# §0 Course Details

ENGG1111

Computer Programming and Applications

Dirk Schnieders

# Outline

## Schedule – Lecture (Class C and Class D)

| # | Date | Time | Venue | Topic* |
|---|---|---|---|---|
| 1 | Sep. 7 2017 (Thu.) | 10:30am - 12:20pm | K102 | Introduction |
| 2 | Sep. 14 2017 (Thu.) | 10:30am - 12:20pm | K102 | Cpp Basics |
| 3 | Sep. 21 2017 (Thu.) | 10:30am - 12:20pm | K102 | Flow of Control |
| 4 | Sep. 28 2017 (Thu.) | 10:30am - 12:20pm | K102 | Functions |
| 5 | Oct. 12 2017 (Thu.) | 10:30am - 12:20pm | K102 | Arrays |
| 6 | Oct. 26 2017 (Thu.) | 10:30am - 12:20pm | K102 | Quiz |
| 7 | Nov. 2 2017 (Thu.) | 10:30am - 12:20pm | K102 | String |
| 8 | Nov. 9 2017 (Thu.) | 10:30am - 12:20pm | K102 | File IO |
| 9 | Nov. 16 2017 (Thu.) | 10:30am - 12:20pm | K102 | Structures |
| 10 | Nov. 23 2017 (Thu.) | 10:30am - 12:20pm | K102 | Pointers |
| 11 | Nov. 30 2017 (Thu.) | 10:30am - 12:20pm | K102 | Data Structures |

* subject to change

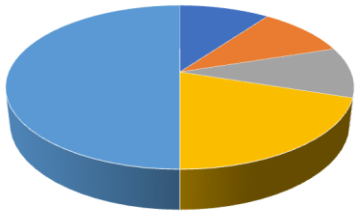
6/9/2017 ENGG1111 3

## Instructor

- Dirk Schnieders
  - Lecturer
  - PhD in Computer Science
  - Web: www.cs.hku.hk/~sdirk
  - Email: sdirk@cs.hku.hk
  - Office: 324 Chow Yei Ching Bldg.
  - Consultation hours: Friday 10:00 – 12:00
  - Use the forum to ask questions!
    - Email me if your question includes private information


6/9/2017 ENGG1111 7

## Assessment



Assignment 1 (10%) Assignment 2 (10%) Assignment 3 (10%)
Quiz (20%) Final (50%)

**Overall mark = A1(10%) + A2(10%) + A3(10%) + Q(20%) + F(50%) + adjustment**

6/9/2017 ENGG1111 11

## Prerequisite

- No prerequisites
  - This course is for everyone

6/9/2017 ENGG1111 24

# Schedule – Lecture (Class C and Class D)

| # | Date | Time | Venue | Topic* |
|---|---|---|---|---|
| 1 | Sep. 7 2017 (Thu.) | 10:30am - 12:20pm | K102 | Introduction |
| 2 | Sep. 14 2017 (Thu.) | 10:30am - 12:20pm | K102 | Cpp Basics |
| 3 | Sep. 21 2017 (Thu.) | 10:30am - 12:20pm | K102 | Flow of Control |
| 4 | Sep. 28 2017 (Thu.) | 10:30am - 12:20pm | K102 | Functions |
| 5 | Oct. 12 2017 (Thu.) | 10:30am - 12:20pm | K102 | Arrays |
| 6 | Oct. 26 2017 (Thu.) | 10:30am - 12:20pm | K102 | Quiz |
| 7 | Nov. 2 2017 (Thu.) | 10:30am - 12:20pm | K102 | String |
| 8 | Nov. 9 2017 (Thu.) | 10:30am - 12:20pm | K102 | File IO |
| 9 | Nov. 16 2017 (Thu.) | 10:30am - 12:20pm | K102 | Structures |
| 10 | Nov. 23 2017 (Thu.) | 10:30am - 12:20pm | K102 | Pointers |
| 11 | Nov. 30 2017 (Thu.) | 10:30am - 12:20pm | K102 | Data Structures |

