Computer Architecture
CS-211

Spring 2017
Recitation #1

Hello!

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- ***Please use Sakai Forum to ask your questions.***
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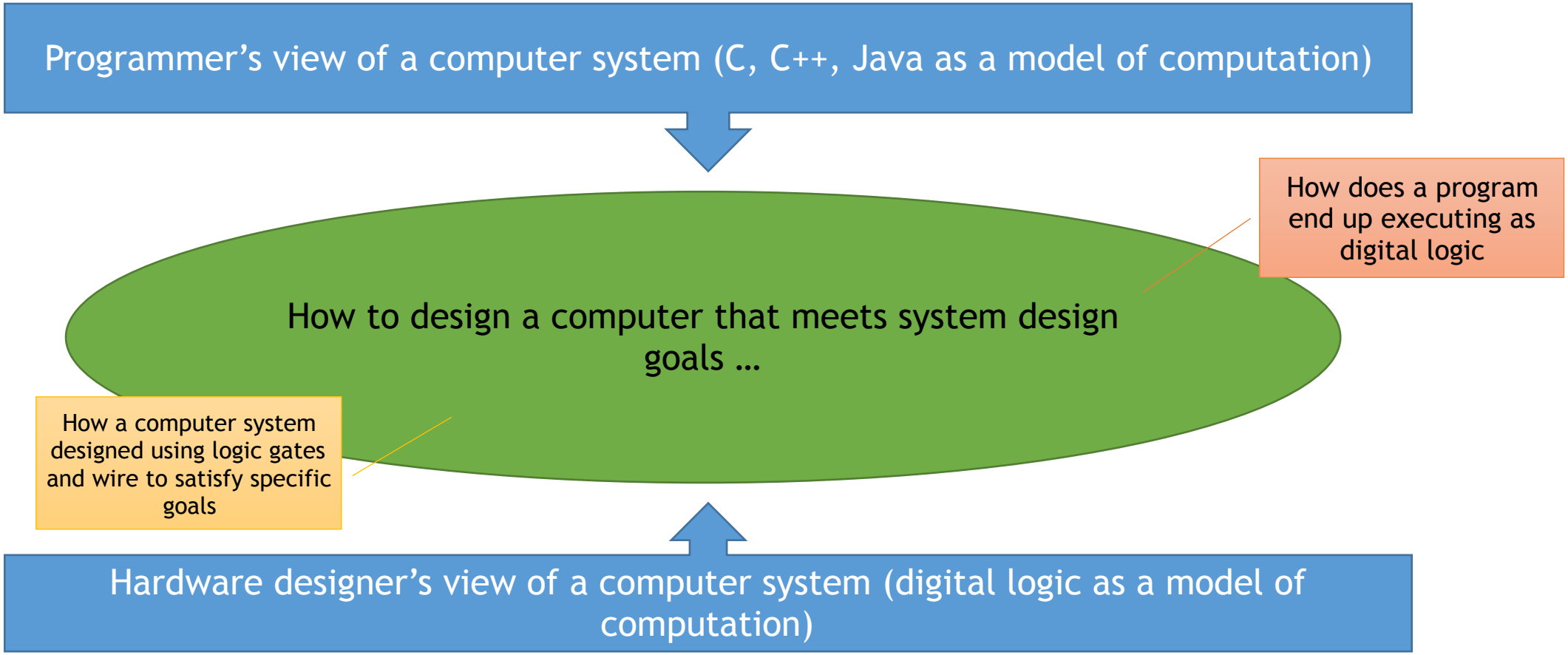
  please use **CS-211** as prefix in your Email Subject!
- Office hours : Thursday 2 pm – 3pm / Hill center 402

