CS1101 Programming and Problem Solving

Dr. Gina Bai

Fall 2022

Instructor

- Dr. Gina Bai
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- Office: FGH 381
- Office Hours:
  - Mon/Wed, 10:00am – 11:30am
  - OR by appointment

Teaching Assistants (TAs)

We have a group of TAs!

- Names, emails, office hours will be posted on Brightspace > Content > Staff
- ALL TA office hours will be held in **FGH 201**
- **SHARED** TA office hours

Piazza

- https://piazza.com/vanderbilt/fall2022/cs1101
- **Preferred** communication method
- Class discussions & Questions
  - All questions related to **programming assignment**
  - You are encouraged to **ask** questions and **answer** other's questions
  - **NEVER post your code publicly**

What is Computer Science?

- Computer science is the study of computation

- Computer science and engineering is the systematic study of algorithmic processes that describe and transform information: their theory, analysis, design, efficiency, implementation, and application.

  by ACM (Denning, et al., 1988)

Challenges when dealing with computers

- Computers have no rational thought.
- Computers require steps of instructions that are very specific.
- Computers do not understand natural languages.

What is computer programming?

- Computer Science is not just programming

- Computer Programming

  The art of **designing** and **writing** a group of **instructions** that the computer's processor executes.

  - Program: a list of instructions to be carried out by a computer

How do we interact with computers?

- Programming languages
  - allow us to write code that uses mostly English and arithmetic operators.

- Compiler
  - translates code we can understand into 0's and 1's that the processor can understand.

What will you learn in CS1101?

- Problem Solving
  - the purpose of writing a program is to solve a problem
- Java programming language
- Concepts of Object-Oriented Programming (OOP)
  - encapsulated collection of data variables and methods
- Documentation techniques

Course Resources – Required

Brightspace

Grades, announcement, …

TopHat

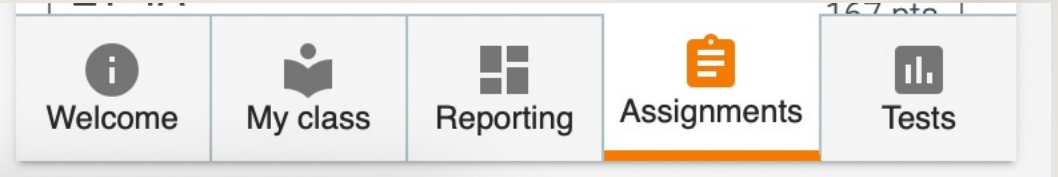
In-class activities / Participation

Course Resources – Required

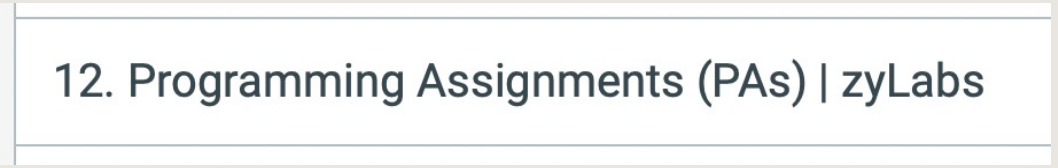
zyBook

Textbook

"ZY" assignments: Assignment



"PA" assignments: Chapter 12



Course GitHub Repo

Lectures

Course materials are also available on Course GitHub Repo.

Or visit:
https://ginabai.github.io

Tentative Schedule

📌 Slides will be posted before the class meetings, check often.

