Programming Assignment #1:
Stitching Substrings into a Byte Stream

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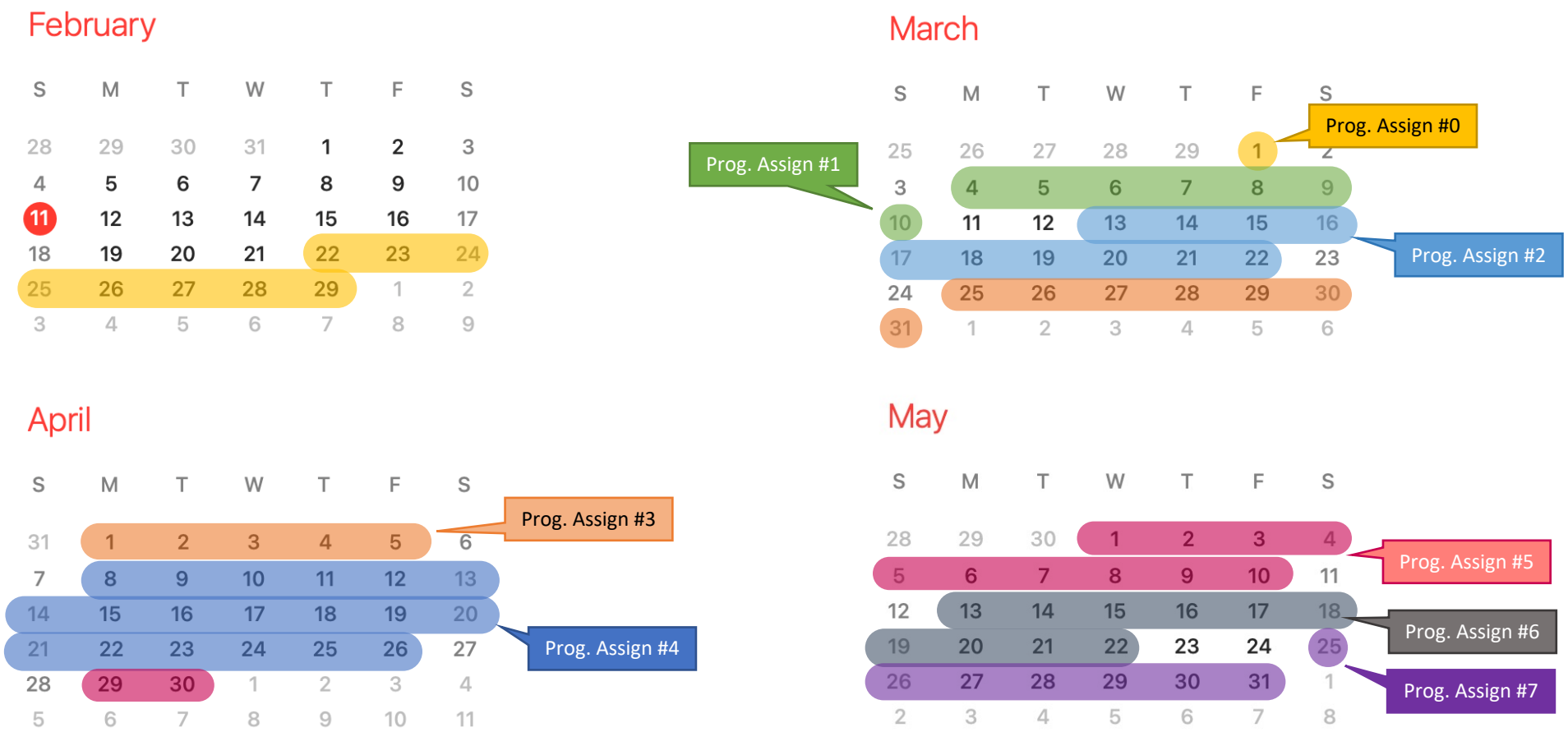
POSTECH CSE
Department of Computer Science & Engineering

Master Timetable

Regular schedules indicated by color. Regular due is at 23:59 of the last day of the same color.
Late submissions are accepted until 24 hours grace period after the regular due (at **20% penalty**)



