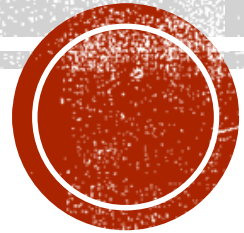
CS 101 LECTURE #0
COURSE OVERVIEW



Mythili Vutukuru

IIT Bombay

WELCOME!

- CS101: Computer Programming and Utilization, Spring 2023
- Language taught: C/C++ (mostly C, with basics of C++)
  - No background knowledge in programming assumed
- Team:
  - Instructor: Mythili Vutukuru (mythili@cse.iitb.ac.in)
  - Course managers:
    - Firuza Karmali (firuza@cse.iitb.ac.in)
    - Nagesh Karmali (nags@cse.iitb.ac.in)
  - TAs (UG and PG students)

SYLLABUS

- Introduction to C programming
- Variables and Operators
- Structured Programming (if-else, while, for, switch, ..)
- Functions
- Arrays
- Pointers and strings
- Structures (time permitting)
- Basics of C++ and classes (time permitting)

SCHEDULE

- Lectures:
  - Section D1: Wed/Fri 11:05-12:30, LA 202
  - Section D2: Tue/Fri 2:00-3:25, LA 202
- Labs:
  - Section D1: Thu 8:30-10:30pm, SL1, SL2, SL3, Basement lab (New CSE Bldg)
  - Section D2: Tue 8:30-10:30pm, SL1, SL2, SL3, Basement lab (New CSE Bldg)
  - Minor changes in a couple of lab slots due to public holidays (see detailed schedule)
- Help sessions:
  - Help session by TAs: Mondays 5:30-7:30 pm, SL3
  - Help session by Firuza and Nagesh: Wednesdays 5:30-6:30pm, CC 215 (New CSE Bldg)
  - Instructor office hours: immediately after lecture slot, or by appointment
- Exams:
  - Quizzes on Saturdays or during midsem/endsem week
  - Lab quizzes Mon/Tue/Thu/Fri 8:30-10:30 pm during lab quiz week

GRADING

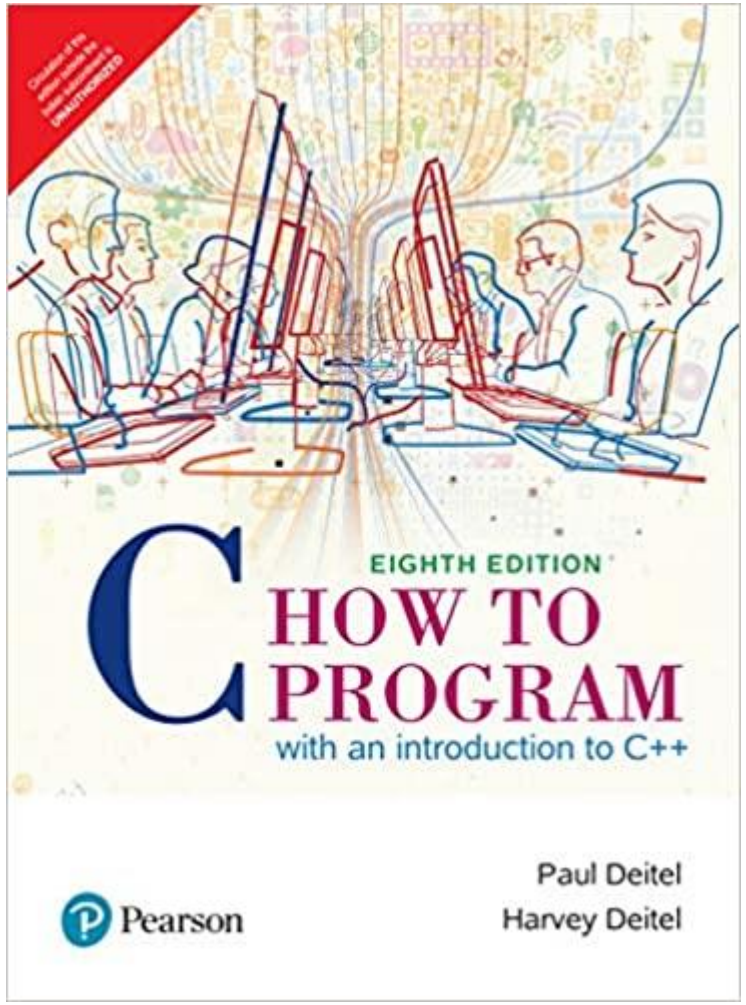
- Weekly Labs: 10%
  - Many practice problems released every week, solve and submit any 2 programs
  - Marks assigned based on attendance and light-weight grading based on self-certification
  - Mainly for programming practice with TA help
  - Can work on your own laptops or the lab machines
- 3 lab quizzes (one every 4 weeks): 30%
  - Proctored programming tests on the lab machines (no network connectivity)
  - Grading based on demo and viva with TA
- 4 pen-and-paper quizzes (one every 3 weeks): 60%
  - 2^{nd} quiz during midsem week, 4^{th} quiz during endsem week
- All exams are cumulative (covers all concepts taught up to that point)
- One makeup exam at the end of semester for theory and lab, only for valid reasons

