Overview. In this project, you and the members of your group will put together a paper and a presentation summarizing part of the material that we have covered in this course.

Purpose. The three main goals of this project are for you to:

- review the material that we have covered this semester,
- demonstrate an understanding of your selected part of that material,
- practice communicating mathematics, both in writing and by presenting to an audience.

Instructions. In class, you will divide yourselves into six groups, one for each chapter of the text that we have covered (Chapter 1-6). We will then decide which group will summarize and present which chapters. We will also decide which day each group will present in class. The entire group will receive a single grade for the project, except in the unusual circumstance that there is evidence that certain group members contributed more or less than their fair shares.

Your presentation will be for the entire class period (50 minutes) on the assigned day and may be delivered by any number of people in your group. Your goal in the presentation is to give a concise summary of the material in your assigned chapter. This can include theorem statements, worked examples, illustrations, perspectives, etc., and in some cases proofs of theorems (if the proofs themselves are among the most important content in the chapter).

In addition to your presentation, you will submit a (word-processed) paper electronically by the beginning of class on Wednesday, May 8. The contents of your paper should be essentially the same as the content of your presentation, except that in the presentation you might say but not write some things that will be written down in the paper. Note that this requires close communication between those presenting and those writing the paper.

You do not need to submit the slides (if you have any) for your presentation. But you should email me your paper in pdf (not Word) format. The file name for the paper should be yourCascadeLogin-project

There should be no spaces or capital letters in your file name.

Your paper should be clearly written and in the style of a mathematical expository paper (or textbook), so it should be mostly prose (with pictures, diagrams, tables, and equations as need be). At the end of the semester, I will join all of the papers and email them to everyone in the class, so you should think of yourself and your classmates as the intended audience for the paper (and presentation). The goal is that for years to come, you will have a nice, short document that you can consult any time you are wondering what you covered in this class.

There is no required length for the paper. It should be long enough to serve its purpose and no longer.
Grading. You will be graded on the appropriateness of the material you select and the clarity of your written and presented summaries. Clarity includes things like proper written grammar and minimization of the number of typos, but it also includes organization and general comprehensibility of your exposition.

For the selection of material, I would encourage you to ask me about your selection of material to see if you are on the right track or if I can offer some suggestions on it. There is no exact single set of material that you must select, so it's okay if your selection differs to some extent from what I might select. But but if your paper or presentation is lacking in any *fundamental* topics, that will affect your grade adversely.

Keep in mind the goal that you are to demonstrate an understanding of the material that you are presenting. Such an understanding can be shown by selecting your topics well and by explaining them clearly and in your own words. As a rather extreme example, scanning the entire chapter from the book as your paper and reading it in your presentation would demonstrate no understanding of the material whatsoever (and would result in a failing grade for the project). On the other hand, working through your own examples or though problems that are not done in the book is an excellent way to show your understanding of the material.

The idea behind the presentations is that the entire class gets an overview of the course. As such, attendance not only to your presentation but also to those of others is important. If you have a good reason for an absence from a presentation and you arrange it with me in advance, that will not count against your grade. However, absence from any group’s presentation without a valid reason may affect your individual grade on this project (although not the grades of the others in your group) adversely; we will discuss this policy further in class.