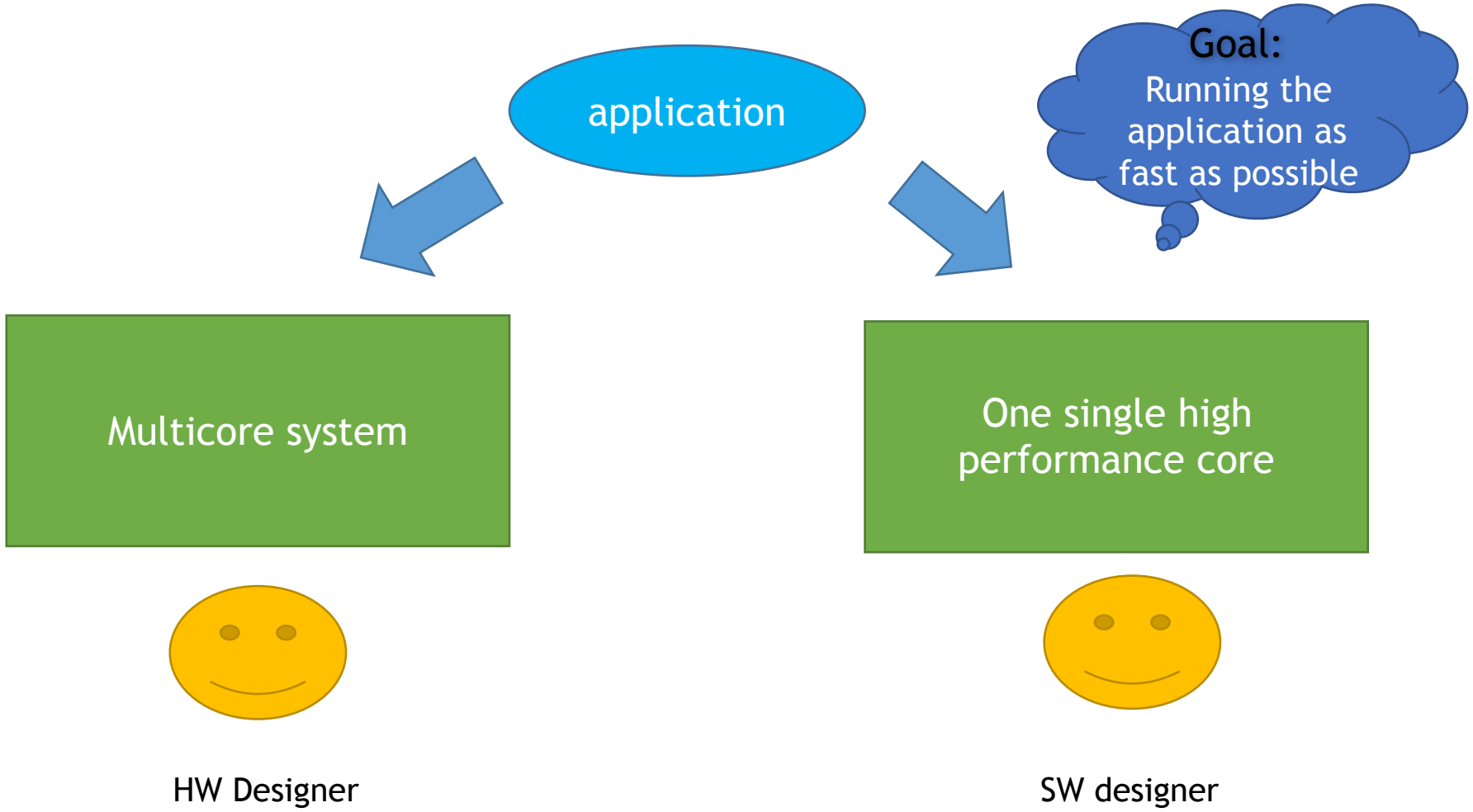
Agenda

- Introduction to Linux
- How to use iLab machines
- Basic Linux commands
- A simple Demo

Computer Architecture



Example of architecting a system



Connecting to iLab servers

- Follow the link to open your account now

  You MUST create or activate your iLab account before you can login.