* subject to change

# Laboratory

- You solve problems and we discuss solutions
  - Post your solution to the course forum
  - Discuss solutions!
- Participation
  - We will record your attendance in the lab
  - Regular attendance will have a positive effect on your grade
  - Talk to me, our student TAs and your classmates

# Schedule – Lab (Class C only)

| # | Date | Time | Venue | Topic* |
|---|---|---|---|---|
| 1 | Sep. 7 2017 (Thu.) | 1:30pm - 2:20pm | HW312 | Introduction |
| 2 | Sep. 14 2017 (Thu.) | 1:30pm - 2:20pm | HW312 | Cpp Basics |
| 3 | Sep. 21 2017 (Thu.) | 1:30pm - 2:20pm | HW312 | Flow of Control |
| 4 | Sep. 28 2017 (Thu.) | 1:30pm - 2:20pm | HW312 | Functions |
| 5 | Oct. 12 2017 (Thu.) | 1:30pm - 2:20pm | HW312 | Arrays |
| 6 | Oct. 26 2017 (Thu.) | 1:30pm - 2:20pm | HW312 | More Functions |
| 7 | Nov. 2 2017 (Thu.) | 1:30pm - 2:20pm | HW312 | String |
| 8 | Nov. 9 2017 (Thu.) | 1:30pm - 2:20pm | HW312 | File IO |
| 9 | Nov. 16 2017 (Thu.) | 1:30pm - 2:20pm | HW312 | Structures |
| 10 | Nov. 23 2017 (Thu.) | 1:30pm - 2:20pm | HW312 | Pointers |
| 11 | Nov. 30 2017 (Thu.) | 1:30pm - 2:20pm | HW312 | Data Structures |

* subject to change

# Schedule – Lab (Class D only)

| # | Date | Time | Venue | Topic* |
|---|---|---|---|---|
| 1 | Sep. 7 2017 (Thu.) | 2:30pm - 3:20pm | HW312 | Introduction |
| 2 | Sep. 14 2017 (Thu.) | 2:30pm - 3:20pm | HW312 | Cpp Basics |
| 3 | Sep. 21 2017 (Thu.) | 2:30pm - 3:20pm | HW312 | Flow of Control |
| 4 | Sep. 28 2017 (Thu.) | 2:30pm - 3:20pm | HW312 | Functions |
| 5 | Oct. 12 2017 (Thu.) | 2:30pm - 3:20pm | HW312 | Arrays |
| 6 | Oct. 26 2017 (Thu.) | 2:30pm - 3:20pm | HW312 | More Functions |
| 7 | Nov. 2 2017 (Thu.) | 2:30pm - 3:20pm | HW312 | String |
| 8 | Nov. 9 2017 (Thu.) | 2:30pm - 3:20pm | HW312 | File IO |
| 9 | Nov. 16 2017 (Thu.) | 2:30pm - 3:20pm | HW312 | Structures |
| 10 | Nov. 23 2017 (Thu.) | 2:30pm - 3:20pm | HW312 | Pointers |
| 11 | Nov. 30 2017 (Thu.) | 2:30pm - :20pm | HW312 | Data Structures |

* subject to change

# Instructor

- Dirk Schnieders
  - Lecturer
  - PhD in Computer Science
  - Web: www.cs.hku.hk/~sdirk
  - Email: sdirk@cs.hku.hk
  - Office: 324 Chow Yei Ching Bldg.
  - Consultation hours: Friday 10:00 – 12:00
  - Use the forum to ask questions!
    - Email me if your question includes private information

# About Me

- Please call me Dirk
- PhD (HKU), MSc (HKU), Dipl.Inf. (Dortmund, Germany)
- Other classes that I teach this year
  - Undergrad
    - ENGG1111 Computer Programming and Applications
    - ENGG1202A Introduction to Computer Science
    - ENGG1202B Introduction to Computer Science
    - CCST9049 From Human Vision to Machine Vision
  - Postgrad
    - Computational Intelligence and Machine Learning
    - Image Processing and Computer Vision