Allocated Days & Relative Score Weights

Source: "**Sponge**" in Stanford CS144 'Introduction to Computer Networking' by Prof. Keith Winstein

- We will provide our own materials with proper localization. While you are free to refer to the original CS144 materials, our materials will precede in case of discrepancy.
- Complexity would vary with assignment; LoC per assignment may be between 25 and 150 lines.
- Per-assignment weights and days are differently allocated, reflecting the varying complexity.
- After each assignment, within 7 days, the best submission will be chosen and disclosed to the class.
  The author of the best submission is rewarded with +10% extra score on top of what she/he earned from that assignment.

No.	Theme	Days allocated (regular + late)	Relative weights allocated
0	**Warmup**	9 + 1	7
1	**Byte streams**	7 + 1	9
2	**TCP receiver**	10 + 1	14
3	**TCP sender**	12 + 1	18
4	**TCP connection**	19 + 1 (including mid-term week)	18
5	**Network interface**	12 + 1	14
6	**IP router**	10 + 1	11
7	**Putting altogether**	7 + 1	9

Where to Submit

At PLMS:

Week 4 (03/11, 03/13)

- Chapter 2. Application Layer
- Chapter 3. Transport Layer

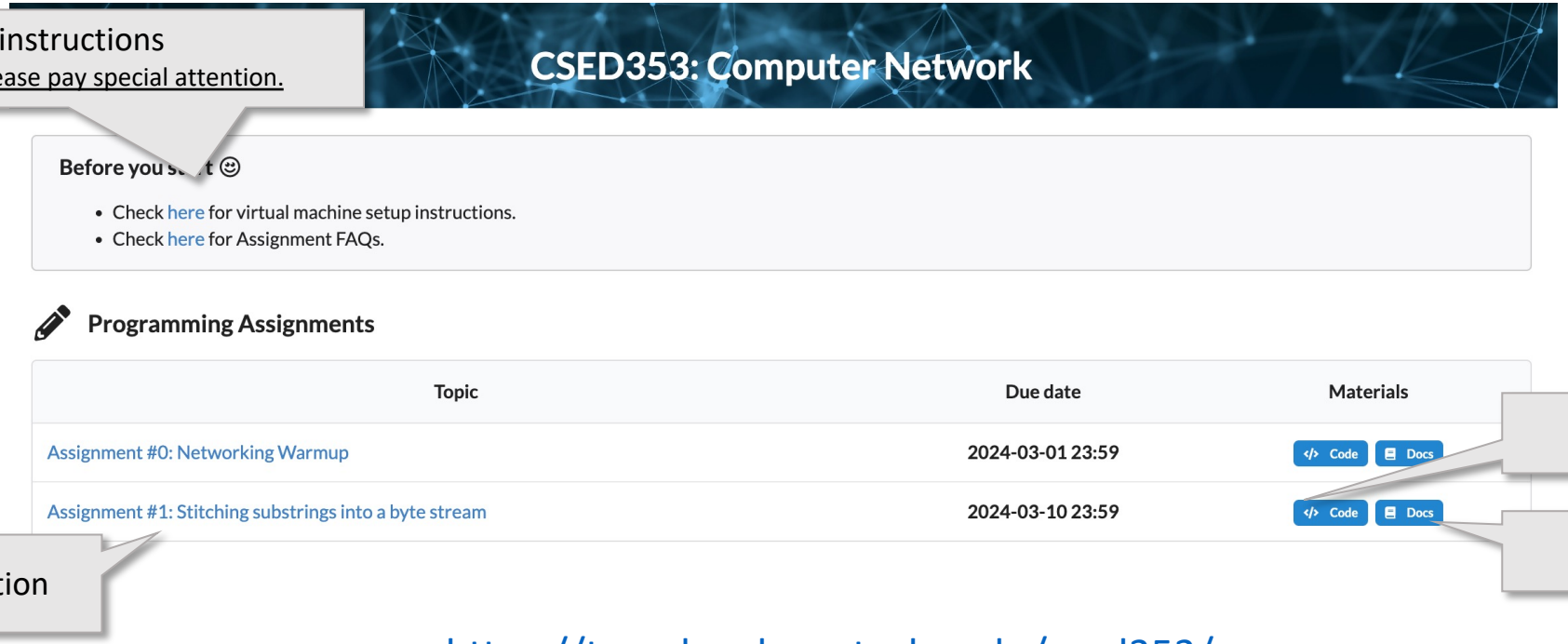
[Assignment] #1. stitching substrings into a byte stream 2024-03-04 00:00:00 ~ 2024-03-10 23:59:00

