

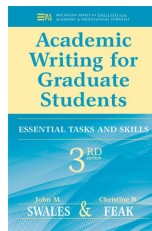
English and LaTeX—Writing Tips

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This slide is is modified by based upon the original slide by Ricardo Terra (rtterrabh@gmail.com). His generosity in sharing the \LaTeX source files is very much appreciated.

John Swales and Christine B. Feak. *Academic writing for graduate students: essential tasks and skills*. 3rd ed. University of Michigan Press/ELT, 2012



Tips

He hasn't nothing to do.

*He **hasn't nothing** to do.*

Tip #1

*He **hasn't nothing** to do.*

*He **has nothing** to do. (or)*

*He **hasn't anything** to do.*

*He **hasn't nothing** to do.*

*He **has nothing** to do. (or)*

*He **hasn't anything** to do.*

He isn't neither tall nor handsome.

*He **hasn't nothing** to do.*

*He **has nothing** to do. (or)*

*He **hasn't anything** to do.*

*He **isn't neither** tall **nor** handsome.*

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*He **hasn't** **nothing** to do.*

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*He **isn't** **either** tall **or** handsome.*

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There isn't no way to validate such results.

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*There **isn't** **no** way to validate such results.*

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He *has nothing* to do. (or)

He *hasn't anything* to do.

He *isn't neither* tall *nor* handsome.

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Tip #1: Beware Double Negative (4)

- Double negative is positive!

In Table IV, 14 out of 32 recommendations (e.g. D18, D20, D21, A4, etc) include a suggestion to move methods or classes to more suitable modules i.e., better modules.

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Tip #2

*In Table IV, 14 out of 32 recommendations (**e.g.** D18, D20, D21, A4, **etc**) include a suggestion to move methods or classes to more suitable modules **i.e.**, better modules.*

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Tip #2: Using connectors properly (etc1, 16, 11)

- Using correctly: “e.g.”, “i.e.”, and “etc.”

Class A depends on classes C_1 , C_2 and C_n .

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Tomorrow, I will play guitar, go shopping or die.

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She likes cooking, and jogging.

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Tomorrow, I will play guitar, go shopping or die.

Tomorrow, I will play guitar, go shopping, or die.

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Tip #3

Class A depends on classes C_1 , C_2 and C_n .

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Tomorrow, I will play guitar, go shopping or die.

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She likes cooking, and jogging.

She likes cooking and jogging.

Tip #3: Comma in series (16, 14)

- Using comma between all the items in a series, including the last two
- This comma is known by *serial comma*

We come up with such syntactic sugar to make the development task easier.

We *come up with* such syntactic sugar to *make* the development task *easier*.

We *come up with* such syntactic sugar to *make* the development task *easier*.

We *designed* such syntactic sugar to *facilitate* the development task.

Tip #4

We *come up with* such syntactic sugar to *make* the development task *easier*.

We *designed* such syntactic sugar to *facilitate* the development task.

Tip #4: Avoid phrasal verbs (10)

- Why? Because it is informal!
- See more phrasal verbs in the next slide

Our recommendations were validated by the senior architect responsible for the architecture.

*Our recommendations **were validated by** the senior architect responsible for the architecture.*

Tip #5

*Our recommendations **were validated by** the senior architect responsible for the architecture.*

*The senior architect responsible for the architecture **validated** our recommendations.*

Tip #5

*Our recommendations **were validated by** the senior architect responsible for the architecture.*

*The senior architect responsible for the architecture **validated** our recommendations.*

Tip #5: Avoid passive voice (19, 12)

- Passive voice is not usual in English writing as it is in Portuguese
- Can I use sometimes? *Yes, you can*
- When? *The passive voice makes sense because the agent is relatively unimportant compared to the action itself and what is acted upon*
 - “Authorities *make* rules to be broken” \implies “Rules *are made* to be broken”
 - “Surgeons successfully *performed* a new experimental liver-transplant operation yesterday” \implies “A new experimental liver-transplant operation *was performed* successfully yesterday”

He is tall, but poor.

He is tall, but poor.

*He is tall, **but** poor.*

*He is tall **but** poor.*

He is tall, but poor.

He is tall but poor.

He is tall but his mom is short.

He is tall, but poor.

He is tall but poor.