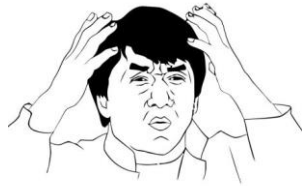
# Teaching Assistants

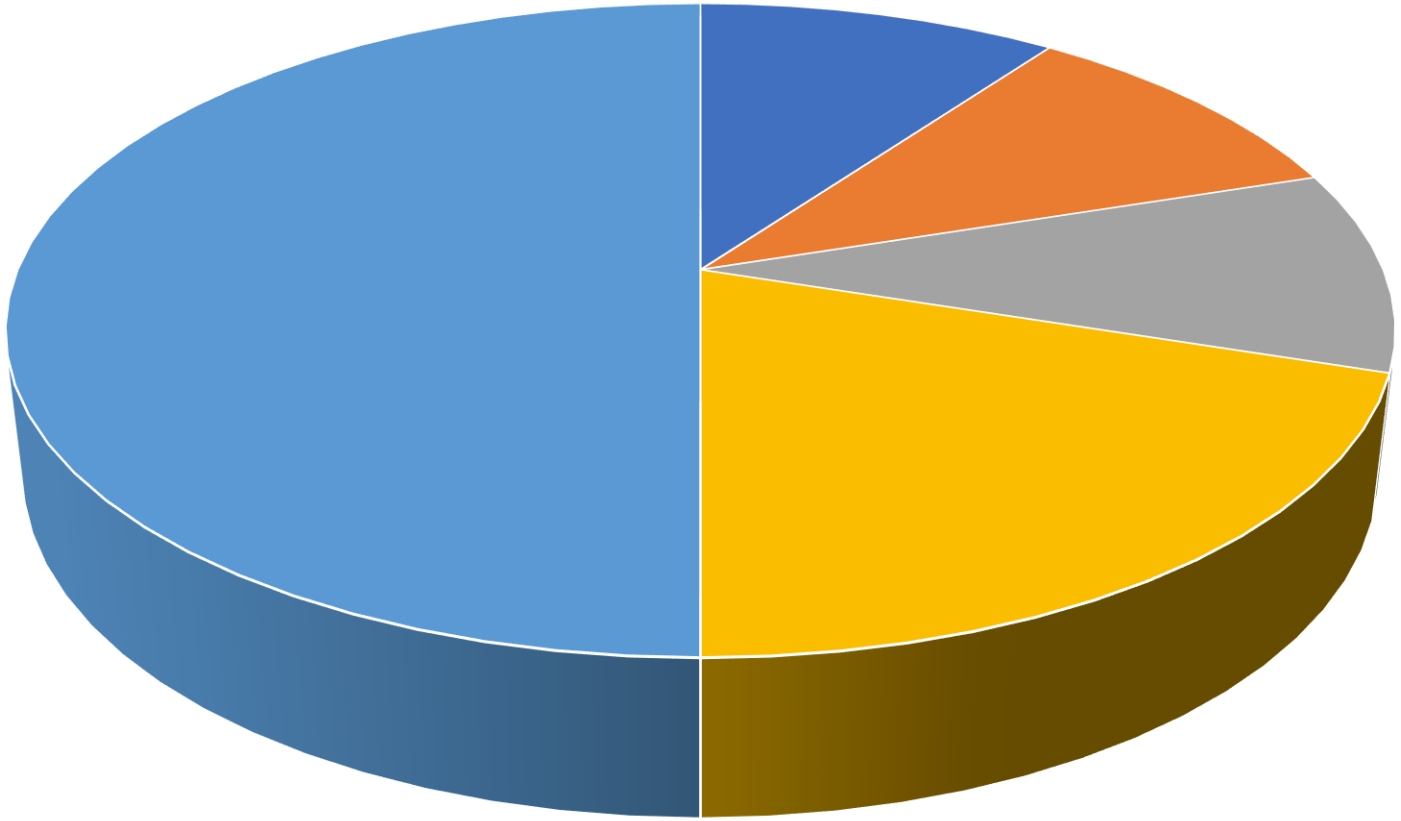
- A1: Chu Lei (lchu@cs.hku.hk)
- A2: Zhu Feida (fdzhu@cs.hku.hk)
- A3: Yue Yating (ytyue@cs.hk.hk)
- Quiz Part A: Meng Fei (?@cs.hku.hk)
- Quiz Part B: Zhang Xiaolong (xlzhang@cs.hku.hk)
- Forum: Wu Kan (kwu@cs.hku.hk)