For assignment description and resources, please refer to:

- Attached slides
- Our assignment webpage: https://tomahawk.postech.ac.kr/csed353/
  - For off-campus access including the dormitory, you need to turn on POSTECH VPN: https://vpn.postech.ac.kr/

Programming Assignment #1: Stitching substrings into a byte stream

VM setup instructions
Note. M1 mac users, please pay special attention.



GitHub repo

API docs

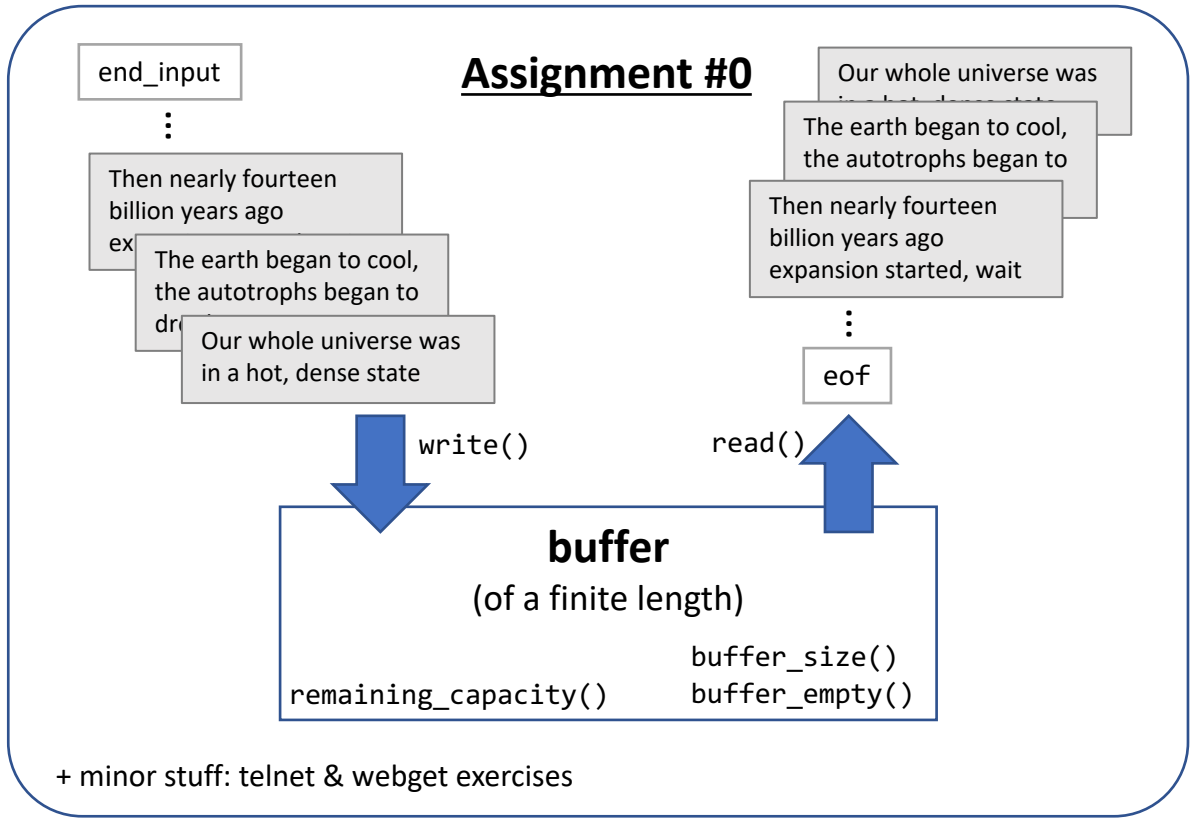
Assignment description

https://tomahawk.postech.ac.kr/csed353/

For off-campus access (including dormitory), get POSTECH VPN first: https://vpn.postech.ac.kr/

In addition, please visit regularly PLMS → Announcement bulletin for important updates about assignments.

