



# Being a (good) Teaching Assistant

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# 1. The Plan

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# The Plan for the next 15 minutes

1. See how I manage my workflow, including:
  - 1.1 Corrections
  - 1.2 Preparation
  - 1.3 Session
  - 1.4 Reset
  - 1.5 Tools
2. Share some tips & tricks at each step
3. Go over a brief template session together
4. (Time permitting: Q&A session)

## 2. Personal Workflow

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# Personal Workflow

- At each step, I'll try to show you what this looks like for me concretely
- I like to front-load work for a smoother experience during the semester (to focus on my own courses)

# 3. Corrections

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# Homework Corrections

- One of the main tasks (and time sinks) of a Teaching Assistant!
- Make sure to take notes while making corrections:
  - You can use these notes for the next session
- If time allows, try them out yourself to see where they might've gotten stuck on
- If you didn't understand the master solution yourself, don't be shy and reach out to other TAs and ask for clarifications (maybe the master solution could be improved by that too!)

# Homework Corrections

- Typically, 80% of students make the same 20% of mistakes<sup>1</sup>
- These are the mistakes/tasks you might want to cover at the beginning of the upcoming session
- Don't feel bad copy-pasting comments regarding the same mistake: ideally, write out a good answer once and re-use it often!
  - 💡 Consider using a clipboard manager
- **code expert** has markdown support: make use of it to structure your comments/feedback
- If something's too complicated to put into just words
  - either suggest to the student they should ask you during/after the session
  - or tell them that you'll cover it in the next session (and prep accordingly)

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<sup>1</sup>80% of statistics are made up on the spot



# How to give Feedback

- Be kind and encouraging
- Make sure to point out the "right" parts of a solution before criticizing the incorrect parts
- If a student does a thing particularly well or in a clever way, make sure to point that out and compliment them on it, e.g.
  - Very good with using `const` in their code
  - Some clever proof
  - Good comments and formatting
- Don't be afraid of telling them to have a look at the master solution themselves if you think it's a particularly important exercise

## 4. Preparation

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# Session Preparation

- With the correction notes, a big part of the prep work is already done
- If you plan on doing exercises put some thought into how you want your students to solve them and how you want to present the solutions e.g.
  - Individual/Silent working
  - Pairs/Groups
  - Live Coding

# Session

- For the session itself, I like to prepare slides (like these!) for the session
  - If you opt for a more archaic approach, make sure your handwriting is legible and that you have a good guideline for the session
- Additionally, have a place to store all the slides/files/notes covered in the session, like a polybox or a webpage (and make sure to have links to it in *every* session)
  - 💡 Consider setting up your [n.ethz.ch](https://n.ethz.ch) webpage before the first session and having a QR-code to it

## 5. Session

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# Session

- I like routines!
- Make a plan to fall back on (or stick to the provided one)
- Do *whatever* you can to ensure people feel comfortable in the session
  - Be friendly, welcoming and *cool*
  - Encourage participation
  - Compliment any answer by underlining correct aspects of it

# *It's all about the vibe, bro*

But how do I make my students feel comfortable?

- Of course, this depends on the kinds of students you have in your class
- Personal guideline: be the TA you would have wanted to be tutored by
- Pro Tip: Sneak in a "planned spontaneous breaks"
  - Each ETH course has it's own lore and history: share some of that with the students for a quick "refocus" after a difficult stretch

# Friendly *and* professional

- Sympathize with them (you were once in their shoes, remember?)
- If a section is going to be tedious, let them know how you struggled with it too
- Make sure they know you're on their side
  - "Us" against the material (but never against the course!)
- Stay professional
  - If someone misbehaves in the sessions or cheats in the exercises, act in the interest of the course and not the (misbehaving) student
  - For specifics on how: ask your head TA or lecturer(s)



# Challenges

- If you don't know the answer to some question
  - Acknowledge it. Don't ever act superior
  - Ask around if someone in the class knows (for programming-related courses this is very often the case!)
  - Show the students how you would go about finding the answer (e.g. "How is the `std::queue::push` in C++ implemented exactly?" Show them how to look it up on `cppreference` or similar)
- If a student is more knowledgeable on a topic than you
  - Try to integrate them into the class (if you feel like they would want that)
- If some students struggles massively with the material
  - Be patient
  - Try to track down "where" they got stuck and work from there
    - ▶ This requires time and should be done outside the session (e.g. right after)

