Introduction to
Computer Science and Engineering
コンピュータ理工学のすすめ

Lecture 2
Review of last week lecture 1

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Contents of the Lecture

- Small test
- Some review on lecture 1
  - Concepts
  - CSE consists of basic courses and researches fields
  - Concept and architecture of computer
- Computating paradigms
- Some examples
- Homework

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Small Test 1: Write O or X, Depending on if the sentence is correct or not

1. Science has more theoretical work, than engineering ( )
2. Engineering has more practical work than science ( )
3. Invention of a new devise is computer science, rather than CE ( )
4. Investigating limitation of computation is CS, rather than CE ( )
5. Computer architecture discusses the relation of CPU and memory ( )
6. OS (Operating System) is for translating a program into executable code ( )
7. Computer network is not for communication between computers ( )
8. Algorithms has no relation with programs ( )
9. WLAN (Wireless LAN) is the same as WAN
10. A home appliance such as refrigerator can be connected with the Internet

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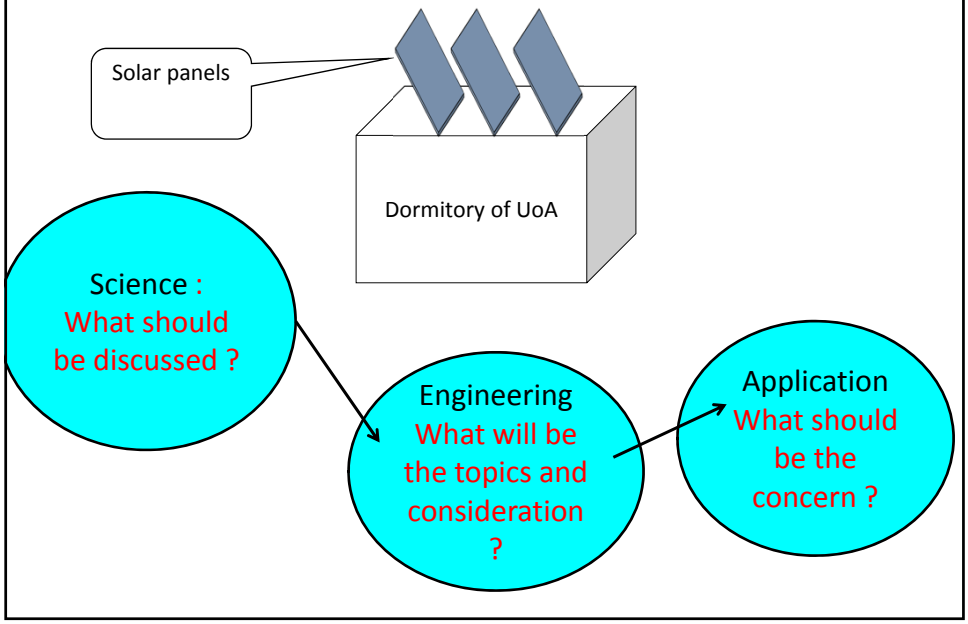
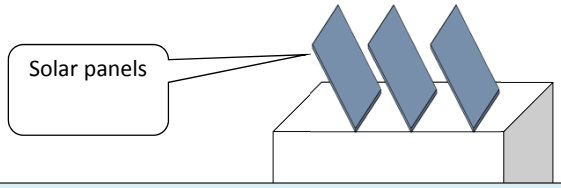
Review : Science or Engineering



Review : Science or Engineering



Answer will be given at the lecture time

Computer Science and Engineering

Knowledge (Courses)

Research (Fields)

Theories

Architecture

Methods (Approach)

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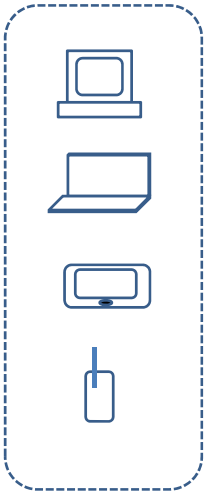
Inside a computer (organization/architecture)

Various computes



Software

- Application
- Middleware
- Network soft
- Operating system
- Driver software

Hardware

- CPU
- Memory
- Input devices
- Output devices
- Network card

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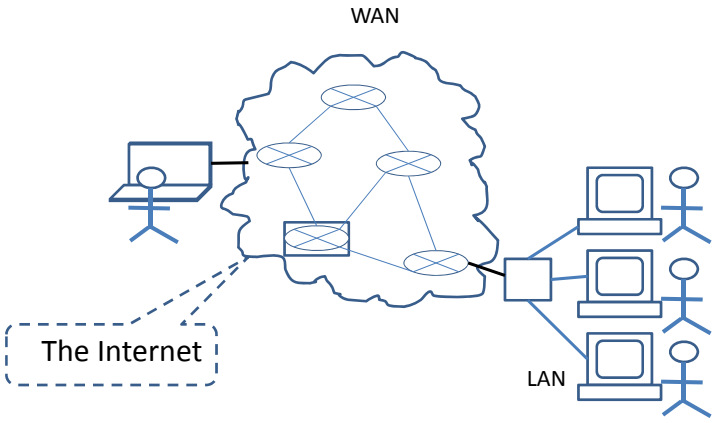
Outside a computer (network/paradigms)
Connection with the Internet



