Organization
Course Goals

Primary goals:

- Learn how to write a scientific paper
- Learn how to give a scientific talk

Secondary goals:

- Practice to read scientific papers
- Understand modern cloud database system architectures
- Have interesting discussions with your peers
Deliverables

During the course each of you will create:

- An preliminary abstract that summarizes your papers topic and focus (∼1 page)
- A research paper draft (5-8 pages + references)
- 2 peer reviews for your fellow students (∼1 page each)
- A research paper (5-8 pages + references)
- A pre-session protocol that shows your preparation for the presentation. (∼1 page)
- A presentation (13-15 minutes)
- Meaningful contribution to the panel discussion in your presentations session
Grading

Rough estimate of grading contributions:

- \( \approx 45\% \) Paper
- \( \approx 25\% \) Presentation
- \( \approx 10\% \) Preliminary abstract
- \( \approx 10\% \) Peer reviews
- \( \approx 10\% \) Pre-session protocol and panel discussion

This is subject to change!
Timeline

Preliminary timeline:

- Mo 15.04.2024 introduction lecture 01
- Mo 22.04.2024 introduction lecture 02 | submit topic preferences
- Mo 29.04.2024 introduction lecture 03
- Mo 06.05.2024 "| submit preliminary abstract
- Mo 13.05.2024 "
- Mo 20.05.2024 Pfingstferien
- Mo 27.05.2024 "
- Mo 03.06.2024 "| submit paper draft
- Mo 10.06.2024 presentation session 01
- Mo 17.06.2024 presentation session 02 | submit peer reviews
- Mo 24.06.2024 presentation session 03
- Mo 01.07.2024 presentation session 04
- Mo 08.07.2024 presentation session 05
- Mo 15.07.2024 presentation session 06 | submit final paper

- Attendance to all sessions in presence is mandatory
Contact

- Website with slides: http://db.in.tum.de/teaching/ss24/seminarModernDatabaseSystems
- Gitlab with topics and schedule: https://gitlab.db.in.tum.de/Rieger/mdbs24
- Join our Mattermost Team MDBS24
- Please ask questions in the Discussion Channel
- Tobias Götz: @tgoetz
- Maximilian Rieger: @rieger
Requirements for Deliverables

- The following slides cover our criteria for the individual deliverables.
- You may use them as a reference when starting to work on each piece.
Paper Requirements (1) Structure

You will get a topic assigned. We expect you to follow this structure:

- **Abstract**: Summarize all contents and results of your paper.
- **Introduction**: Show the relevance of the problem and where it occurs. List what your paper addresses.
- **Background**: Explain required previous knowledge. (optional)
- **Main Part**: Describe the core ideas, methods, and solutions of your topic. This might include more than one section.
- **Related Work**: Find relevant work on the same and similar topics. What has been done before? What has been built on top of this later? Describe how your presented method differs from these others.
- **Research Idea**: Describe an interesting path for further research on this topic. Maybe for your own thesis?
- **Conclusion**: Briefly recap the contents and value of your paper. Show the impact of your presented method.

Try to add value to your work. There should be a reason to read your paper instead of the original one.
Furthermore, the following points are important for your paper:

- **No Plagiarism**: Write the paper on your own. If we notice that your paper includes any text you did not understand or find long sections that just paraphrase sources you will not pass this course.

- **Structure**: Choose one goal for the content of your paper. All parts of your text should contribute to that goal. Possible goals might be:
  - Show that problem XY should be approached with solution AB.
  - Give an overview of different approaches to problem XY.
  - Explain how system XY works and show the advantages, disadvantages, and use-cases.

- **Language**: Use good scientific writing style. Write precise, concise, clear, and uncomplicated.
Furthermore, the following points are important for your paper:

- **References**: Show your work on literature review by citing relevant sources. Adhere to citation guidelines.

- **Figures**: Your paper needs to include at least one figure that actually enriches the paper. Good are visualizations explaining algorithms, examples, architecture overviews. You may re-use external figures (although, creating your own can be very useful). Caption text of all figures has to be your own.

- **Length**: Stay within a page count of 5-8 pages. References do not count.

- **Format**: Your paper needs to be in the VLDB format. If there is any visual difference to this template, we will deduct points. You have to submit as PDF.
Paper Draft Requirements

Submit an earlier version of your final paper for the peer review process.

- **Content**: This should be as close to your final submission as possible. It should be possible for your peers to give you meaningful feedback in their reviews.
- **Length**: The same as the final paper.
- **Format**: The same as the final paper.
Peer Review Requirements

You will read two of your peers papers and write reviews for them. We will follow a single-blind review process: Reviewers stay anonymous.

