

## Lecture 6 Examples Citations References

## Examples

One of the most important parts of a paper.

- good examples can make up for other sins
- readers can often induce definitions, algorithms, proofs from good examples
- examples are a way for the reader to fix concepts in his or her mind

I have seldom seen a paper with too many examples.

Will look at different kinds of examples.

## Motivating Example

Comes before the formal description of a term, algorithm, method to “set the stage.”

- don't use notation that is
- the example should be easier to understand than

Can also illustrate the problem you are trying to solve.

## Illustrative Example

Demonstrates a concept, method, theorem that has been introduced previously.

- keep it close to the definition
- consider putting it between theorem and proof
- do a substantive, not trivial, case

## Illustrative Example 2

- If there is a possibility of misinterpretation by the reader, choose an example that will disambiguate.
- If elements (quantities, entities) can be different in the definition, probably should be distinct in the example

$$\frac{\log_c b}{\log_c a} = \log_a b$$

- “non-example” helps, too—
- Clarifying example is similar—

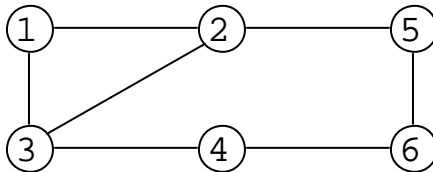
## World's Worst Example

*Definition.* Consider a database containing the relations  $R_1, R_2, \dots, R_k$ . Let  $R(A_1, A_2, \dots, A_n)$  be one of these relations, or the natural join of any subset of these relations, and let  $R^*$  be the transitive closure of relation  $R$ . Then if  $(a_1, a_2, \dots, a_n)R^*(a_1, a_2, \dots, a_n)$  for any tuple  $(a_1, a_2, \dots, a_n)$  of  $R$ , then  $R$  is said to be a cyclic relation and the database is called a cyclic database.

Example 8.1. The relation

## Example Example

Definition: A simple path in an undirected graph is a sequence  $\langle v_1, v_2, \dots, v_k \rangle$  of vertices,  $k \geq 1$ , where  $(v_i, v_{i+1})$  is an edge for  $1 \leq i < k$ , and  $v_i \neq v_j$  if  $i \neq j$ .



## Running Example

A single example that is used several times throughout the text

- can be effective, since reader has less investment in time per concept illustrated
- can be hard to write as you go,

## “Pun” Examples

Avoid examples that come from the same domain as you are writing about

- a database for database schema information
- using a user interface tool to build the interface for
- a logic program for interpreting logic programs

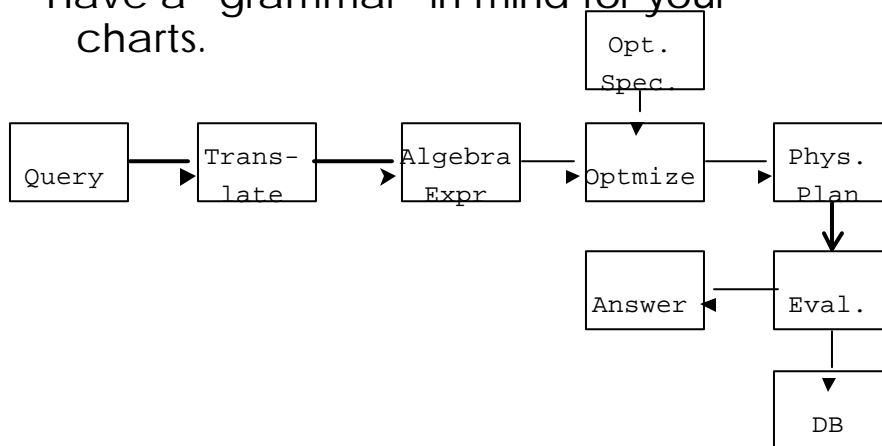
If you can find an example outside of computer science, great

Also, beware of tired examples

Though there can be “standard” examples

## Illustrations

Have a “grammar” in mind for your charts.



## Citations

What do you need to cite?