MOODLE FOR COURSE MANAGEMENT

- All study material related to the course will be on Moodle
  - Lecture slides and sample code discussed in class
  - Practice problems for weekly labs and exams
- All logistics and related information will be on Moodle
  - Student to TA mapping, lab seating arrangement
  - Seating plans and other instructions for all exams
- All course grading will be done via Moodle
  - Code in lab quizzes to be uploaded on Moodle
  - All marks and feedback for all exams via Moodle
- Announcements: all course announcements will come via Moodle
- Discussion forum: ask doubts on discussion forum, respond to others doubts
  - No individual emails to instructor or TAs for doubts about course content
  - For confidential matters, please email instructor

TEXTBOOK

- "C How to Program: With an introduction to C++" by Deitel and Deitel
- Course will follow textbook very closely
  - Lectures, code examples discussed in class
  - All practice programming questions for weekly labs
- All code from the book is here (also on Moodle) https://github.com/pdeitel/CHowToProgram8e/archive/master.zip



ROLE OF THE TA

- One PG TA assigned for every 14 students, one UG TA for every 28 students
  - Some TAs as backup to cover for TAs on leave
- Weekly lab sessions (one per week)
  - Help students with practicing programming questions
  - Clear any other doubts in the course content
  - Update attendance-based grade on Moodle for weekly labs
- Grading lab quizzes
  - Conduct demo and viva after lab quizzes (during subsequent regular lab hours)
  - Upload marks and feedback on Moodle
- Informal help session to clear doubts from lectures every week (3-4 TAs per week)
- Invigilation and grading of pen-and-paper quizzes, handling "cribs"

ROLE OF THE INSTRUCTOR

- Lectures: main point of contact with instructor
  - Please ask questions during/after class
- Weekly labs:
  - TA is main point of contact, but instructor will be available briefly
- All exams: instructor is available, but avoid asking for clarifications
- Moodle discussion forum: available to clear doubts online
- Office hours: come by for one-on-one discussions
- Email: only for personal/confidential/emergency/serious issues
- Please do not hesitate to reach out to instructor any time

ROLE OF COURSE MANAGERS

- CS101 Course Managers: Firuza and Nagesh
- TA management
  - Main point of contact for all TAs in the course
  - Maintain TA-student mapping, seating arrangement for labs
  - Tracking TA attendance and availability
- Handling all logistics of the course
  - Ensuring smooth conduct of all lectures, labs and exams
- Helping instructor with course content, exams, grading
- Helping students with course content via office hours, Moodle discussion forum

YOUR ROLE AS A STUDENT

- Attend all lectures and follow along, ask questions, be proactive
- Attend your weekly lab session
  - Ask TA for help if you are facing difficulties
  - Help others in your group/lab, especially if you have prior programming experience
  - Discussions encouraged during weekly labs
- Attend help sessions and office hours as required
- No copying code or any other unfair means during exams
  - Cheating will be dealt with strictly
  - Exams should be easy to attempt if you follow lectures and labs sincerely
- Group with best aggregate performance will get a surprise gift at the end
  - Please help your peers learn!

