CSE 20
Intro to Computing I

Lecture 1 – General Course Information

Data Type

CSE 20: Fall 2017

- Lecturer
  - Chi Yan “Daniel” Leung
  - cleung3@ucmerced.edu
  - Office Room: AOA 126
  - Office Hours:
    - T/R 10:00-12:00pm
    - W 1:00-2:30pm
    - By appointment
- All email inquiries received before 5pm during school days will be replied within 48 hours
  - Please follow the guidelines below for proper email communications
    - https://cms.cerritos.edu/uploads/ifalcon/How_to_Email_your_Professor.pdf

CSE 20: Spring 2015

- TA
  - Hanlin He: hhe3@ucmerced.edu
  - Narjes Tahaei: ntahaei@ucmerced.edu
  - Wei-Chih Hung: whung8@ucmerced.edu
  - Suryabhan Singh Hada: shada@ucmerced.edu
  - Hsin-Ying Lee: hlee246@ucmerced.edu
  - Jacob Rafati Heravi: jrafatiheravi@ucmerced.edu

Course Overview

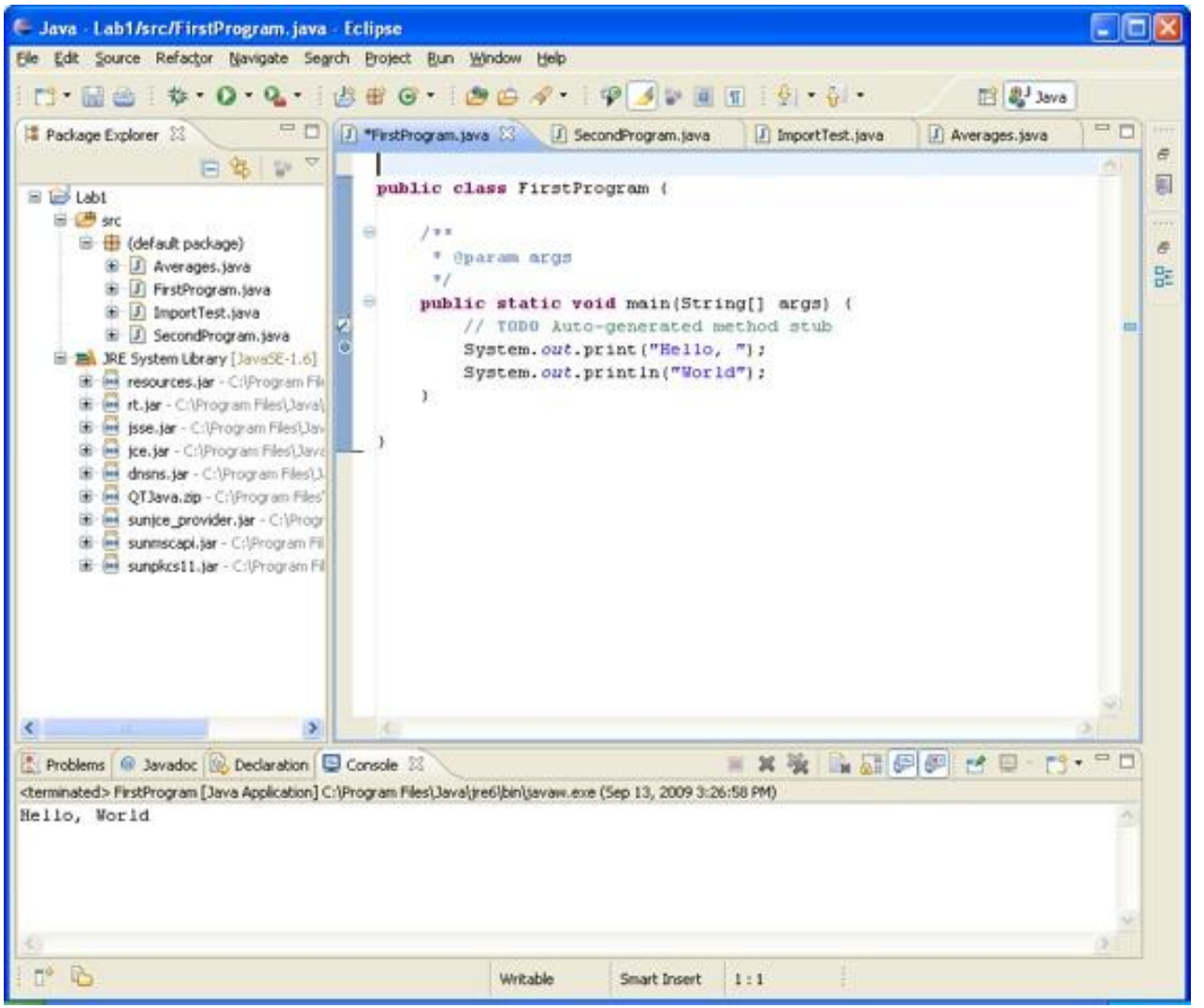
- CatCourses
  - Check regularly for announcements.
  - Labs & Project Assignments will be posted and submitted there.
  - Grades for assignments will also be found there (secure).
- 1 Lecture and 1 Lab per week
- 1 Mid-term exam (October 16, tentative)
- Final exam (December 11)
- 13 lab assignments (every week)
- 2 programming projects