[Review] Programming Assignment #0: Networking Warmup



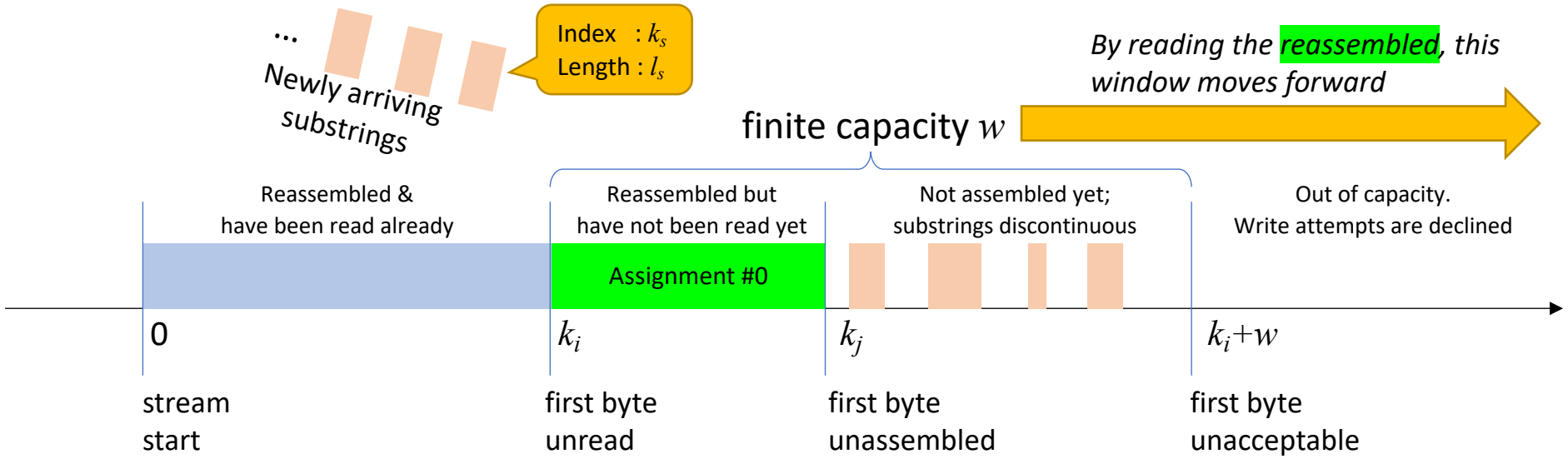
Grading Criteria

- ***Assignment score*** will be graded based on the test cases you pass.
- ***Best submission*** (+10% reward, code disclosure) will be selected based on various quality metrics, including:
  - Latencies to pass test cases
  - Readability and comments
  - Coding styles, DOs & DON'Ts (as per guidelines in section 3.2, Assignment #0 description)
- We inspect code similarities. ***No mercy*** will be shown to a misconduct with assignment codes.
  - Using whole or part of third party's code (e.g., someone else, Internet repo, LLM)

Honestly, the net time to code for this assignment would be just 2-3 hours.
Extra time is reserved to accommodate:

- One-time set up of your assignment environment (VirtualBox etc.) – 1 hour
- Reading the assignment description PDF – 1 hour
- Getting familiar with GitHub – 1 hour
- *Letting you enjoy the beautiful spring season* – 8 days