DETAILS OF GRADING ON MOODLE

- Students and TAs to always ensure marks on Moodle are correct and consistent
- All quizzes will be for 2 * W marks, where W is weightage of quiz in final grade
  - Lab quizzes will be for 20 marks each
  - Pen-and-paper quizzes will be for 30 marks each
  - Please ensure that marks updated on Moodle immediately after any changes/cribs
  - Your final course total is simply (total marks on Moodle / 2)
- Each weekly lab will be for 2 marks each
  - Students can attempt the lab questions beforehand, but mandatory to attend lab session once a week
  - Upload code on Moodle for at least 2 programs per week, and self-certify to TA that lab is complete before you leave (you can leave early if you are done)
  - TA will assign grade of 0, 1 or 2 for lab submissions based on checking student code at high level
  - If absent due to unavoidable reasons, contact TA over email and show progress later (before next week)
  - Total weekly lab marks on Moodle = 2 marks for each of 9 weekly labs + 2 marks bonus for those with full lab attendance = 20 marks = 10% weightage in final grade

DETAILED SCHEDULE

D1 lecture: 11:05-12:30
D2 lecture: 2-3:25pm
All lectures in LA202

All labs 8:30-10:30pm
Labs in new CSE Bldg

MARCH 2023

SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
Semester Starts 5	6	Holi 7	D1 Lec 8	D1 Lab 9	D1 Lec D2 Lec D2 Lab 10	11
12	13	D2 Lec D2 Lab 14	D1 Lec 15	D1 Lab 16	D1 Lec D2 Lec 17	18
19	20	D2 Lec D2 Lab 21	Gudi Padwa 22	D1 Lab 23	D1 Lec D2 Lec 24	QUIZ 1 25
26	27	D2 Lec 28	D1 Lec 29	30	D1 Lec D2 Lec 31	

LAB QUIZ 1 (MON, TUE, THU, FRI)

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2023 APRIL

SUN	MON	TUE	WED	THU	FRI	SAT
						1
2	3	4 Mahavir Jayanti	5 D1 Lec **D2 Lab**	6 D1 Lab	7 Good Friday	8
9	10	11 D2 Lec D2 Lab	12 D1 Lec	13 D1 Lab	14 D1 Lec D2 Lec	15
16	17 **D2 Lec (Tue)**	18	19 Midsem Start	20 QUIZ 2 (in midsem week)	21	22 Id-ul-Fitr
23	24	25 Midsem End	26	27	28 D1 Lec D2 Lec	29
30						

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2023 MAY

SUN	MON	TUE	WED	THU	FRI	SAT
	1	2 D2 Lec D2 Lab	3 D1 Lec	4 D1 Lab	5 Buddha Purnima	6
7	8	9 D2 Lec	10 D1 Lec	11	12 D1 Lec D2 Lec	13
14	15	16 D2 Lec D2 Lab	17 D1 Lec	18 D1 Lab	19 D1 Lec D2 Lec	20 QUIZ 3
21	22	23 D2 Lec D2 Lab	24 D1 Lec	25 D1 Lab	26 D1 Lec D2 Lec	27
28	29	30 D2 Lec D2 Lab	31 D1 Lec			

LAB QUIZ 2 (MON, TUE, THU, FRI)

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2023 JUNE

SUN	MON	TUE	WED	THU	FRI	SAT
				1 D1 Lab	2 D1 Lec D2 Lec	3
4	5	6 D2 Lec	7 D1 Lec	8 D1 Lec (Fri) D2 Lec	9 D1 Lec D2 Lec	10
11	12 Endsem Start	13	14	15	16	17
18	19 Endsem End	20	21	22	23	24
25 Grading Deadline	26	27	28	29	30	

LAB QUIZ 3 (MON, TUE, THU, FRI)

QUIZ 4 (in endsem week)

Makeup quiz (theory, lab)

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