

Course Rules & Workstation Tutorial

EE4033 Algorithms, Fall 2019

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Outline

- General mindset & common sense
 - Homework assignment
 - Programming assignment
- Workstation tutorial
 - EDA Union workstation
 - Bash commands
 - Compiler & Makefile
 - Vim
- Online resources

General Mindset & Common Sense

- Check email & NTU COOL at least weekly
 - You don't want to miss any homework, do you?
- When contact TAs via email:
 - Add [Alg19] in mail title
 - Tell me who you are 😊
- Ask TA if anything is uncertain!
 - But please don't message us...
- Avoid plagiarism at all cost!
 - Why waste our valuable time?
- The following rules are for insurance purpose
 - We believe all of you are great 😊
 - For rules not specified, Professors and TAs have the final say!

Homework Assignment

- Hand-in your **Left-top-side STAPLED** homework **BEFORE** lecture starts
- Discussions are highly encouraged, but please finish it separately
 - No borrowing, no lending
- Specify **ALL** your coworkers & resources after each problem
 - Specify **NONE** if you work on your own!
 - Ex:

Prob 1	Coworker:	Resource:
...	B00901020 呂祐昇	NONE
...	B03505028 徐晨皓	
Prob 2	Coworker:	Resource:
...	NONE	<website>
...		
...		

Homework Assignment

- An evaluation standard (ES) will be released after sample solution (SS) is released
- Late submission penalty: 20% of full score per day
 - No submission accepted after sample solution is released
- Hint and Q/A section will be held on recitation one week before deadline

Programming Assignment

- Check your format/execution command/naming rule/file location before submission
 - Penalty for each case if occurred
 - Revision accepted within two weeks after score announced
- Check your compiler version with respect to workstation setting
- Late submission penalty: 20% of full score per day
- Hint and Q/A section will be hold on recitation one week before deadline
- From previous experience, you won't pass if you don't submit your PA...

Recitation

- Free to join
 - Won't roll call
- Hint and Q/A one week before each deadline
- Review before each exam
- Difficult part explanation

TA Contacts

TA	Class	Job	Time	Location	Email
呂祐昇	大助教	統籌	Thur. 17:00~18:00	BL406	f04943094@ntu.edu.tw
徐晨皓	張教授班	HW2,5 PA2	Mon. 12:10 ~ 13:10		r07943107@ntu.edu.tw
蔡宇傑					r07943111@ntu.edu.tw
謝承運	李教授班	HW2,3 PA1	Mon. 12:10 ~ 13:10 Wed. 13:20 ~ 14:10	BL427	d08943012@ntu.edu.tw
吳辰鎡					r07943150@ntu.edu.tw
林尚謙	江教授班	HW1,4 PA3			BL407
林奕廷			r07943102@ntu.edu.tw		

Calendar

Week	Date	Topic: Textbook Chapters	PA	HW	Recitation	Person in Charge
1	9/10,11	Foundations: CH1, CH2		1 out	Tutorial	祐昇
2	9/17,18	Foundations: CH3, CH4	1 out		PA#1	辰鉉
3	9/24,25	Sorting: Ch6 , CH7			HW#1	尚謙
4	10/1,2	Sorting: Ch8, CH9		1 in		承運
5	10/8,9	Trees: CH 12 PA #1 due SUN 1PM	1 in	2out		祐昇
6	10/15,16	Trees: CH 13				祐昇
7	10/22,23	Advanced Design: CH 15	2 out		HW#2	辰鉉、宇傑
8	10/29,30	Advanced Design: CH 16 (HW#2 Friday 6pm due, no late HW) (SOL#2 SAT announce)		2 in	EXAM	祐昇
9	11/5,6	Midterm Exam 10:00-12:30				
10	11/12,13	Disjoint Set :CH21		3 out	PA#2	晨皓
11	11/19,20	Graphs BFS/DFS: CH22	2 in		(APP)	祐昇
12	11/26,27	Graphs MST:CH23	3 out		HW#3	承運
13	12/3,4	Graphs SP: CH24		3in 4out	PA#3	祐昇
14	12/10,11	Graphs SP: CH 25			HW#4	奕廷
15	12/17,18	Graphs Flow: CH26		4in 5out	(APP)	尚謙
16	12/24,25	NP-complete: CH 34 Amortized Analysis: CH17	3 in		HW#5	晨皓
17	12/31	Optional topics HW#5 Friday 6pm due SOL#5 SAT Announce		5in	EXAM	祐昇
18	1/7,8	Final exam 10:00-12:30 !				

