581365-8
Computer Organization II
(Tietokoneen rakenne)

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Fall 2002

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Course Focus

- Understand basic computer system design from the user (human, OS, compiler) viewpoint as well as from the designer viewpoint.
- Understand how a simple hardware clock signal makes a computer to execute programs.

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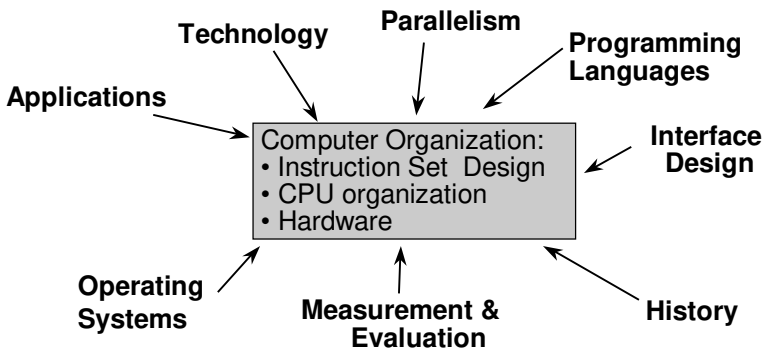
Peripheral topics



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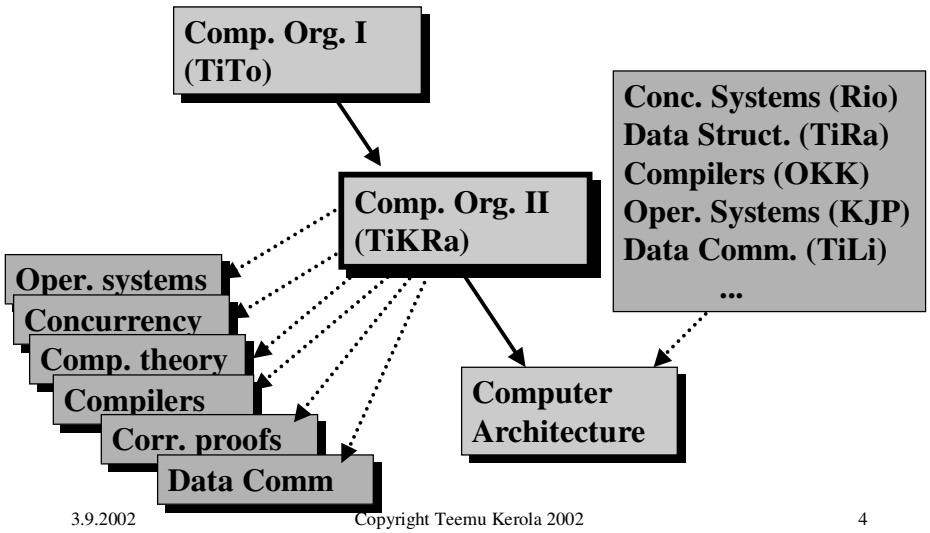
Related Courses



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Notice

- These slides are made to support lectures and to be used with the text book.
- They do NOT include everything that is covered in the lectures.
- They are NOT a replacement for a text book.
- If you need a self-contained presentation, please use the text book.

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Motto

- "It is not good exercise,
  if you do not sweat"

("Kunto ei nouse, jos ei tule hiki")

