

CS1101S Discussion Group Week 1: *Introduction & Administration*

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Why Week 1?

- Materials covered in this document *should* be taught to you in Week 1 (corresponding to the lectures).
- However, CS1101S Discussion Group officially starts from Week 2 (which is already earlier than most of the other modules).
- Since I believe that these things are necessary for you to know, as CS freshmen, I will try to cover them as much as possible after I finish the “ordinary” Week 2 materials.

Overview

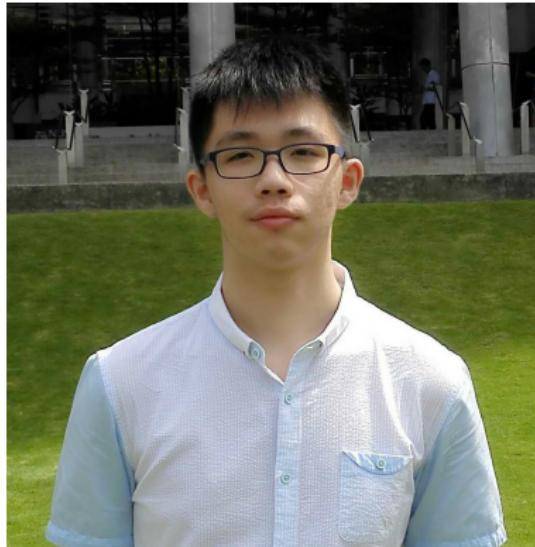
1 Introduction

- About me
- About you
- About this module
- About this discussion group

2 Advice

- How to get good grades
- How to learn CS
- How to do missions and sidequests

About me



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- LinkedIn: @Niu Yunpeng
- GitHub: @Beckid

About you

Introduce yourself to everyone



About you

Things to cover in your self-introduction

- Your name?
- Your major (your faculty also if you are not from SoC)?
- Why do you learn CS?
- Why do you take CS1101S?

Important notice

- Speak loudly.
- Speak clearly.

About you

Some statistics

...To Be Filled...

About this module

Originated from MIT 6.001



Massachusetts Institute of Technology (MIT), the U.S.A.

About this module

History of MIT 6.001

- Scheme was invented by Guy Steele and Gerald Sussman in 1975, as a dialect of Lisp.
- The first class of MIT 6.001 was taught by Hal Abelson and Gerry Sussman in 1980.
- Hal Abelson and Gerry Sussman published their famous textbook *Structure and Interpretation of Computer Programs* in 1985.
- MIT 6.001 was later taken over by Eric Grimson, the head of Department of Electrical Engineering and Computer Science at MIT before his appointment as the Chancellor of MIT in 2011.

About this module

History of MIT 6.001 (continue ...)

- MIT 6.001 was taught for the last time in 2008. Gerry Sussman took it back from Eric Grimson, as he said he wanted to be the last person to teach it.
- This module was later replaced by 6.00, 6.01, and 6.02 (taught in Python) due to the new CS curriculum at MIT.
- To commemorate this remarkable module, a highly-condensed version of 6.001, MIT 6.037 was introduced during the Independent Activities Period (IAP) after that.

About this module

Self-readings about MIT 6.001

- The End of an Era. By *Evan Broder*. Click [here](#).
- MIT 6.001 Spring 2007 Course Website. Click [here](#).
- MIT 6.037 IAP 2017 Course Website. Click [here](#).
- MIT 6.001 Webcast (1986). *YouTube Video Playlist*. Click [here](#).

About this module

Now, back to NUS CS1101S



NUS

National University
of Singapore



NUS CS1101S Online Folder

<http://comp.nus.edu.sg/~cs1101s>

History of CS1101S

- First introduced to Department of Information System and Computer Science in AY1997/1998 Semester 1, under the module code IC1101S.
- It was named to CS1101S the next academic year.
- Has been taught by Jacob Katzenelson, Leong Tze Yun, Leong Hon Wai, Terence Sim, Razvan Voicu, Ben Leong, Martin Henz, Low Kok Lim, etc.
- Prof Ben Leong first attempted to gamify this module, at that time on a platform called *Jedi Academy*.
- Prof Martin Henz used JavaScript instead of Scheme for the first time worldwide.
- *Source Academy* was introduced last year.