Typically, not common knowledge found in introductory texts—the reader is unlikely to be unfamiliar with the material or mistake it for your own.

But if material might be unknown, or from an obscure source, or should be credited as the work of another,

## Citation Style

Van Leunen recommends in-line citation in brackets

[14] [AHU74]

Treat it as parenthetical material that is not a sentence (nor a word).

Aho and Ullman give a more general formulation of the algorithm. [15]

The reach-back algorithm in [15] is a more general formulation.

Leave a space before it.

algorithm[15].

## Authors

Usually a good idea to mention the authors

Last name usually enough

First name or initial to disambiguate

Dr., Prof. is not used

Sethi [16] proves the converse is false.

P. Fischer [17] proved generalized tic-tac-toe is NP-Hard; M. Fischer [18] showed it is actually NP-complete.

The consistency of the axioms was shown by Dr. Sahni [19].

## Frequency and Location

Generally don't need to re-cite in the same paragraph.

Reps and Horwitz [20] present the design of a structured editor.

They also observe that sometimes non-structured editing is easier [20].

Not a single right place for a citation, but are wrong places.

Morris and Pratt present an algorithm for string matching, which has expected sublinear behavior.

## Groups of Papers and Authors

If the text says the same thing about a list of citations, group the citations.

Miller [23], Rabin and Karp [24], and Ng [25] have analyzed this randomized algorithm.

If you use *et al.*, only list one author.

Aho, Tarjan, *et al.* [12] proved the conjecture is false.

No comma before *et.*

Group and order citations.

[17][27]

[27, 17]

## References

Goals: Make clear what the source is, make it reasonably easy for the reader to obtain it.

Seems like each journal or organization has its own style.

I will talk about van Leunen's style, with a couple of suggested changes.

Basic parts

I. Author.

II. Title.

III. Bibliographic Info.

## Examples

### Book

Marla Scott.  
*Effective Programming in C*.  
Addison-Wesley, 1992.

### Journal paper

Craig Chambers and Guy T. Leavens.  
Type checking and modules for  
multimethods.  
*ACM Transactions on Programming  
Languages and Systems* 17(6), pages  
805-843, November 1995.

## Examples 2

### Proceedings paper

S. Heiler and A. Rosenthal.  
G-Whiz, a visual interface for the  
functional model with recursion.  
*Proceedings of the XI International  
Conference on Very Large  
Databases*, pages 11-23, Stockholm,  
Sweden, August 1985.

## Examples 3

### Article in collection

Umeshwar Dayal and John M. Smith.

PROBE: A knowledge-oriented database system.

In M. C. Brodie and J. Mylopoulos, editors, *On Knowledge Based Management Systems*, pages 81-93, Springer-Verlag, New York, 1986.

## Getting the Right Information

Get information from  
the title page of a book

the first page of an article

### Paper titles

Make sure that proper names get capitalized

Finding hamiltonian circuits using pascal.

Usually capitalize after a colon, unless the subtitle only describes what kind of paper.

The stable-marriage problem: a parallel solution.

The stable-marriage problem: an informal survey.

### Web Pages

Problem—lack of author, title or date

Problem—transitory nature

Robert Burns.  
Spiders on the web.  
URL:<[http://www.dead-poets.com/  
arachnid.html](http://www.dead-poets.com/arachnid.html)>, revised 12 December  
1886.

### Web Pages 2

Another example

University of Chicago, Department of  
Economics.

Our favorite Nobel prizes.

URL:<<http://www.econ.uc.edu/nobel>>,  
version of 13 January 1999.

Check out

<[http://www.cas.usf.edu/english/  
walker/mla.html](http://www.cas.usf.edu/english/walker/mla.html)>

<[http://www.columbia.edu/cu/cup/cgos/  
idx\\_basic.html](http://www.columbia.edu/cu/cup/cgos/idx_basic.html)>

**Manuals**

Cite a manual as a book, with company as author if no person listed.

MassStore, Inc.

*DiscPac 2000 Installation Guide.*

2400 Briarcliff Road, Gary, Indiana  
50304, July 1988.