He is tall but his mom is short.

He is tall, but poor.

He is tall but poor.

He is tall but his mom is short.

He is tall, but his mom is short.

*He is tall, **but** poor.*

*He is tall **but** poor.*

*He is tall **but** his mom is short.*

*He is tall, **but** his mom is short.*

Tip #6: Correct use of *but* (16)

- Use comma before *but* in order to connect two independent clauses
- Otherwise, do not use

For the first system – a 21 KLOC open-source strategic management system – we could indicate the correct refactoring recommendations for 75% of the detected violations.

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Tip #7

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Tip #7: Using dash properly (16)

- In English: *blablabla—something—blablabla*
- In Portuguese: *blablabla – algo – blablabla*

Furthermore, a detailed description of all architectural refactoring recommendations is available in a companion website¹.

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Tip #8

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Tip #8: Footnote markers (16)

- Mostly, after the whole sentence
- Sometimes in the middle of the sentence to avoid misunderstandings:
 - “The Lattix Dependency Manager (LDM) tool² provides a simple language to declare design rules that the target system implementation must follow (e.g., **A cannot—use B**) and visually represents the detected violations in a DSM.”

It's common to identify patterns they are following.

*It's common to identify patterns **they are** following.*

*It's common to identify patterns **they are** following.*

*It's common to identify patterns **they're** following.*

*It is common to identify patterns **they are** following.*

*It's common to identify patterns **they are** following.*

*It's common to identify patterns **they're** following.*

*It is common to identify patterns **they are** following.*

Tip #9: Contraction forms (16)

- Should I use or not? *It depends on the journal or conference you're submitting to*
- However, **never** mixed them up

I can not play soccer because I broke my leg.

*I **can not** play soccer because I broke my leg.*

*I **can not** play soccer because I broke my leg.*

*I **cannot** play soccer because I broke my leg.*

*I **can not** play soccer because I broke my leg.*

*I **cannot** play soccer because I broke my leg.*

Tip #10: Cannot or Can not? (7)

- *cannot* is the ordinary modern way of writing *can not*
- Both *cannot* and *can not* are acceptable spellings
 - but the first is much more usual
- In fact, you would use *can not* when the *not* forms part of another construction such as *not only*:
 - “He can not only sing but also dance.”

The approach cannot suggest recommendations.

*The approach **cannot** suggest recommendations.*

The approach cannot suggest recommendations.

The approach may not suggest recommendations. (possibility)

*The approach **cannot** suggest recommendations.*

*The approach **may not** suggest recommendations. (possibility)*

Tip #11: Can or May? (1)

- Use *may* for possibility
- Use *can* for ability

The formula must satisfy these criterion.

*The formula must satisfy these **crit**erion.*

*The formula must satisfy these **crit**erion.*

*The formula must satisfy these **crit**eria.*

*The formula must satisfy these **crit**erion.*

*The formula must satisfy these **crit**eria.*

Tip #12: Greek nouns? (15, 6)

- Ends with *on* in case of singular (e.g., *phenomenon*)
- Ends with *a* in case of plural (e.g., *phenomena*)

We report two case studies with ArchLint. In a first study, we applied the solution in an industrial-strength information system.

Tip #13

*We **report** two case studies with ArchLint. In a first study, we **applied** the solution in an industrial-strength information system.*

Tip #13

We *report* two case studies with ArchLint. In a first study, we *applied* the solution in an industrial-strength information system.

We *reported* two case studies with ArchLint. In a first study, we *applied* the solution in an industrial-strength information system.

Tip #13

We *report* two case studies with ArchLint. In a first study, we *applied* the solution in an industrial-strength information system.

We *reported* two case studies with ArchLint. In a first study, we *applied* the solution in an industrial-strength information system.

Tip #13: Parallelism (16)

- Keep the tense
- More examples:
 - *She likes cooking and to read novels.* \implies
She likes cooking and reading novels. (or)
She likes to cook and read novels.
- More important, sections *Related Work* and *Background* can be written in either *Simple Past* or *Present Perfect*, but **never** mix tenses up

The tool relies on search algorithms, like hill climbing and simulated annealing, to suggest six inheritance-related refactorings.