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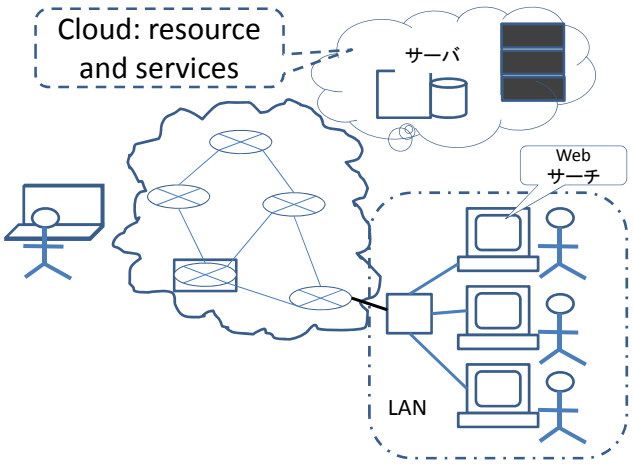
Computing paradigm
Cloud computing



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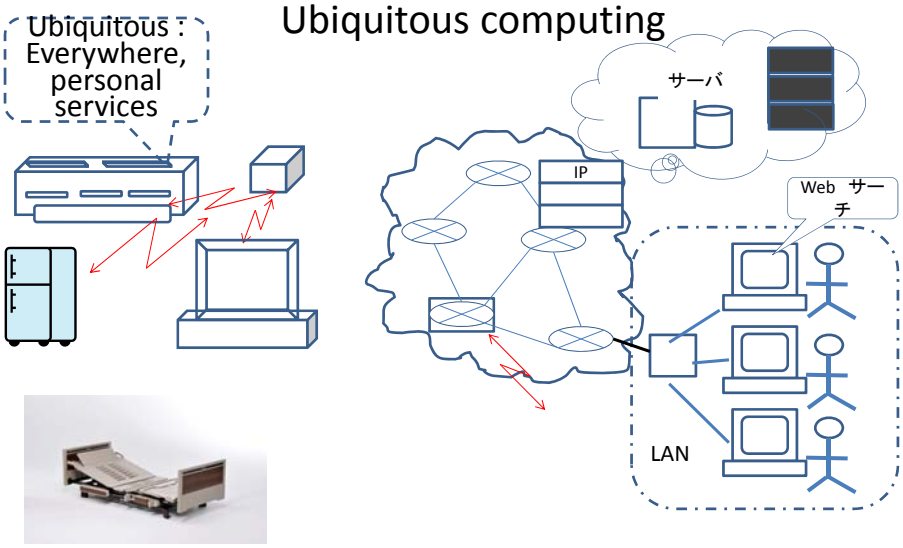
Computing world (paradigm)
Ubiquitous computing



