



Instructions, Rules and Tips for the Exam

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Presentation: don'ts

- **Do not make slides full of text. People cannot read and listen at the same time, and if you fill in your slides with text the audience will read it instead of listening to you. And worst, you will probably end up reading it! The audience will lose interest completely.**
- **Do not use a small font. The font size should be at least 35 pt. If you need a smaller font because otherwise you can't fit enough things in the slide...you are surely writing too much text!**
- **Do not use distracting elements. A colored background (or, even worse, a picture!) are distracting.**
- **Do not insert silly cliparts. They are distracting as well. You should insert a lot of figures in your slides, but they have to be meaningful!**

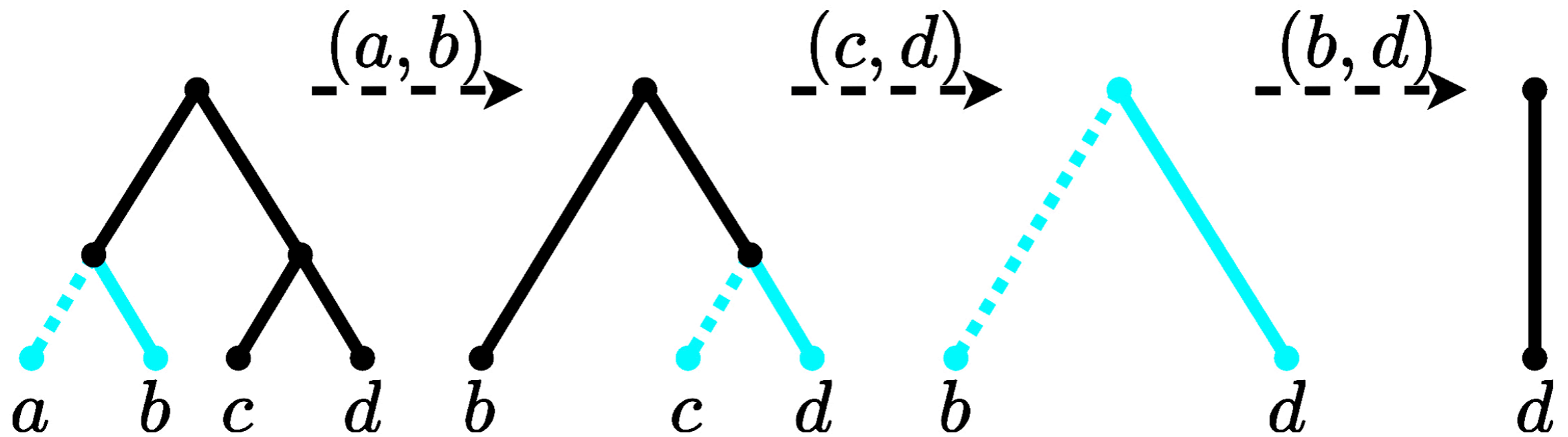


Presentation: dos

Neutral background

Large font

Meaningful figures!



Booking the Exam

The booking system will show three dates between June and July for the exam of Algorithmic Design. However, **these will not necessarily be the dates in which you will give the exam.** Instead, I will propose a larger list of dates in which you will be able to give the exam. A small group of students will give the exam in each of the possible days. **To give the exam you must:**

1. **Book in the official system** the closest date which is before the day in which you want to give the exam.
2. **Write your name** on your preferred date **in the shared document.** Each date admits a minimum and a maximum number of students. It holds the rule of "first come, first served".
3. If you signed up for a date but you no longer want to give the exam that day, let me know as soon as possible. **If you don't show up without telling me first, you will have to wait for at least 2 weeks** before being allowed to give the exam again.

Choosing the Paper

There are three options for choosing a paper for your presentation.

- 1. Choose a paper from the list.** You find the papers I propose both in the Files section on Teams and on Moodle. If you choose one of these papers, you must write your name beside it in the shared Excel file. It holds the rule of "first come, first served". If your favourite paper has already been chosen by someone else, write me and I will find another one on a similar topic.
- 2. Propose a paper yourself.** In this case, you should send the paper to me to ask for approval before preparing your presentation.
- 3. Ask me to find a paper on your favourite topic** among the ones taught in the course.

Presentation Format

- Your presentation must **last between 15 and 20 minutes**. Longer presentations will be penalised with lower grades.
- You have to prepare some slides with any tool you like (Powerpoint, Google Presentations, Keynote, Beamer...). On the exam day, you will either use your computer to display them or mine. If you use mine, you should send me the slides via email. In this case, **the slides must be in .pdf format**.