About this module

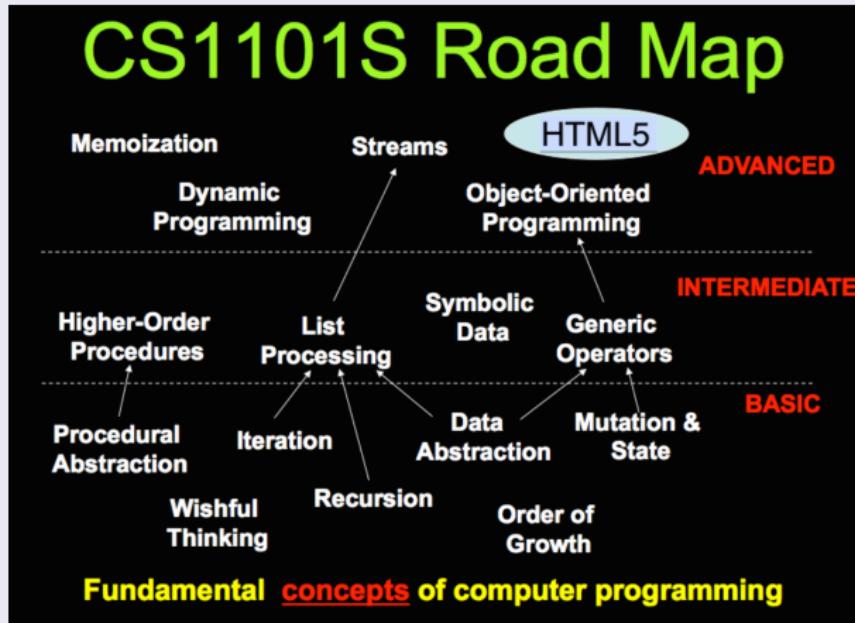
What is CS1101S about?

- It is “not” about programming.
- It is “not” about Computer Science.
- It is “not” about Source, or the underlying JavaScript.
- It is about **Computation**.

Adapted from the lecture notes of MIT 6.001 Spring 2007. Available online.

About this module

What to learn in CS1101S



About this module

Assessment Components

- 35% Continuous Assessments (CA)
- 5% Discussion Group Participation
- 15% Mid-term Test
- 15% Practical Examination
- 30% Final Examination

Is CS1101S bell-curved?

- No. Not at all.

Is it harder than CS1010?

- Yes, much more materials will be covered.
- Yes, almost everything is much more difficult.
- No, because the percentage of students who get A-, A and A+ is however usually higher.

About this module

To earn XP points - get better grades from CA

- Complete Missions
- Complete Sidequests
- Win Contests
- Actively participate in Discussion Groups
- Finish Paths (and earn "Early Bird" bonus)
- Participate in Forum

About this module

CS1101S Communication Channel

- IVLE Forum (where you can earn XP)
- Facebook Group (click here)
- IVLE Announcement (through Email and/or SMS)
- Source Academy Announcement (through Email)

Caution

- These are this module's official communication channels.
- Our Discussion Group has our own communication channel (WhatsApp Group), which will be introduced later.
- You should distinguish them.

About this Discussion Group

Discussion Group Administration

- Time: Conducted weekly, ??:00 to ??:00.
- Venue: TBD.
- Participants: Every one of you and me.
- Attendance will be taken every time, however, only attending all the classes (without active participation) may not guarantee you the full marks for the participation component of your CS1101S grade.

About this Discussion Group

Ways to participate actively

- Be prepared before class.
- Frequently *ask* questions (both in class and on Whatsapp Group).
- Frequently *answer* questions from your classmates (if you can).
- Tell really funny jokes.

About this Discussion Group

About Discussion Group Problems

- Discussion Group Problems will be released before our class starts (usually during the weekend).
- Although I do not require you to finish all the problems before class, you are welcome to do so.
- However, please at least look through the problems before class.

About this Discussion Group

Our Communication Channel

- For general enquiries (not about the specific materials covered by me during our class), like questions about the lecture notes, recitations, missions, sidequests, you may want to post them on the IVLE Forum.
- For enquiries about the materials covered by me during our class, please do not hesitate to ask in our WhatsApp group. **Notice:** You are encouraged to post it in the group instead of directly to me because others may have the same question.
- If you have personal enquiries, like doubts about the marking of assignments, reminder for me to mark your assignments (I may ignore your submission carelessly), you may want to talk to me in person or on WhatsApp.

About this Discussion Group

Our Communication Channel - Whatsapp Group

- I will invite / have already invited you to our Whatsapp Group according to the handphone number you fill in for the Google Forms.
- If you have not filled in the form, please do it as soon as possible. It is available [here](#).