EDA Union Workstation

- Available server list:

Server	OS	CPU	Memory	gcc Version
EDAU1	CentOS 6.8	Intel Xeon E5620 @ 2.4 GHz	48 GB	gcc 5.4.0
EDAU5	CentOS 6.8	Intel Xeon E5-2620 @ 2.1 GHz	16 GB	gcc 5.4.0
EDAU8	CentOS 6.8	Intel Xeon E5-2620 @ 2.0 GHz	8 GB	gcc 5.4.0
EDAU12	Ubuntu 8.04	Intel Xeon E5420 @ 2.5 GHz	24 GB	gcc 4.2.4
EDAU15	CentOS 6.8	Intel Xeon X5680 @ 3.33 GHz	40 GB	gcc 5.4.0

- Student account

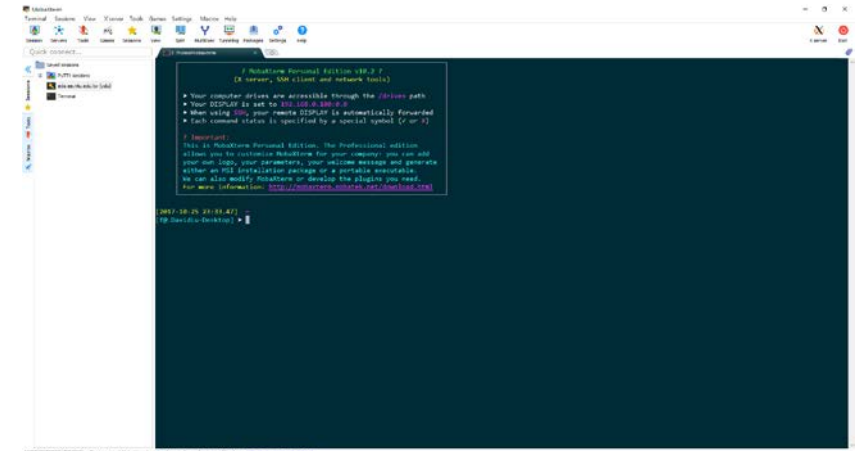
- Alg19+<number>
- Ex: Alg19123

- Login command

- ssh <account>@edaunion.ee.ntu.edu.tw -p 40050+<ServerID>
- Ex: ssh Alg19123@edaunion.ee.ntu.edu.tw -p 40051

Terminal Consoles

- Windows
 - MobaXterm: <https://mobaxterm.mobatek.net/>
 - Putty: <http://www.putty.org/>
 - Pietty: <https://sites.google.com/view/pietty-project>
- FTP
 - FileZilla: <https://filezilla-project.org/>
- Linux/MacOS
 - Default terminal
- Code editor
 - Notepad++: <https://notepad-plus-plus.org/zh/>
 - Visual Studio Code: <https://code.visualstudio.com/>
 - Vim: http://linux.vbird.org/linux_basic/0310vi.php



Terminal Commands

- Commands you **MUST** know
 - yppasswd
 - ls
 - cd
 - mkdir
 - rm
 - mv
 - tar
 - time
 - timeout
 - top
 - ...

Compiler & Makefile

- Compiler
 - Compile your program using “commands” instead of “buttons”
 - g++, clang, ...
 - Command: `g++ [-O/O2/O3] <file name> -o <program name>`
 - Other flags: `-O/O2/O3`, `-g`, `-std`, ...
 - Ex: `g++ -O2 main.cpp -std=c++11 -o PA1`
- Makefile
 - Fast compile script for large and complex software
 - Command: `make`, `make clean`, `make debug` (how?)

Vim

- A very powerful & elegant text editor
- Commands
 - Insertion mode, view mode, visual mode switching
 - Esc, i, v
 - Save & Quit
 - :w, :q
 - Copy & paste
 - yy, p
 - Auto indent
 - ???
 - Environment setting
 - .vimrc

Online Resources

- Command line
 - Basic
 - http://linux.vbird.org/linux_basic/
 - Compress file
 - <http://note.drx.tw/2008/04/command.html>
 - Compiler & Makefile
 - <http://beyond-firmware.blogspot.tw/2014/12/c-compiler-g.html>
 - <http://www.laird.tw/2015/04/linux-c-ubuntu-c.html>
 - <https://dywang.csie.cyut.edu.tw/dywang/linuxProgram/node58.html>
 - http://www.csie.nuk.edu.tw/~kcf/course/97_Spring/Embedded%20System/8-Makefile.pdf
 - Vim:
 - http://linux.vbird.org/linux_basic/0310vi.php
- Reference book
 - C++ Primer, C++ Primer Plus, ...