Programming Assignment #1: Stitching Substrings into a byte stream

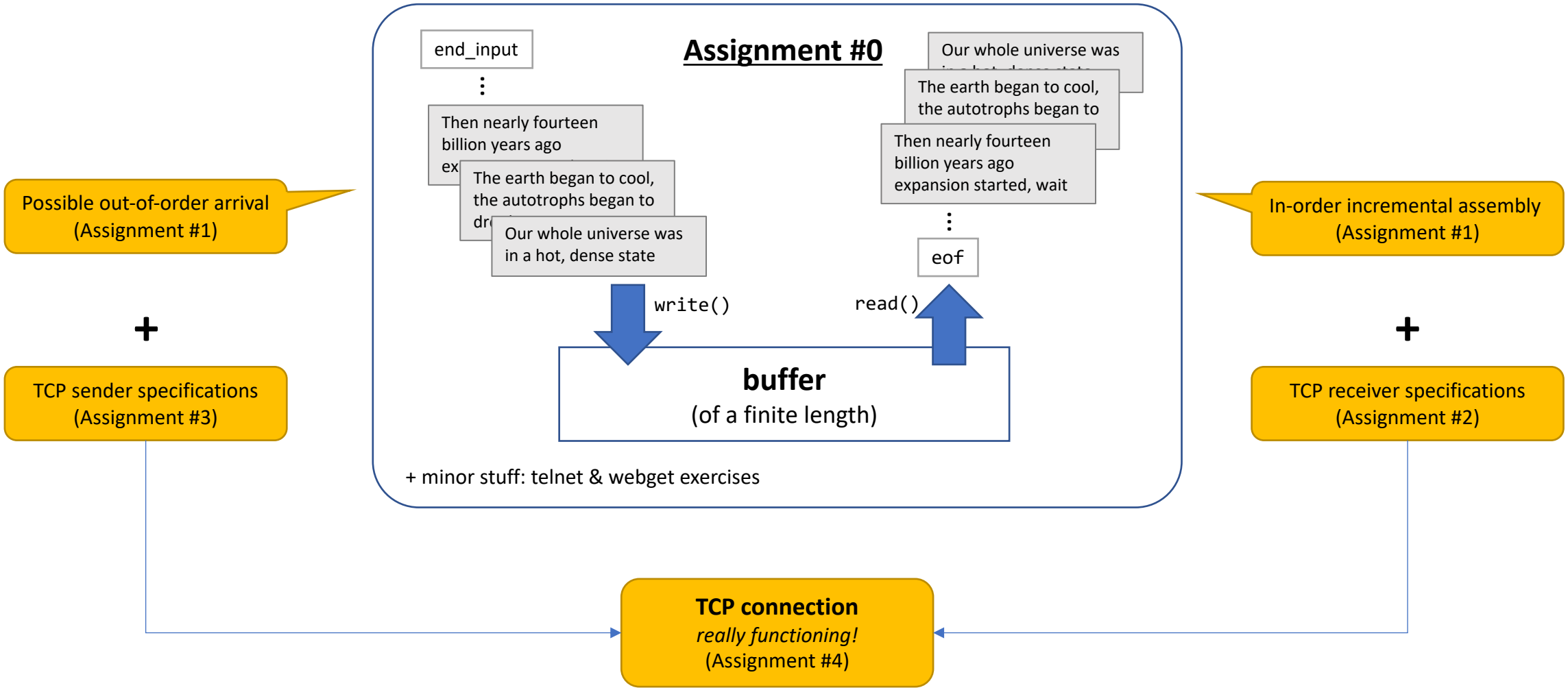


Why you do Assignment #1?

- IP packets may arrive out-of-order.
- TCP ensures in-oder reassembly, providing stream abstraction to applications

- **Regular due** : March 10, 23:59 (7 days including today)
- **Late due** : March 11, 23:59 (20% penalty)
- **9% weight** out of the whole programming assignments
- **Naming convention**: <your_student_id>.git (e.g., 20209876.git)

Programming Assignment: Roadmap #0 – #4



Please start working on your assignment ***early***

- You may find troubles in setting up your environment.
- You may find some differences between your output and the assignment PDF.
  - Partly our mistakes that a known discrepancy was not fixed already.

- You are welcome to post questions, as long as you are not asking us to solve or debug your assignment directly.
- However, it takes time for us to provide responses, typically ≦ 24 hours.
  - If many of you do your assignment close to the deadlines, many questions will be poured in a short period of time.
  - Due to the peak load, our responses may get delayed.
  - In the worst case, you may not have your answer before the deadline. Still, the due won't be extended.