*The tool relies on search algorithms, **like** hill climbing and simulated annealing, to suggest six inheritance-related refactorings.*

Tip #14

*The tool relies on search algorithms, **like** hill climbing and simulated annealing, to suggest six inheritance-related refactorings.*

*The tool relies on search algorithms, **such as** hill climbing and simulated annealing, to suggest six inheritance-related refactorings.*

Tip #14

*The tool relies on search algorithms, **like** hill climbing and simulated annealing, to suggest six inheritance-related refactorings.*

*The tool relies on search algorithms, **such as** hill climbing and simulated annealing, to suggest six inheritance-related refactorings.*

Tip #14: Like or such as? (2, 13)

- *Like* says that what follows is intended as a frame of reference to indicate the group of things you're talking about but is itself not included in the group
- *Such as* means that what follows are examples of the things that are part of the group you're talking about
- More examples:
 - Chuck enjoys desserts such as brownies, cheesecakes, and macaroons
 - Chuck enjoys desserts like brownies, cheesecakes, and macaroons

Diamonds that are expensive often elicit forgiveness.

*Diamonds **that** are expensive often elicit forgiveness.*

*Diamonds **that** are expensive often elicit forgiveness.*

*Diamonds, **which** are expensive, often elicit forgiveness.*

*Diamonds **that** are expensive often elicit forgiveness.*

*Diamonds, **which** are expensive, often elicit forgiveness.*

Tip #15: That or which (16, 5, 21)

- *That* for a restrictive clause, i.e., it specifically restricts some other part of the sentence
- *Which* for a nonrestrictive clause, i.e., it can be left off without changing the meaning of the sentence
- More examples:
 - Our house that has a red door and green shutters needs painting.
 - Our house, which has a red door and green shutters, needs painting.

He doesn't need a car, because he lives downtown.

*He doesn't need a car, **because he lives downtown.***

He doesn't need a car, because he lives downtown.
He doesn't need a car because he lives downtown.

He doesn't need a car, because he lives downtown.

He doesn't need a car because he lives downtown.

Since the museum was closed she went to the shopping.

He doesn't need a car, because he lives downtown.

He doesn't need a car because he lives downtown.

Since the museum was closed she went to the shopping.

He doesn't need a car, because he lives downtown.

He doesn't need a car because he lives downtown.

Since the museum was closed she went to the shopping.

Since the museum was closed, she went to the shopping.

Tip #16

He doesn't need a car, because he lives downtown.

He doesn't need a car because he lives downtown.

Since the museum was closed she went to the shopping.

Since the museum was closed, she went to the shopping.

Tip #16: Because or since? (20, 3, 18)

- Conjunctions—such as because, as, since, while, and though—the dependent clause (the part beginning with the conjunction) can also come at the beginning of the sentence
- In this case (and ONLY in this case), a comma can be used to join the two clauses

Although lasagna and pizza are both popular dishes in the school cafeteria, most students prefer the later.

*Although lasagna and pizza are both popular dishes in the school cafeteria, most students prefer the **later**.*

*Although lasagna and pizza are both popular dishes in the school cafeteria, most students prefer the **later**.*
*Although lasagna and pizza are both popular dishes in the school cafeteria, most students prefer the **latter**.*

Tip #17

*Although lasagna and pizza are both popular dishes in the school cafeteria, most students prefer the **later**.*

*Although lasagna and pizza are both popular dishes in the school cafeteria, most students prefer the **latter**.*

Jill traveled to Aruba, Australia, and Paris, but her favorite vacation was the latter.

Tip #17

*Although lasagna and pizza are both popular dishes in the school cafeteria, most students prefer the **later**.*

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*Jill traveled to Aruba, Australia, and Paris, but her favorite vacation was the **latter**.*

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*Although lasagna and pizza are both popular dishes in the school cafeteria, most students prefer the **later**.*

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*Jill traveled to Aruba, Australia, and Paris, but her favorite vacation was the **latter**.*

*Jill traveled to Aruba, Australia, and Paris, but her favorite vacation was the **last**.*

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*Although lasagna and pizza are both popular dishes in the school cafeteria, most students prefer the **later**.*

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*Jill traveled to Aruba, Australia, and Paris, but her favorite vacation was the **latter**.*

*Jill traveled to Aruba, Australia, and Paris, but her favorite vacation was the **last**.*

Tip #17: Using former/latter (8)

- *Former and latter should only be used when comparing two items*
 - former = first
 - latter = last
- More examples:
 - John likes both dogs and cats, but he really prefers the former over the latter.