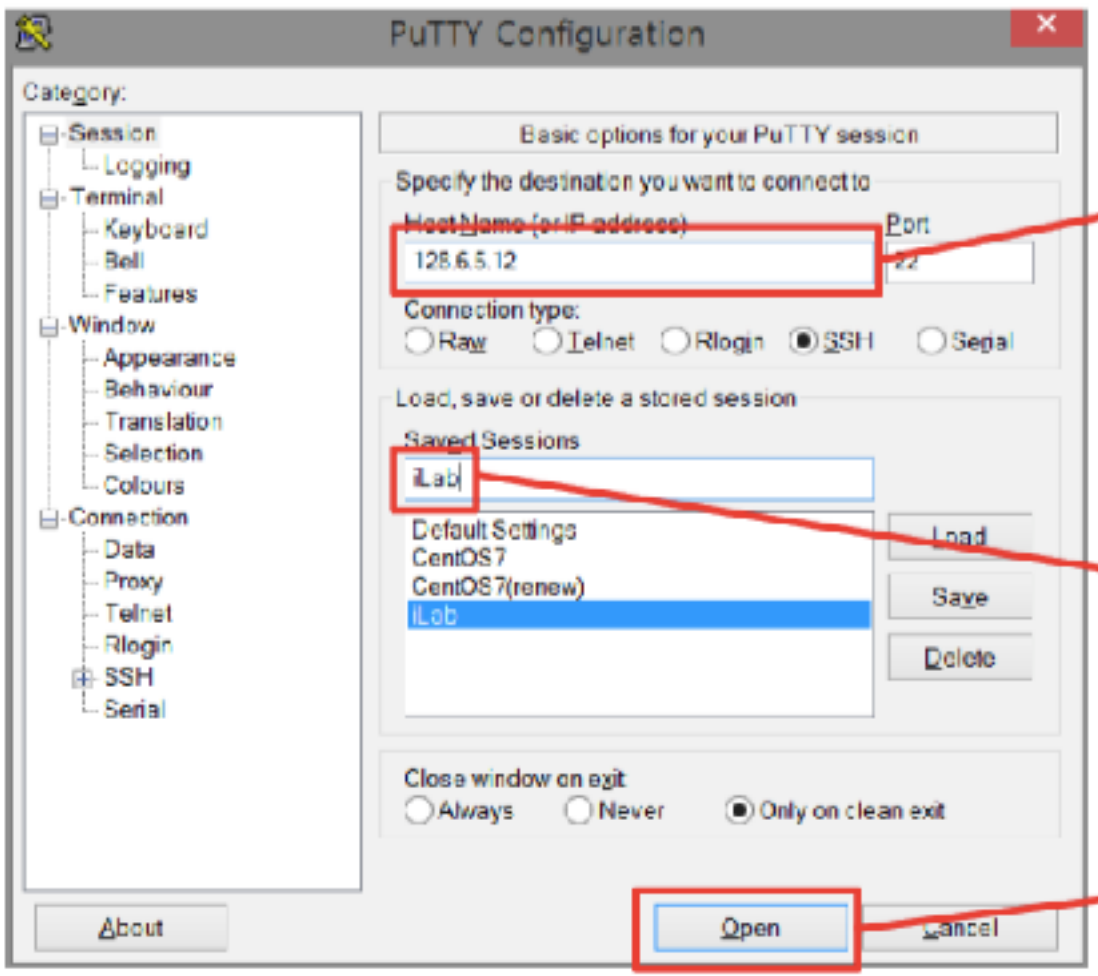
  https://www.cs.rutgers.edu/resources/instructional-lab

  Check status of iLab machines

  http://report.rutgers.edu/mrtg/ilab.html

- Beginners Info
  - https://www.cs.rutgers.edu/resources/beginners-info
- For Windows users
  - Use Putty, and WinSCP (GUI for transferring files)
- For Mac users
  - Use terminal application
  - Then use ssh netid@address : e.x.: ssh reza@
- X2Go
  - https://www.cs.rutgers.edu/resources/accessing-computer-science-linux-desktop-using-x2go

Putty



Put the IP address of the machine in iLab (the IP address may be different as it is shown)

Save the session

Connect iLab Machine

Basic Linux Commands

Check this: http://linuxcommand.org/index.php

- ssh: login to any machines remotely
- pwd: show current location
- cd: change directory (eg. $cd Documents, or $ cd ..)
- ls: list all contents (http://www.rapidtables.com/code/linux/ls.htm)
- locate: show location of a le (eg. $locate test.txt)
- Grep: search texts in les (http://www.cyberciti.biz/faq/howto-use-grep-command-in-linux-unix/)
- cat: print contents on screen (ex. $ cat test.txt)
- touch: create a file (eg. $ touch test.txt)

Basic Linux Commands 2

- cp: copy file (eg. $ cp source.txt destination.txt)
- mkdir: make directory (eg. $ mkdir myfolder)
  rm: remove file (eg. $ rm test.txt)
  mv: rename file (eg. $ mv oldname.txt newname.txt)
- scp: transfer file/directory from local to server machine and vice versa (scp sourcce destination)
  - Local computer to iLab (use -r only for directory)
    $scp -r local-folder/ netid@null.cs.rutgers.edu:~/
  - iLab to Local (execute command from local machine)
    $scp -r netid@null.cs.rutgers.edu:~/remote-folder/ .

Compile

Compile

“Address Sanitizer”: a memory error detector for C/C++ that will tell you instantly when you e.g. access already deleted memory.

```
gcc -Wall -Werror -fsanitize=address hello.c -o hello.out
```

and run with

```
./hello.out
```

Next time

- How to write a simple Makefile
- Review of assignment 1
- How to use autograder for assignment 1
- How to pass argument to your program
- How to read/write to file in C