Tips for the Presentation

- **Do not include long formal proofs** in your presentation, but justify the theoretical results with either proof sketches or (whenever possible) figures and examples. Ask yourself: what is the main idea of this proof? Does it follow from another result? What are the key observations? Is there an example on which it is easy to see why the result is intuitively true? **Only include the main ideas and/or figures and examples.**
- **Do not write a lot of text** on your slides. Make figures whenever possible and relevant, and give definitions/explain concepts using the figures. A good online tool for making figures is **diagrams.net**: you can link it to your drive and you can write LaTeX formulas on the figures enabling mathematical typesetting in the tool. If you are good at drawing, producing figures with a tablet is another good option.
- Spend enough time in the beginning to **properly introduce the problem** and motivate it. Give all the appropriate definitions and do not assume the audience is familiar with the problem. This introduction can last **around 5 minutes.**

Tips for the Presentation

- **Do not make more than one slide per minute.** Your presentation should consist of no more than 15/20 slides.
- **Do not include too many results!** 15/20 minutes are generally not enough to present the whole content of a paper. Make sure you select the most relevant results of the article and only focus on those.
- **Do not include results you did not fully understand.** If something is unclear in the paper, first try to look it up in the internet (e.g. on Wikipedia, textbooks, lecture notes from other universities...) and if it is still not clear please ask me for explanation. If you include results you cannot explain well I will ask you to clarify them, and wrong answers will lower your grade!
- **Prepare well!** If you fail the presentation part, you will have to prepare a new presentation (either on the same paper or on another one, depending on your preferences) and wait **at least two weeks** before giving the exam again.

Tips for the Oral Examination

After your presentation, if it was above the passing mark, I will test your theoretical knowledge with an oral examination (if the presentation is judged below the passing mark, you will be asked to rework it. In that case, you can choose whether trying again with the same paper or with a different one).

- **Make sure you can give precise definitions** for all the problems and objects seen in class! My first question will almost surely be to define something. A wrong definition would considerably lower your grade or even make you fail the exam.
- **Make sure you know how to write pseudocode.** I might ask you to describe some procedures through pseudocode. Minor mistakes in the pseudocode you write will have marginal impact on the grade, but you must be able to reason on it and possibly correct it on the fly.

Tips for the Oral Examination

- **Formal proofs are not required**, I will only ask you about proof sketches, that is, the main ideas used in the proofs. However, **you must be able to write correct statements** for the lemmas/theorems seen in class.
- **You must be able to provide examples** when required.
- **You will not be asked to solve proper exercises** during the exam. However, **you may be asked to simulate the execution of some algorithms** on a given input. For example, I may ask you to show some steps of a sorting algorithm on a given array, to visit a graph according to some algorithm, to draw the suffix tree for a string... So **make sure you know how to execute the algorithms with pen and paper!**

FAQs

Can I choose another article if I don't like the one I chose in the first place?

Yes, as long as you let me know it well before the exam.

Can multiple people choose the same article?

I would avoid this. If you are interested in an article that is already taken, tell me and I will find another one on the same topic.

Must the presentation include all the results in the paper?

No! Making a clear presentation of a subset of the results is much better than listing all of them without explaining them well. It is a good idea to identify the most important result(s) and only focus on them.

May I choose an article that is not in the list?

Yes, as long as it is related to the topics of the course. Articles that are not in the list must be explicitly approved by me, so ask me before preparing your presentation!

FAQs

How long should the presentation be?

It should last between 15 and 20 minutes. Longer presentations will be penalised, so make sure you stick to this rule. A rule of the thumb is that you should not exceed 18/20 slides.

If I fail the presentation part, do I have to change paper for the next attempt?

Not necessarily, this is up to you. You can either improve your presentation on the same paper or change subject and prepare a new presentation.

If I pass the presentation part and I fail the oral part, do I have to give the presentation again the next time?

Yes, but you can use the same presentation if you want.

If I fail the exam, can I try again immediately?

No, you will have to wait for at least two weeks before the next attempt.

FAQs

Do I have to wait for two weeks to try again if I refuse a positive mark?

No, in this case you can fix a new date without any constraints.

During the oral examination, will I be required to solve exercises?

No, but you might be asked to show the execution of an algorithm on some example using pen and paper.

During the oral examination, will I be required to write pseudocode?

Yes, I might ask you to write short blocks of pseudocode, so make sure you understand how to write it and memorise the procedures of the main algorithms!

What if I followed the course last year?

Then you can choose whether giving the oral examination on the last year's program or on this year's program.