Course Material

- Text Book:
  - Programming in Java by ZyBooks
    - Sign up at zybooks.com
    - Enter zyBook code: **UCMERCEDCSE20LeungFall2017**
  - You will be asked to do some of the exercises in the text as part of your reading assignment.
  - **You must subscribe your own copy. Participation grade will be evaluated based on the activities within the subscription account.**

Eclipse - Java programming software

- We will learn more about it in our labs.
- You can install it in your computer as well.



Grading

- Participation: 15%
- Lab assignments: 25%
- Projects: 15%
- Mid-term: 20%
- Final exam (comprehensive): 25%

Lab Rules

- Attendance is mandatory
  - Participation grade is also evaluated from physical presence during lab hours.
  - Your TA will take attendance during lab hours
- Submit on CatCourses before the deadline
  - Grace period of THREE days after deadline with no penalty.
  - No submission after grace period (exceptions may apply if approved by instructor before hand).
- To ensure that your assignments are graded, you MUST **show/demo** your work to your TA or instructor **before submission**, and we will ask you questions related to your work.
  - You can do so during lab hours or office hours.

Project Rules

- 1 – 2 students per group.
- All group members must submit their own solution in their CatCourses account.
- Should be done outside of lab session hours unless you have completed the lab assignment already.
- Same submission policy as labs, except for later deadline

Exams

- 45% of the course grade
  - Midterm 20%
  - Final 25%
- Open Notes
  - Just don’t bring in electronic devices
- Practice Exams
  - For both midterm and final
  - Actual exam will follow the same format and order
  - Expect you to study hard so each problem will be harder on the actual exam

Skipping CSE 21

- Arrange a meeting with me (email)
- Practice labs on your own
- Pass CSE 21 Final with B or above

Hints for success

- Attend lecture
- Read the textbook and do the activities
- Do & understand the labs and homework YOURSELF
- Create a portfolio to save all your work
- Take notes while reading and in lecture
- Ask questions

Policies

- Don’t copy someone else’s code
- Don’t give your code away
- Don’t outsource your assignments
- Don’t use electronic devices in exams
- Don’t use electronic devices during lecture for purposes other than note taking
- Turn off speakers/cellphone during class

No Cheating!

- Communicating information to another student during examination.
- Knowingly allowing another student to copy one's work.
- Offering another person's work as one's own.
- I am serious!

About me

- Originally from Hong Kong
- B.S. degree at the University of Wisconsin, Madison
- M.S. degree at the California State University, Fresno
- PhD. at UCM
- Research interests: computer vision/image processing

About you

- Computer you use?
  - Windows
  - Mac/iOS
  - Linux/Android
- Programming languages?
  - Java, Python, HTML, Perl/CGI, C, C++…
- What's your major?

