University of Illinois, Urbana Champaign
CS 598DK Special Topics in Cryptography

LECTURE

10

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Scribe: Ima Student
Date: August 28, 2019

Instructions for Preparing Scribe Notes

Using the provided `\makeheader` command, customize the above header with your name, lecture date, lecture number, and lecture title. For example, the above header was generated by typing `\makeheader{Ima Student}{August 28, 2019}{10}{Instructions for Preparing Scribe Notes}`. Your scribe notes should start with a high-level description of the lecture, its goal and techniques, and how it fits in the broader context of the course. In particular, explain its relation to the previous lecture if appropriate. This high-level description should be two or three solid paragraphs in length.

10.1 Organization

Lecture proper should be presented in a sequence of sections. For example, you might choose to present background or preparatory work in one section, the main results in another section, and any generalizations or conclusions in a third section. Do *not* use any subdivisions within sections (subsections, subsubsections, etc.). Use normal capitalization in section headings rather than initial caps.

10.2 Some do's

The single most important thing to keep in mind when preparing scribe notes is that they should be a self-contained record of the lecture. In particular, it is *entirely inadequate* to simply typeset the contents of the blackboard— this will be rewarded with a flat grade of 1 point. The lecture is much more than the contents of the blackboard; I do not just walk in the classroom and write on the blackboard for two hours. The lecture has a *soundtrack*, which supplies a motivation for the material, intuitive descriptions of the proofs, and answers to questions from the audience. This component of the lecture is vital to understanding the subject matter and should be prominently present in your scribe notes. Here are some other things to keep in mind.

- Always preface a formal statement (theorem, lemma, proposition) with a discussion of its purpose and a brief and intuitive outline of the proof.

FIGURE 10.1: A triangle and a circle.

- We all know from experience that a picture is worth a thousand words, so be generous with figures. See Figure **??** for an example usage of the figure environment.

- Write in complete sentences. Mathematical writing is not fundamentally different from any other form of expository prose. Take pride in your work.

- As with any writing, make sure to spell check your scribe notes.

- Be sure to include all bibliographic references, like so [**?**]. You will find all the needed references at the end of the corresponding chapter in the textbook. The bibliography must be incorporated using BibTex. When finished, please send me the following files by email: your LaTeX source file (`.tex`), your bibliography file (`.bib`) if you used one, any figures (ideally in `.pdf` format), and the resulting typeset document (`.pdf`). I prefer to receive a single ZIP archive rather than several individual attachments.

10.3   Some don'ts

Here are the most common pitfalls to watch out for.

- Copying or paraphrasing material from the textbook is emphatically *not* OK because it defeats the pedagogical purpose of scribe notes. What I am looking for is *your* personal perspective on the material. A good way to proceed is to master the material from the lecture and textbook, wait a day for it to sink in, and then typeset your scribe notes without consulting any sources. This approach brings out your personal take on the material and allows you to truly internalize it to a point when you yourself could teach it.

- You must not change the format of the scribe notes in any way, including font type, font size, pagination, section numbering, margins, or bibliography style.

- No content should spill over into the margins.

- You should not need to include any LaTeX packages in addition to those already included in the template file. One exception, if you want to be extra creative, is tikz-people (http://tex-talk.net/2016/11/tikz-people/).

10.4 Mathematical environments

For your convenience, the scribe note style file comes with the following mathematical environments predefined: theorem, lemma, corollary, proposition, fact, claim, definition, example, assumption, remark, conjecture, open problem, problem. The environments are illustrated below. Please limit yourself to these environments.

THEOREM 10.1. *Statement here*

LEMMA 10.2. *Statement here*

COROLLARY 10.3. *Statement here*

PROPOSITION 10.4. *Statement here*

FACT 10.5. *Statement here*

CLAIM 10.6. *Statement here*

DEFINITION 10.7. Statement here

EXAMPLE 10.8. Statement here

ASSUMPTION 10.9. Statement here

REMARK 10.10. Statement here

CONJECTURE 10.11. Statement here

OPEN PROBLEM 10.12. Statement here

PROBLEM 10.13. Statement here

Note that LaTeX automatically numbers these environments within the lecture number (10 in this case). The same applies to the numbering of pages (this page being page 10-3), figures (Figure **??** above), and equations:

$$a = a_1 + a_2 + \cdots + a_n. \tag{10.1}$$

For proofs, use the provided `proof` environment, illustrated below.

Proof. Proof goes here. □

Acknowledgement

These scribe notes were prepared by editing a light modification of the template designed by Alexander Sherstov.