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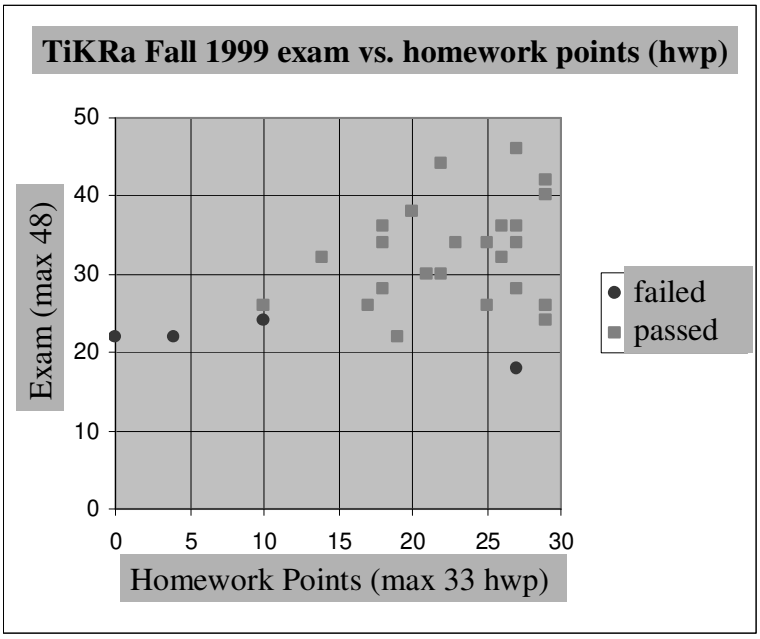

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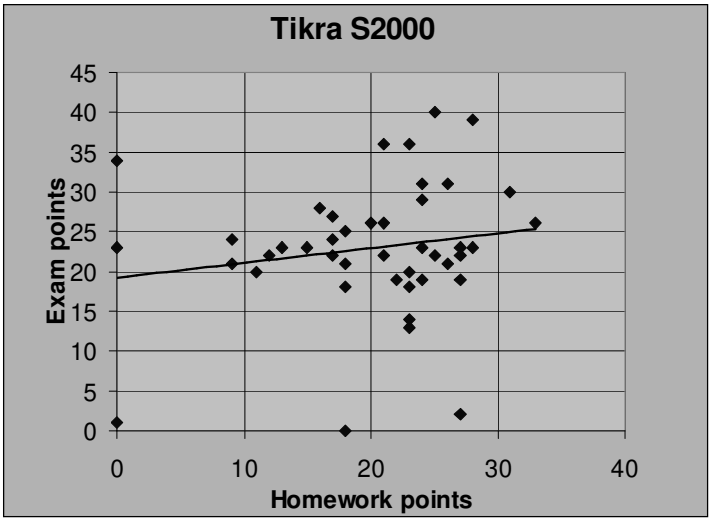
TiKRa Fall 2000 exam vs. homework points (hwp)



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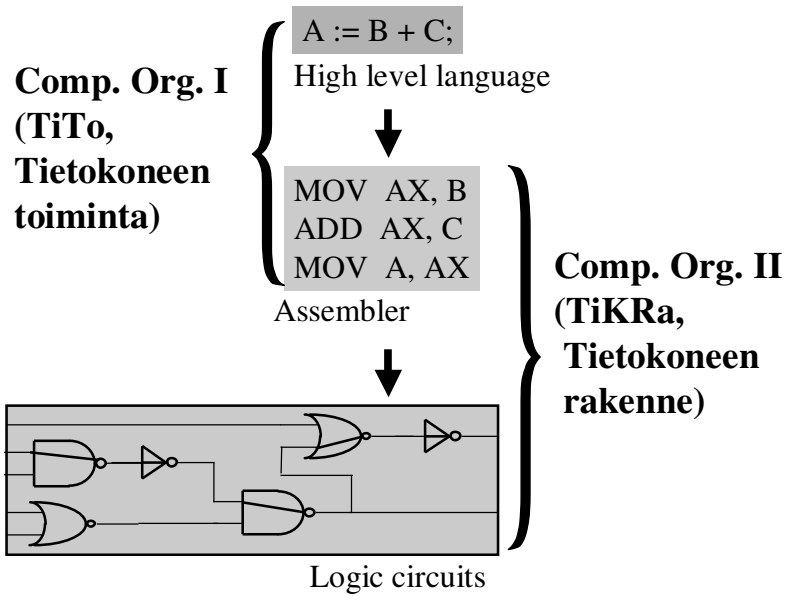
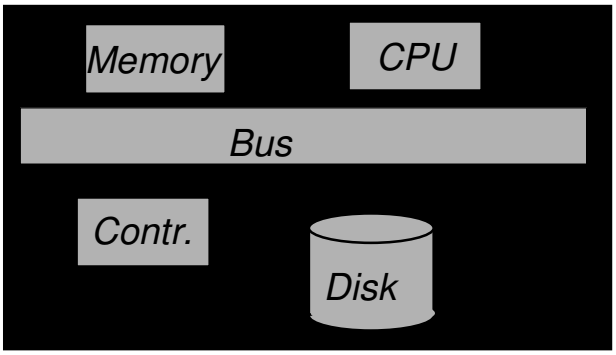
WWW Information