# Student Teaching Assistants

- 2015/16 students
  - Lam Fong Pui (samson_lam@connect.hku.hk)
  - Yeung Yu Wang (peter221@connect.hku.hk)
  - Tibrewal Ankit (u3534578@connect.hku.hk)
  - Mak Hoi Tung Anastasia (ana0630@connect.hku.hk)
  - Pi Renjie (pipilu@connect.hku.hk)

# Assessment






**Overall mark = A1(10%) + A2(10%) + A3(10%) + Q(20%) + F(50%) + adjustment**

# Assignments

- Write solutions to programming problems
- No credit for a program that cannot compile/run in the provided X2Go / VM environments
  - Test your assignment in the X2Go / VM environments if you are using anything else
- No late submissions will be accepted

# Assignments

| | Weight | Topics | Release | Deadline | Release Marks |
|---|---|---|---|---|---|
| A1 | 10% | Variables, Flow of Control | Sep. 21 | Oct. 11 | Oct. 18 |
| A2 | 10% | Functions, Array | Oct. 12 | Nov. 1 | Nov. 5 |
| A3 | 10% | String, File IO, Structures | Nov. 16 | Dec. 6 | Dec. 13 |

* subject to change

No extension of deadline under any circumstance

# Assignments

- Your code will be auto-graded for technical correctness
- However, the correctness of your implementation, not the auto-grader's judgements, will be the final judge of your score
- If necessary, we will review and mark your assignments individually to ensure that you receive due credit for your work

# Quiz

- Oct. 26 2017 (Thu.)
- Closed Book
- 90 minutes
- Written
- No lecture on day of quiz

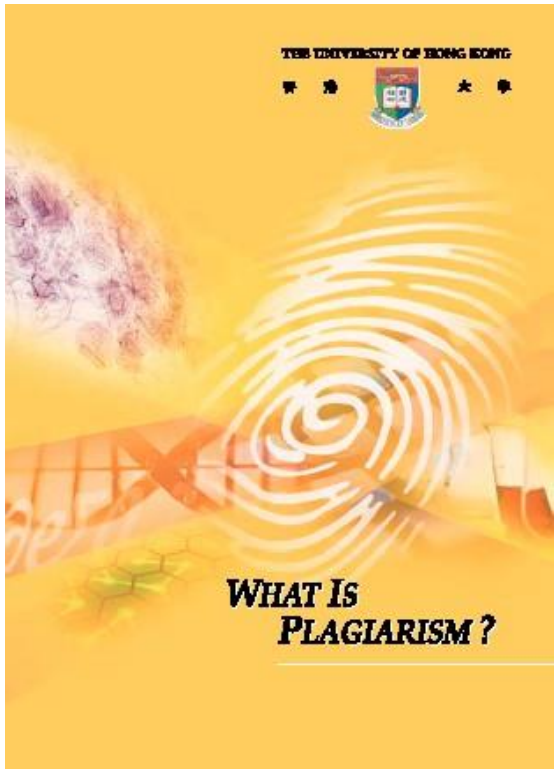
# Final

- 3 hours closed book written exam
- Students may bring one A4 paper with notes
- Day of exam to be announced later in the semester

# Plagiarism

- Plagiarism detection software will be employed to check for plagiarism cases across subclasses
- First attempt
  - Written warning
  - Zero marks
  - Referred to BEng(CS) program director
- Second attempt
  - Referred to University Disciplinary Committee
  - Published reprimand
  - Suspension of study
  - Expulsion