## 6. Reset

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# Reset

- Have a checklist for all the things you're supposed to do *after* the session, e.g.
  - Write down unanswered questions for next session's "follow-up" section
  - Note fixes in your session material (e.g. mark typos in the slides)
  - Note fixes in exercises (e.g. improvements for the master solution)
  - Upload notes and annotation to website/polybox

## 7. Tips and Tools

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# Tools I use

## ■ Raycast

[Download here](#)

for copy-pasting text and creating snippets for repeated answers and *much* more

## ■ Amethyst

[Download here](#)

for window management (Raycast has most of its features)

## ■ Toggle Track

[Setup here](#)

for tracking time spent on work

## ■ Sublime

[Download here](#)

for my  $\text{\LaTeX}$ -editing and correction notes (excellent autocomplete and snippet features)

## ■ n.ethz Website

[Guide for setup](#)

for storing all the files for your students

## ■ qrencode (CLI)

[man page](#)

for generating QR codes

## 8. Sample Session

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# Session 00 - Example Session, Topic XYZ

Adel Gavranović

# Today's Schedule

Follow-up  
Feedback for Exercises  
Learning Objectives  
Main Topics for the Session  
Tips for next Exercises  
Old Exam Questions  
Outro



[n.ethz.ch/~agavranovic](https://n.ethz.ch/~agavranovic)

[Exercise Session Material](#)

[Adel's Webpage](#)

[Mail to Adel](#)



8. Sample Session

## 8.1. Follow-up

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# Follow-up from last exercise session

- Follow-up items go here!
- This is where you follow-up on stuff you mentioned last time, this includes:
  - Questions and other things that weren't resolved (well-enough) during the last session
  - Questions you've been asked between sessions via mail or by students
- Feel free to have multiple slides on this if needed
- Make sure to be clear about what is really "lecture material" and what is extra

8. Sample Session

## 8.2. Feedback for Exercises

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# General things regarding Exercises

- List things that are important in general for the exercises
- This is where you *kindly* tell your students to send you in their solutions as a  $\text{\LaTeX}$ -typeset PDF or use sensible code formatting in **code expert**

# Task "Example Task"

- Go over your correction notes for each task/exercise
- This is where a lot of "aha"-moments happen so take your time and prepare well

# Questions regarding the exercises from your side?

Leave time and room to actively ask students if they understood the explanation and plan enough time to cover them

8. Sample Session

## 8.3. Learning Objectives

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# Learning Objectives

Formulate them as specifically as possible and as close to the material as you can, ideally in checklist form, e.g.

## **Learning Objectives**

- Understand Hashing, its components, and related concepts:
  - Prehashing
  - Collision
  - Simple Uniform Hashing
  - Uniform Hashing
  - Open Addressing
  - Closed Hashing
  - Chaining
  
- Be able to apply simple *hashing methods* by hand



8. Sample Session

## 8.4. Main Topics for the Session

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# Actual Material

- Cover the main material for the exercise session here
- Make sure you take your time for this section
- Always make time and room for questions

# Questions?

Tip: Have empty slides like this one for notes and more space to discuss things and draw them out!

8. Sample Session

## 8.5. Tips for next Exercises

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# Tips for next exercises

When time allows or the upcoming exercises are very difficult consider having a look at the exercises ahead of the session and give your students some pointers

## **Task "Taskname"**

- Consider using `std::unique_ptr<Node>` for a safer implementation
- Warning: Subtask b) is very difficult, have a look at this week's lecture material for this one!

8. Sample Session

## 8.6. Old Exam Questions

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# Old Exam Questions

- If time allows, and you had enough time to prepare, consider having a look at old exam questions that fit the current session's topics
- Students love solving old exam questions in class

8. Sample Session

## 8.7. Outro

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# General Questions?

This is where you ask for any remaining questions for a last time

## 9. Questions & Answers

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# Questions & Answers

Any questions from your side?

That's all!

Thank you all and have fun being a TA!