It was design a tool that implement our approach.

*It was **design** a tool that **implement** our approach.*

*It was **design** a tool that **implement** our approach.*

*It was **designed** a tool that **implements** our approach.*

*It was **design** a tool that **implement** our approach.*

*It was **designed** a tool that **implements** our approach.*

Section 1 describe our approach.

*It was **design** a tool that **implement** our approach.*

*It was **designed** a tool that **implements** our approach.*

*Section 1 **describe** our approach.*

*It was **design** a tool that **implement** our approach.*

*It was **designed** a tool that **implements** our approach.*

*Section 1 **describe** our approach.*

*Section 1 **describes** our approach.*

*It was **design** a tool that **implement** our approach.*

*It was **designed** a tool that **implements** our approach.*

*Section 1 **describe** our approach.*

*Section 1 **describes** our approach.*

It is showed in Figure 1.

*It was **design** a tool that **implement** our approach.*

*It was **designed** a tool that **implements** our approach.*

*Section 1 **describe** our approach.*

*Section 1 **describes** our approach.*

*It is **showed** in Figure 1.*

*It was **design** a tool that **implement** our approach.*

*It was **designed** a tool that **implements** our approach.*

*Section 1 **describe** our approach.*

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*It is **showed** in Figure 1.*

*It is **shown** in Figure 1.*

*It was **design** a tool that **implement** our approach.*

*It was **designed** a tool that **implements** our approach.*

*Section 1 **describe** our approach.*

*Section 1 **describes** our approach.*

*It is **showed** in Figure 1.*

*It is **shown** in Figure 1.*

We could got more information.

*It was **design** a tool that **implement** our approach.*

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*Section 1 **describe** our approach.*

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*It is **showed** in Figure 1.*

*It is **shown** in Figure 1.*

*We could **got** more information.*

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*It was **designed** a tool that **implements** our approach.*

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*Section 1 **describes** our approach.*

*It is **showed** in Figure 1.*

*It is **shown** in Figure 1.*

*We could **got** more information.*

*We could **get** more information.*

Tip #18

*It was **design** a tool that **implement** our approach.*

*It was **designed** a tool that **implements** our approach.*

*Section 1 **describe** our approach.*

*Section 1 **describes** our approach.*

*It is **showed** in Figure 1.*

*It is **shown** in Figure 1.*

*We could **got** more information.*

*We could **get** more information.*

Tip #18: Conjugation (9, 16)

- Pay attention to third-person singular, past participle, etc.

The heuristic #1 has found several violations.

The heuristic #1 has found several violations.

The heuristic #1 has found several violations.

Heuristic #1 has found several violations.

The heuristic #1 has found several violations.

Heuristic #1 has found several violations.

The results are illustrated in the Table 3.

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The heuristic #1 has found several violations.

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The results are illustrated in the Table 3.

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We rely on the function f to find duplicates.

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We rely on the function f to find duplicates.

The heuristic #1 has found several violations.

Heuristic #1 has found several violations.

The results are illustrated in *the* Table 3.

The results are illustrated in *Table* 3.

We rely on *the* function f to find duplicates.

We rely on *function* f to find duplicates. (or)

We rely on *the* f *function* to find duplicates.

The heuristic #1 has found several violations.

Heuristic #1 has found several violations.

The results are illustrated in the Table 3.

The results are illustrated in Table 3.

We rely on the function f to find duplicates.

We rely on function f to find duplicates. (or)

We rely on the f function to find duplicates.

*The class **ArrayList** represents a collection.*

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We rely on the function f to find duplicates.

We rely on function f to find duplicates. (or)

We rely on the f function to find duplicates.

*The class **ArrayList** represents a collection.*

*The **ArrayList** class represents a collection. (or)*

*Class **ArrayList** represents a collection.*

Tip #19

The heuristic #1 has found several violations.

Heuristic #1 has found several violations.

The results are illustrated in *the* Table 3.

The results are illustrated in *Table* 3.

We rely on *the* function f to find duplicates.

