

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who are these people? – introductions


Ben


Uwe

Ben Swift & **Uwe** R. Zimmer

Abigail (**Abi**) Thomas, **Ashleigh** Johannes, **Ben** Gray, **Brent** Schuetze,

Calum Snowdon, **Chinmay** Garg, **Harrison** Shoebridge,

Johannes (**Johnny**) Schmalz, **Peter** Baker, **Ryan** Stocks, Septian **Razi**,

Tom Willingham

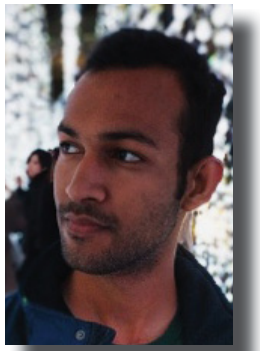

Abi


Ashleigh


Ben


Brent


Calum


Chinmay


Harrison


Johnny


Peter


Ryan


Razi


Tom

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how will this all be done?

☞ Lectures:

- 2 x 1.5 hours lectures per week … all the nice stuff
  Monday 13:30, Wednesday 11:30 (both on-line - which is: *here*)

☞ Laboratories:

- 3 hours per week … all the rough stuff
  time slots: on our web-site – on-campus in CSIT N.xxx or HN Lab.xx laboratories
  -enrolment: https://cs.anu.edu.au/streams/ (opened on Monday)

☞ Resources:

- Course site: http://cs.anu.edu.au/student/comp2300/ … as well as schedules, slides, sources, links to forums, etc. pp. … keep an eye on this page!

☞ Assessment:

- *Hurdle lab* in week 4 (1%) – a pass here is a **hurdle** for the course
- *Mid-semester exam* (13%)
- *3 assignments* (12% each)
- *Final-exam* at the end of the course (50%) – 40/100 is a **hurdle** for the final exam

"Text book" for the course

[Patterson17]
David A. Patterson & John L. Hennessy
Computer Organization and Design – The Hardware/Software Interface
ARM edition, Morgan Kaufmann 2017

☞ Many concepts in this course are in there – *but not all!*

The [**Patterson17**] provides an excellent general background and a lot of in-depth studies into more specific fields.

☞ *References for specific aspects of the course are provided during the course and are found on our web-site.*