About this Discussion Group

Where to find my slides

- We have our own Discussion Group Website.
- Visit <https://cs1101s.azurewebsites.net/>.
- Your **unique** username and password will be issued / have been issued to you. *Do NOT tell others! Do not lend your account to others!*
- The server may be unstable sometimes. Please be patient.
- Do NOT attack this website. Otherwise, please note that you will be liable for your actions.

About this Discussion Group

What to do in Discussion Group

- Review the materials from lecture and recitation.
- Clarify any kind of your doubts.
- Do Discussion Group Problems.
- Last but not least, have fun...

Most importantly

Improve your ultimate result in CS1101S.

Overview

1 Introduction

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- About this discussion group

2 Advice

- How to get good grades
- How to learn CS
- How to do missions and sidequests

To Get Good Grades

How to get good grades

- Sleeping is optional, but working hard is compulsory.
- High efficiency is essential.
- To study effectively, always concentrate only on what you are doing right now:

It is okay to play or have fun, but please play effectively as well. After you have enough fun, go back to concentrate on your work.

To Get Good Grades

How to get good grades in CS1101S

- Attend all lectures, recitations and discussion groups.
- Finish all missions, sidequests & contests and try your best to get full marks for every one of them.
- Do not be too shy to ask questions.
- From now on, do “*wishful thinking*”!

To Get Good Grades

About the leaderboard

- Leaderboard does not affect your grade in CS1101S.
- Aim for leaderboard **only if** you finish all your other work in CS1101S and other modules, and you still have extra time.
- Anyway, leaderboard may become the motivation for you to study hard.

To Get Good Grades

Leaderboard last year

64/38 /

Level	Achievements
38	40

Navigation

- Announcements
- Assessments
- Submissions
- Achievements
- Comments
- Leaderboard
- Students
- Materials

Leaderboard

1		<u>Fifid</u> <u>sneqsd</u> <u>Jr</u> Level 38
2		<u>fl</u> <u>lt</u> Level 38
3		<u>J_Yue</u> <u>J_Yu</u> Level 38
4		<u>I_Yunpeng</u> Level 38
5		<u>BoBo</u> <u>uiLevel</u> Level 38

How to learn Computer Science (CS)

To become a good CS student

- Appreciate how many changes computers have made in the world.
- Love programming.
- Be prepared to suffer.
- Be resourceful.
- *Google* is always your best friend.

How to learn Computer Science (CS)

To learn CS in NUS

- Be modest.
- Be brave to take harder modules, like CS1101S.
- Get to know excellent people (including both students and professors).
- Do internship as much as possible.

How to learn Computer Science (CS)

Interesting (and hard) CS modules in NUS

- CS1101S Programming Methodology
- CS3216 Software Product Engineering for Digital Markets
- CS3217 Software Engineering on Modern Application Platforms
- CS3226 Web Programming and Applications
- CS3233 Competitive Programming

And one more sad thing

- CS2020 Data structure and Algorithms Accelerated
- No longer offered since this academic year (maybe because it is too hard, sad...).

How to learn Computer Science (CS)

Valuable opportunities at SoC

- Orbital Programme (CP2106)
- Undergraduate Discussion Leader (UDL)
- Computing for Voluntary Welfare Organisations (CVWO)
- Undergraduate Research Opportunities Programme (UROP)
- Advanced Technology Attachment Programme (ATAP)
- NUS Overseas Colleges (NOC)

How to learn Computer Science (CS)

So, what is Computer Science (CS)?

- Computer Science is not actually a science. It is more likely to be a kind of engineering or art.
- Computer Science is not much about computers. We pay much more attention to the abstract computation process rather than the actual physical machines.
- Computer Science is a kind of magic, which is used to solve problems and control the complexity of the solutions.

Adapted from MIT 6.001 (1986) Lecture 1A, by Hal Abelson. The video is available at [here](#).

How to learn Computer Science (CS)

My understanding of CS

- Computer Science is not only about computers.
- Computer is not only about software.
- Software is not only about programming.
- Programming is not only about coding.

How to Do Missions and Sidequests in CS1101S

Follow these steps

- Keep thinking and trying for at least 30 minutes.
- Ask your best friends, **Google**.
- Ask in our DG Whatsapp Group.
- Report to me, since there must be something wrong with the assignment.

How to Do Missions and Sidequests in CS1101S

What to expect in Missions and Sidequests

- Graphics Programming (Runes & Curves)
- Security Programming (RSA Encryption / Decryption)
- Sound Programming (Digital Sounds)
- Robotics Programming (*Lego Robot Competition*)
- Game Programming (DeathCube)
- Stream Programming (Solving Algebra Problems with Streams)

End

Let the adventure begin



End

The End