What is Computing?

- The discipline of computing is the systematic study of algorithmic processes that describe and transform information: their theory, analysis, design, efficiency, implementation, and application. The fundamental question underlying all computing is '**What can be (efficiently) automated?**'

Perfect for lazy people!

- Computer program: a sequence of actions we want a machine (computer) to perform
  - Think about a list of chores from your mom

How well do you know …

- What type of files do you have in your computer?
  - Essays in Word Documents?
    - 25-100 KB (Kilo-Bytes)
  - Music - MP3's?
    - 3-5 MB (Mega-Bytes)
  - Movies – mov, mp4?
    - 2-4 GB (Giga-Bytes)
- How fast is your internet connection?
  - DSL
    - 356 Kbps to 6 Mbps (Kilo-/Mega-bits per second)
  - Cable
    - ~ 6-200+ Mbps
- How long does it take to download 5 MB file using DSL of 1 Mbps?

Need to convert Bytes into bits!

What are they?

What's in a bit?

- Could be two values :
  - 0 or 1 (On or Off)
- How many values would 2 bits take on?
  - 00
  - 01
  - 10
  - 11
- In computer, information is always stored as power of 2's
  - Digital system
  - N bits → 2^N possible values
- Byte is the basic unit in computer storage
  - 1 Byte = 8 bits
- Will learn more about numbers in next lecture

Your first Java code: outputs in Java

- Outputs: ways a computer to communicate with us
  - Displays (monitors), printers, speakers…
- To display a statement on a monitor:
  - System.out.print(“Test print”);

Output:

```
Test print    (Doesn’t end with a newline)
```

Outputs in Java

- Outputs: ways a computer to communicate with us
  - Displays (monitors), printers, speakers…
- To display a statement on a monitor:
  - System.out.print(“Test print”);
  - System.out.println(“Test println”);