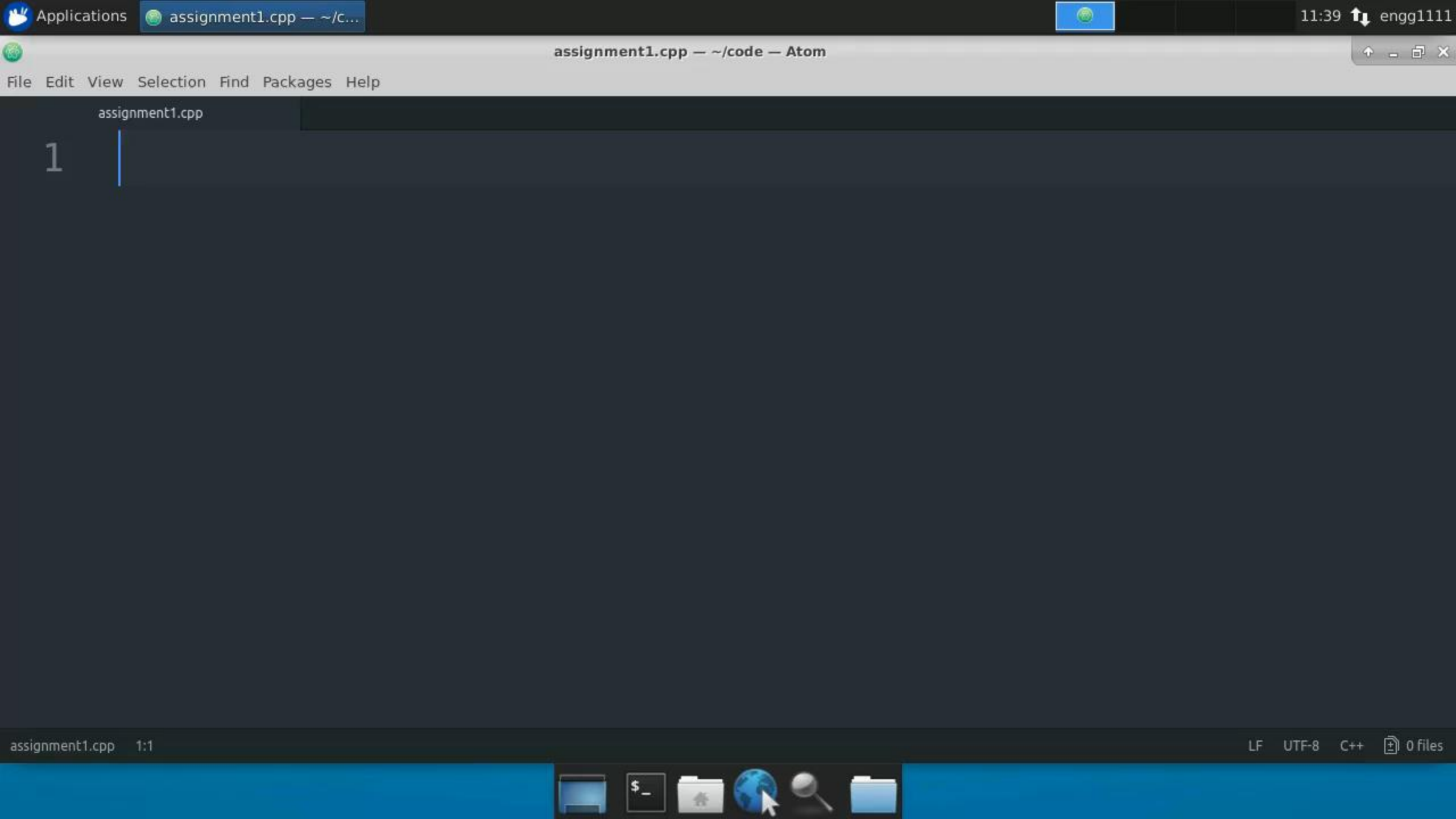
# Ignorance of plagiarism excuses no one




http://www.rss.hku.hk/plagiarism/

# Avoid Plagiarism

- Plagiarism is a serious offence in the academic world
- You can discuss the assignment with others in the design phase only
- Never ask others to see their solution
- Never show your assignment code to anyone
  - Use a smaller font in public
  - Lock computer when leaving
- We will punish the source equally strong
- How much plagiarism is plagiarism?
  - Copying one line of code is already plagiarism


