CS 466 Fall 2002
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Frequent errors

Please use this list as a guide to the symbols that appear circled in your project. I have grouped the comments in a few rough categories. The mark breakdown appears on the other sheet; many of the comments here did not change your mark, but appear to give you feedback on technical writing.

Content

C1. Choose the level of detail of presentation very carefully. If you have included details of a proof or of an algorithm, make sure there is a good reason for doing so (you might consider making sure that your reader understands the reason as well). Be sure to highlight the main ideas, similarities, and differences. If you have decided to omit a proof or an algorithm, consider adding a sentence or two outlining the techniques used. Often it is reasonable to include certain key proofs and algorithms and to suppress others.

C2. Where possible, go to the original sources rather than include high level discussions from other surveys. There are two reasons for this suggestion. One is that the survey you read might omit details that have relevance for your project. The other is that part of the purpose of the project is for you to learn to read a variety of styles and to form them into a coherent context of your own devising. Using someone else's interpretation and format robs you of this exercise.

Style

S1. You should avoid repeating your own sentences (e.g. in both the abstract and the introduction or in both the introduction and in a subsequent section).

S2. Terms that are not part of general algorithmic knowledge should be defined ("general knowledge" depends on the target audience; here terms about subfields should be defined, not terms concerning algorithm analysis). Definitions of terms should appear before the terms are used. If an informal discussion is needed (e.g. in an abstract), consider using a nontechnical description instead of a formal term, or include an intuitive idea of what the formal term means.

S3. It is best not to start a sentence with a symbol. Thus, you might write "The parameter k is at least ..." instead of "k is at least ...".

S4. A paragraph should contain a logically connected sequence of sentences supporting one main idea, starting with a sentence that introduces the idea. Starting a paragraph with a definition tends to prevent the existence of a introductory sentence. Beware of paragraphs starting with "Let". I have used the paragraph symbol to mark locations where paragraphs should start.

S5. Your paragraphs should be connected with each other by sentences that show the flow of ideas. You can view your task as telling a story. The reader needs to be informed of the connections between ideas and needs to be motivated to read each section.

S6. A section heading or an enumerated list is not an excuse for omitting introductory and connecting sentences.

S7. Introductory and connnecting sentences should do more than state "Now we will give some definitions."; use them as opportunities to inform the reader of the importances of what you are asking them to read.

S8. Be careful to not let your language become too chatty or too informal. This includes avoiding the use of "etc." where possible.

S9. It is common to label references with numeric or alphabetic keys in square brackets, and then to use these in the text for citations. The text should be readable without the citations, hence they should not be used in place of nouns.

S10. Depending on the context, it is sometimes preferable to write out small numbers as words.

English

E1. Even if English is your first language, check carefully to make sure that your subjects and verbs always agree (plural with plural, singular with singular).

E2. Be careful not to overuse the word "some". Often a more precise word is more appropriate.

E3. When you use "they" or "it", be aware that you are refering back to the subject of the previous sentence. Thus, citing a paper and then writing "they" does not immediately imply that "they" = "coauthors of the paper". Similarly, the phrase "this problem" will refer to the most recent problem mentioned, not necessarily the subject of the paper.

E4. You may refer to "maximum cut" or "the maximum cut problem", but not "maximum cut problem" (without "the"). In constrast, "Problem B" appears without "the".