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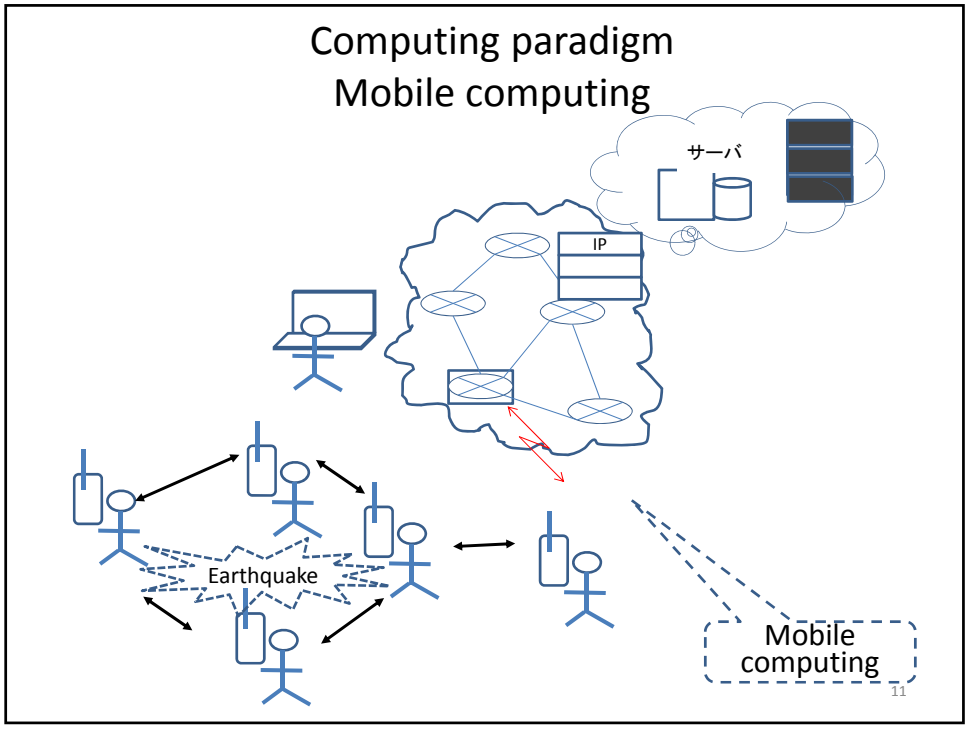
Computing paradigm
Mobile computing
サーバ
IP
Earthquake
Mobile computing
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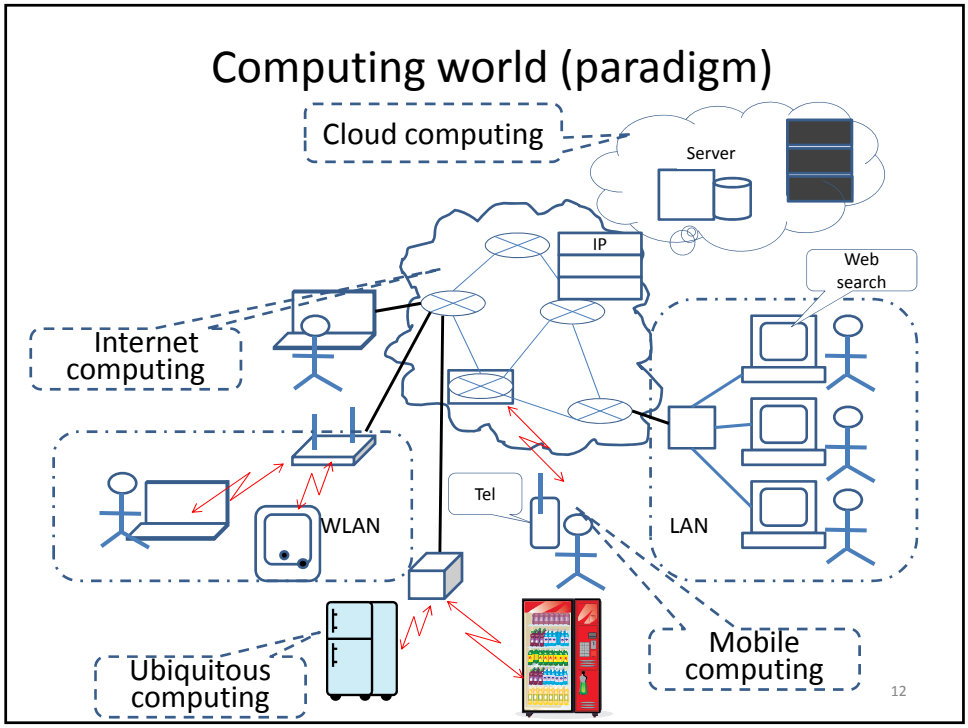
Computing world (paradigm)
Cloud computing
Server
IP
Web search
Internet computing
WLAN
Tel
LAN
Mobile computing
Ubiquitous computing
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Outside a computer (network/paradigms)

A paradigm is a pattern or an example of something. The word also connotes the ideas of a mental picture and pattern of thought
http://whatis.techtarget.com/definition/paradigm

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Homework 2

1. What is the function of the following software: Application, Middleware, Network soft, Operating system , Driver software (write 1~2 sentences for each)
2. What is the function of the following hardware : CPU, Memory, Input devices, Output devices, Network card (write 1~2 sentences for each)
3. Describe the following computing paradigms : Cloud computing, Ubiquitous computing, Mobile computing, Distributed Computing

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Repeating the Lecture 1's Homework (submit) for confirmation (see the revised file of lecture also)

- Write a report within two A4 pages
  - Possible titles, not limited to the followings, you can have your own
    - Four examples on the differences of science and engineering
    - My understanding on a basic course/subject, or field in CSE
  - Submit to
    - Prof. Tei z-cheng@u-aizu.ac.jp, cc : sgu-office@u-aizu.ac.jp
    - Subject ReportCSE(1) by YYYYYY (YYYYYY means your name)
    - By Nov. 11 Fri. 20:00 Word format (or PDF)
  - Approach to the report,
    - Searching related WWW pages, a survey, or an article, on one of today's topics
    - Read the survey, paper, or article,
    - Write your comments and understanding on the reading
    - Write your interests/ideas related with CSE
  - Format of the report
    1. Overview of the report, mention why you select the examples, and what survey, papers, or articles you have searched and read
    2. Outline and your understanding of the survey, paper, or article
    3. Comments, ideas, and dreams related with the topic

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Thanks for your attention

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