Applications
assignment1.cpp — ~/c...
11:39
engg1111
assignment1.cpp — ~/code — Atom
File Edit View Selection Find Packages Help
assignment1.cpp
1
assignment1.cpp 1:1
LF UTF-8 C++ 0 files

# Late Submission

- Submission after the deadline is **not** OK
  - You will receive 0 marks
- Re-submission before the deadline is OK
  - The latest submission before the deadline is marked
- Make sure that you submit the correct files
  - You cannot resubmit after deadline

# Past Assessment

- Last years quiz and final will be published on Moodle
- Solutions will not be published

# Marks

- Check your marks on Moodle
  - If you feel that your mark is incorrect, contact the TA that is responsible for the marking asap
- All in-class assessment (quiz, assignments) marks will be frozen on 20 Dec.
  - We will not be able to change them if you email us after 15 Dec.
- Mapping between marks and grades is confidential

# Prerequisite

- No prerequisites
  - This course is for everyone

# Lecture Slides

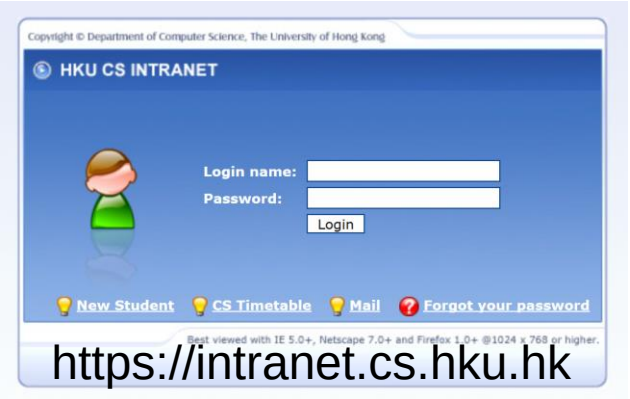
- Available on Moodle on the day before the lecture
  - Usually at night
- PDF format
  - No *.pptx
- Please use the provided materials responsibly

# Lecture Recording

- Lecture video and audio recording (screen capture of projector) will be uploaded
- Don’t skip class
  - Attend the lecture / lab
  - Ask/answer questions
  - Lab sessions are crucial for your learning
  - Talk to me, our student TAs and your fellow students

# CS Account

- Create a CS account before the lab session
- You may have received an email through hkuportal already with the account details
- Follow the instructions here
  - https://intranet.cs.hku.hk/csintranet/newstudent.jsp



https://intranet.cs.hku.hk

# Development Environment

- Ubuntu Desktop 16.04.3 LTS
- XUbuntu with xfce
- gcc 7.2
- Atom 1.19.3
- gcc-make-run 0.2.12 (Atom package)