Week	Date	Topics	Assignments (Central Time)
1	Aug 24	• Introduction	🪶 `HW0-A`, `HW0-B` on **Brightspace > First Week** **DUE:** Monday, Aug 29, at 11:59 pm
	Aug 26	• Structure of Java • Write-Compile-Execute	• 💻 `PA00-A`, `PA00-B` in **zyBook > Chap 12** **DUE:** Thursday, Sept 1, at 11:59 pm • 📚 `ZY-1`, `ZY-2A` in **zyBook > Assignments** **DUE:** Saturday, Sept 3, at 11:59 pm
2	Aug 29	• Debugging • Program Errors • Primitive Data Type 📄 Recommended Reading: • Oracle - Java Tutorial: Primitive Data Types	
	Aug 31	• Expressions • Variables • Scanner with integers	
	Sept 2	• Math Class • Constant & Class Constant	
3	Sept 5	• Strings • Scanner with Strings	
	Sept 7	• Static Method Parameter & Return Value	
	Sept 9	• Passing Parameters • Verify Parameter Values • Scanner as a Parameter	
4	Sept 12	• Boolean • Equality, Relational, Logic Operators	
	Sept 14	• Conditionals • Conditional expressions	
	Sept 16	• TBD: 1) Finish the topics above if needed, or 2) Exam 1 review, or 3) more conditionals	
5	Sept 19	💬 Exam 1 Review and/or Q&A	
	Sept 21	📝 Midterm Exam 1	

Course Resources – Required

codePost

Assignment grading

Gradescope

Exam grading

Course Structure

- **TopHat Activities – 5%**
  - To receive 100% of the grade, you must complete **70%** of all TopHat questions during classtime

Course Structure

- **Assignments**
  - zyBook Activities (Participation & Challenge) – **10%**
    - "ZY", ~10 in total
    - To receive 100% of the grade, you must complete **90%** of all zyBook activities
  - Programming Assignments – **45%**
    - "PA", ~11 in total

Late Work Policy

- zyBook Activities
  - **No late submissions** are accepted without a note from the Dean's office

- Programming Assignments
  - Penalty
    - 20% for (0, 24] hours late
    - 50% for (24, 48] hours late
  - Assignments will be accepted late **up to 48 hours**.

Late Work Policy

FOUR *free* late days for programming assignments ("PA")

- One late day extends a deadline by 24 hours
- Regardless of the use of free late days or not, **no submissions** will be accepted **48 hours after** the due date
  - Also means we only allow **up to two late days per assignment**
- Two free late days are given at the beginning, the remaining two will be given at the start of Week 8

Course Structure

- **Exams**
  - Midterm 1 – **10%**
    - Sept 21
  - Midterm 2 – **15%**
    - Oct 26
  - Final – **15%**
    - Dec 13

Exam make-up policy

- Midterms
  - Makeups only for *serious* (**documented**) reasons
  - A student sending an email or leaving a phone message does not constitute permission
  - Otherwise, 20-100% penalty may be assessed

- Final
  - No alternate dates

Grading Disputes

- Regrade requests MUST be submitted **within TWO weeks** after grades are released
  - **Where** do I find the grades?
    - For assignments, visit **codePost**
    - For exams, visit **Gradescope**
  - **Who** do I contact about the grading disputes?
    - For assignments, contact TAs
    - For exams, contact your instructor (yea that's me)

Academic Integrity

ALL violations will be reported to the Honor Council

Read the Academic Honesty Policy (Brightspace > Content > Course Documents) carefully for examples of academic misconduct in CS1101

- Cheating
- Plagiarism
- Aiding & Abetting
- Destruction of Academic Materials

Protect yourself

- Do not leave your workstation and/or laptop unattended or forget to log yourself out
- Do not email, ftp, or post your code on the Internet, message boards, etc.
- Do not discuss implementation details of individual assignments with your peers
- …
- Ask the instructor for clarification of any questions or concerns about academic integrity policies before submitting an assignment

What You Should Do After Class

- Purchase your *zyBook subscription* – We start this week!
- Complete ***Homework 0-A and 0-B*** by Monday (08/29, at 11:59pm)
  - On Brightspace under **Content > First Week**
  - HW0-A
    - Read the **Academic Honesty Policy** (under **Content > Course Documents**)
    - Must receive *all 10 pts* to be considered for completing the quiz
  - HW0-B
    - An informal student survey