Output:

```
Test printTest println   (Ends with a newline)
```

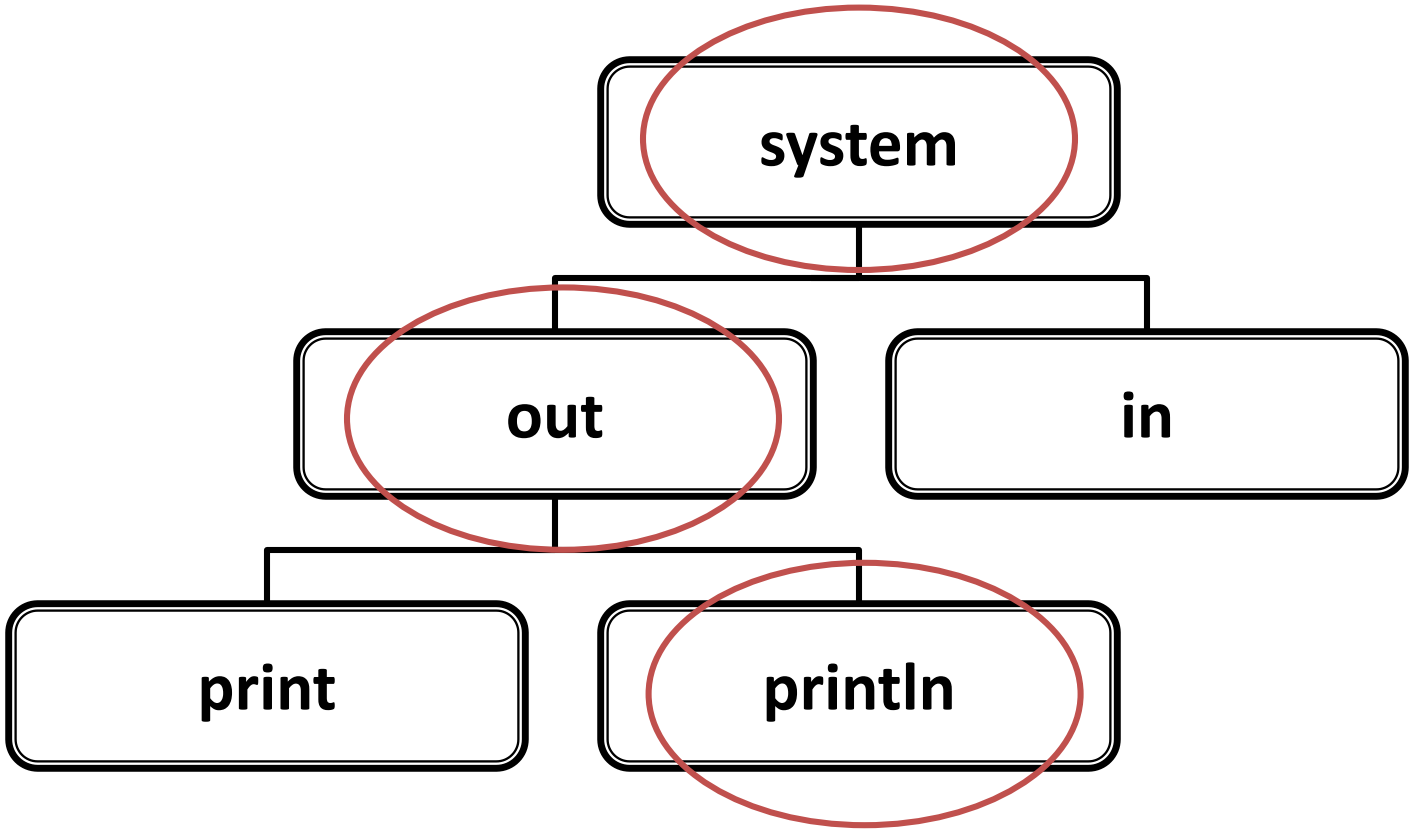
Outputs in Java

- Outputs: ways a computer to communicate with us
  - Displays (monitors), printers, speakers…
- To display a statement on a monitor:
  - System.out.print(“Test print”);
  - System.out.println(“Test println”);
  - System.out.print(“Done”);

Output:

```
Test printTest println
Done
```

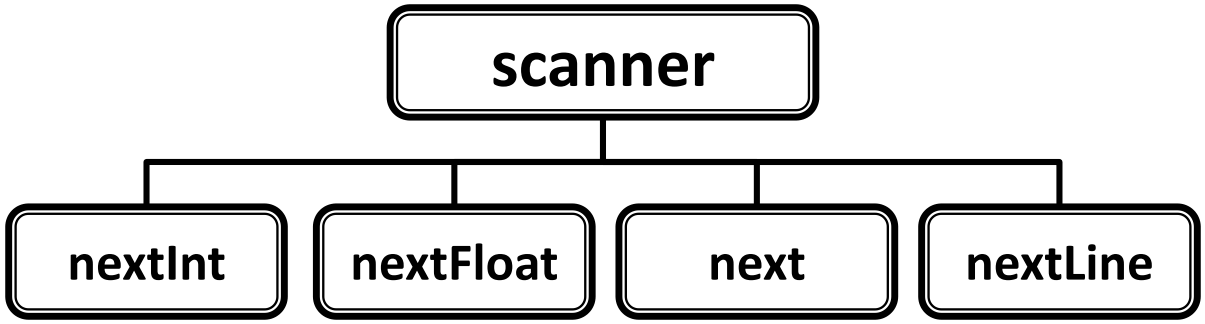
System Objects




```
System.out.println("World");
```

Input from keyboard – Scanner

- We can interact with the program using input devices:
  - Keyboards, mice, microphones




```
Scanner input = new Scanner(System.in);
input.nextInt();
input.nextFloat();
input.next();
input.nextLine();
```

We will learn more about this in future labs

Announcements

- Lab #1 open this week
  - Due in a week (before lab#2)
- Reading assignment
  - Chapter 1.1 – 1.10, 2.1 – 2.5 of textbook
  - Participation activities in