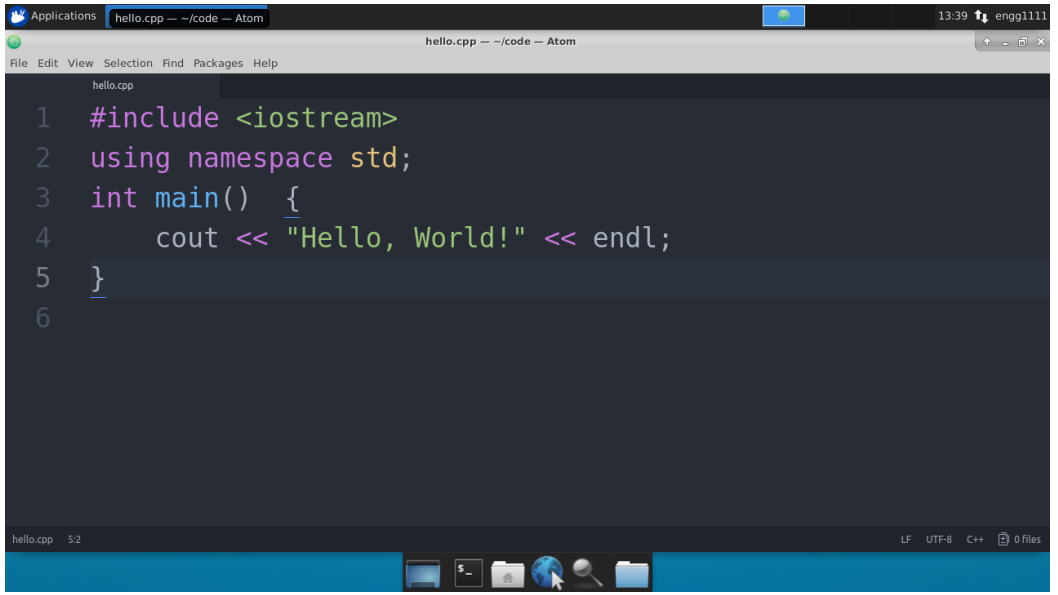

ubuntu

ATOM

open source initiative

# Software

- We offer two methods to use the development environment
- 1. X2Go (for convenience)
  - Remote desktop application
  - Available for Windows and Mac
  - Requires internet connection
  - May become slow when many user access the system
- 2. VM (preferred)
  - Emulation of a computer system
  - No internet connection required
  - Very fast on most modern computers



# X2Go

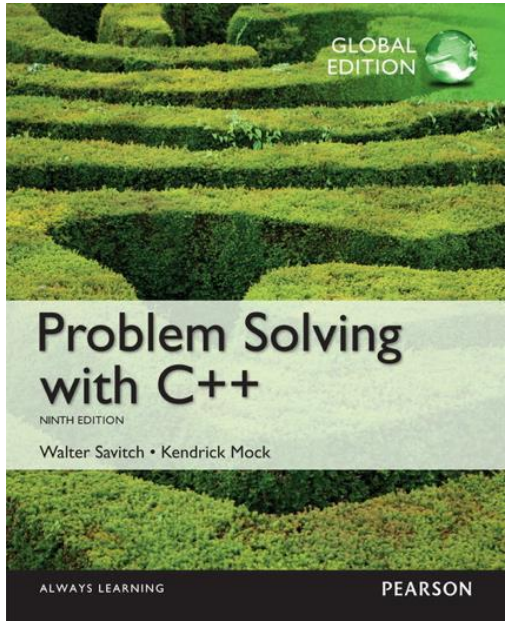
- Visit
  - https://intranet.cs.hku.hk/
- Click On
  - Technical Support
- Click On
  - Remote Access
- Follow instructions for
  - CSVPN
- Follow instructions for
  - X2Go

# VM

- Download VM
  - https://www.dropbox.com/s/gu1ke9rrjn42e0x/engg1111.7z?dl=1
- Extract the file and follow instructions in readme.txt

# Reference Textbook

- Reference Textbook: Problem Solving with C++
  - Walter Savitch and Kendrick Mock
- Available at University bookstore (HKD 348.30)



# Getting Help

- For many students this course is challenging
  - You are not alone
  - You are always welcome to come to us if you have difficulties
  - We are happy to help everyone of you
- We want the materials to be rewarding and instructional, not frustrating and demoralizing
  - We don't know when to help unless you ask
  - Note that a certain amount of struggling with the materials is a normal and essential part of the learning process

# Acknowledgments


- Materials in this course are based on previous work by others
  - C.K. Chui
  - K.Y.K Wong
  - G. Mitcheson

Questions?