- Course home page
  http://www.cs.helsinki.fi/Teemu.Kerola/tikra/
- This semester schedule
  .../tikra/S2002/aikataulu.html
- Lectures *.../luennot/*
- Homeworks *.../laskuharj/*
- Old exams *…/tikra/kokeet/*
- Newsgroup *hy.opiskelu.tktl.tikra*

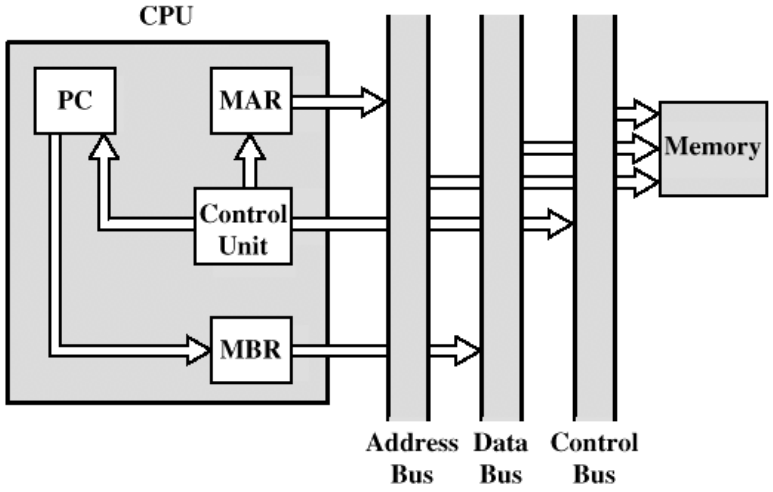




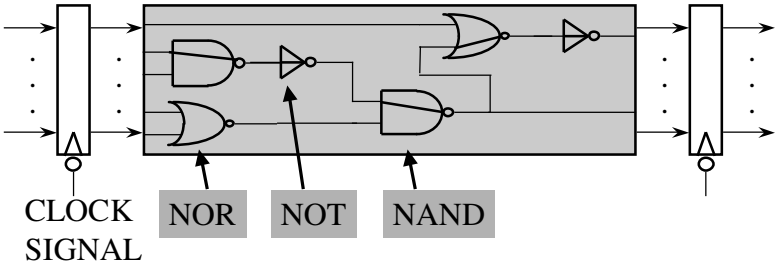
TiTo: What happens is system

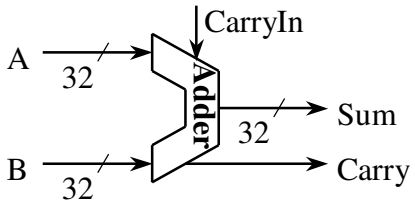
TiKRa: How are CPU & memory implemented?

The Lowest Presentation Level for Comp Org I (TiTo)



The Lowest Presentation Level for Comp Org II (TiKRa)





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Contents

Text book: Stallings, Computer Organization & Architecture, 6th Ed., 2003 Old text book: 5th Ed, 1999

- Computer system - overall structure (Ch 1-8) (Ch 1-7) 5th Ed, [Stal99]
- System buses (Ch 3) (Ch 3)
- Digital logic (App A) (App A)
- Memory hierarchy (Ch 4.3, 8.3) (Ch 4.3, 7.3)
- Computer arithmetic (Ch 9) (Ch 8)
- Instruction sets (Ch 10-11) (Ch 9-10)
- CPU structure and function (Ch 12) (Ch 10)
- Reduced Instruction Set Computers (Ch 13) (Ch 12)
- Instr. level parall. and superscalar proc. (Ch 14) (Ch 13)
- Control unit (Ch 16-17) (Ch 14-15)

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