- **Content**: Pay attention to the following points:
  - **Goal**: Is the goal of the text clear?
  - **Sections**: Does every section serve its purpose?
  - **Structure**: Is there a coherent narrative?
  - **Argumentation**: Can you follow the points of the paper?
  - **Language**: How can the writing quality be improved?
  - **Research Idea**: Comment on what you think about the idea.
  - **Simple Mistakes**: Point out simple improvements such as typos.
  - **Strong Points**: Name at least two good things about the paper.

- **Tone**: Be constructive and friendly. Your job is to help your peer to improve their paper.

- **Length**: Stay within 150-300 words. Be concise!

- **Format**: Submit as PDF.

- **Effort**: Should take you no longer than two hours.
Preliminary Abstract Requirements

Two weeks after you receive your topic you have to submit an preliminary abstract.

- **Content**: Show your plan for the final paper:
  - **Topic**: Summarize the topic concisely. What method / system / solution do you present?
  - **Motivation**: Show the relevance of the problem and where it occurs.
  - **Main Part**: What will you focus on in your paper?
  - **Goal**: What will the goal of your final paper be?
  - **Related Work**: Cite relevant related literature.

- **Length**: Stay within 150-400 words. References do not count.

- **Format**: The same as the final paper.

Show that you understood your topic and know how to work on your paper.
Presentation Requirements

You should present key points of your topic:

- **Content**: Some key points of your topic / paper.
- **Audience**: Optimize your presentation for your peers.
- **Scope**: It might be necessary to limit the content of your presentation. Make sure the audience can learn something new. It is not necessary to include everything.
- **Non-Goal**: Do not try to impress the audience by showing how smart you are or how much you know.
- **Format**: Submit as PDF. You will present using our laptop.
- **Time**: Stay within 13-15 minutes. We will cut you off after 16 min!
Panel Discussion Requirements

At the end of each session we will have a panel discussion where all presenters will come to the front. You will discuss together and with the audience.

• **Content:** You are free to discuss what you want. Some ideas:
  • How do different topics relate to each other?
  • Which solution would you choose for which use-cases?
  • Ideas for further improvements?
  • Ideas for further research?
  • Connection to previous weeks.
  • Crazy ideas for new systems.

• **Moderation:** The presenters are responsible for the moderation.

• **Group:** We will consider the discussion as a group work of all presenters.

• **Form:** Discuss as natural as possible. Do not read prepared text. Interact.

• **Time:** About 25 minutes.
Pre-Session Protocol Requirements

Find all peers that present in your session. Meet once before your session and practice your presentations together. Prepare talking points for the panel discussion.

- **Content:**
  - **Topics:** For each topic, how does it relate to your topic? (1-2 bullet points each)
  - **Panel Discussion Points:** Possible points to discuss in the sessions. (3-5 bullet points)
  - **Presentation Practice:** What will you change after presenting in front of your peers? (1-2 bullet points)
  - **Presentation Feedback:** What will you change after hearing feedback of your peers? (1-2 bullet points)
  - **Other Presentations:** What did you observe that can be improved? Do not mention names. (1-2 bullet points)

- **Length:** 7-17 bullet points.
- **Format:** Submit as PDF.
Deadlines

Deadlines for everyone:

- Topic Preferences: 22.04.2024
- Preliminary Abstract: 06.05.2024
- Paper Draft: 03.06.2024
- Peer Reviews: 17.06.2024
- Final Paper: 15.07.2024

Deadlines based on your presentation date:

- Pre-Session Protocol: 2 days before your presentation.
- Presentation Slides: 1 day before your presentation.

All deadlines are at 23:59.
Supervision

- Ask organizational questions in the discussion channel on mattermost.
- Ask short questions about your topic and work as direct message on mattermost.
- Meet your supervisor in person and discuss:
  - Once before the submission of your draft.
  - Once before your presentation.
- Usually personal meetings will improve your final grade by 1.0 (e.g. 2.0 -> 1.0).
The structure of a presentation session:

- 2-3 Presentations per session for 60 min.
  - Present for 13-15 min. (I will stand up after 15, cut you off after 16 min)
  - Discussion for questions regarding the presentation or topic for 2-4 min.

- Short break for 5 min.

- Panel discussion for 25 min.
  - Everybody is welcome to participate in the discussion.
  - Questions regarding individual presentations are allowed.
  - Presenters are responsible to maintain an interesting discussion.
Next Steps

- Make sure you are in the mattermost team Mattermost Team MDBS24
- Find your preferred topics on gitlab: https://gitlab.db.in.tum.de/Rieger/mdbs24
- Rank your top three favorite topics and send them to @rieger
  Your message should use the topic short names and look like this:
  
  My topic preferences:
  1: EarlyQO
  2: Anyblob
  3: ClientServer

- Spend enough time to find a topic you really want to work on!