We rely on *function* f to find duplicates. (or)

We rely on *the* f *function* to find duplicates.

The **class** **ArrayList** represents a collection.

The **ArrayList** *class* represents a collection. (or)

Class **ArrayList** represents a collection.

Tip #19: Using the (16)

- You don't use *the* when the target object has an identifier

Some people like coffee, other prefer tea.

Some people like coffee, other prefer tea.

Some people like coffee, other prefer tea.

Some people like coffee, others prefer tea.

*Some people like coffee, **other** prefer tea.*

*Some people like coffee, **others** prefer tea.*

Besides this heuristic, we propose others heuristics.

*Some people like coffee, **other** prefer tea.*

*Some people like coffee, **others** prefer tea.*

*Besides this heuristic, we propose **others** heuristics.*

*Some people like coffee, **other** prefer tea.*

*Some people like coffee, **others** prefer tea.*

*Besides this heuristic, we propose **others** heuristics.*

*Besides this heuristic, we propose **other** heuristics.*

*Some people like coffee, **other** prefer tea.*

*Some people like coffee, **others** prefer tea.*

*Besides this heuristic, we propose **others** heuristics.*

*Besides this heuristic, we propose **other** heuristics.*

Tip #20: Other vs. Others (17)

● In short:

- *others* = *other* <noun>
- *other* for singular or plural

Our approach achieved a precision about 70%.

*Our approach achieved a precision **about** 70%.*

*Our approach achieved a precision **nearby** 70%.*

*Our approach achieved a precision **nearby** 70%.*

We evaluate using a lot of systems.

*Our approach achieved a precision **nearby** 70%.*

*We evaluate using **a lot of** systems.*

*Our approach achieved a precision **nearby** 70%.*

*We evaluate using **a considerable amount of** systems.*

*Our approach achieved a precision **nearby** 70%.*

*We evaluate using **a considerable amount of** systems.*

The function gets an instance from the factory.

*Our approach achieved a precision **nearby** 70%.*

*We evaluate using **a considerable amount of** systems.*

*The function **gets** an instance from the factory.*

*Our approach achieved a precision **nearby** 70%.*

*We evaluate using **a considerable amount of** systems.*

*The function **obtains** an instance from the factory.*

*Our approach achieved a precision **nearby** 70%.*

*We evaluate using **a considerable amount of** systems.*

*The function **obtains** an instance from the factory.*

We argue that four systems are enough.

*Our approach achieved a precision **nearby** 70%.*

*We evaluate using **a considerable amount of** systems.*

*The function **obtains** an instance from the factory.*

*We argue that four systems are **enough**.*

*Our approach achieved a precision **nearby** 70%.*

*We evaluate using **a considerable amount of** systems.*

*The function **obtains** an instance from the factory.*

*We argue that four systems are **sufficient**.*

*Our approach achieved a precision **nearby** 70%.*

*We evaluate using **a considerable amount of** systems.*

*The function **obtains** an instance from the factory.*

*We argue that four systems are **sufficient**.*

Violations happen when constraints are not respected.

Tip #21

*Our approach achieved a precision **nearby** 70%.*

*We evaluate using **a considerable amount of** systems.*

*The function **obtains** an instance from the factory.*

*We argue that four systems are **sufficient**.*

*Violations **happen** when constraints are not respected.*

Tip #21

*Our approach achieved a precision **nearby** 70%.*

*We evaluate using **a considerable amount of** systems.*

*The function **obtains** an instance from the factory.*

*We argue that four systems are **sufficient**.*

*Violations **occur** when constraints are not respected.*

Tip #21

*Our approach achieved a precision **nearby** 70%.*

*We evaluate using **a considerable amount of** systems.*

*The function **obtains** an instance from the factory.*

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Because of that, violations are not fixed as the system evolves.

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Tip #21: Better ways to write the same thing (16)

- Always prefer the more formal way

Our approach focuses in long methods.

*Our approach focuses **in** long methods.*

Our approach focuses in long methods.

Our approach focuses on long methods.

*Our approach focuses **in** long methods.*

*Our approach focuses **on** long methods.*

Tip #22: Very used sentences (16)

- rely on
- based on
- focus on
- with respect to (w.r.t.)

The function is formalized as follow:

*The function is formalized as **follow**:*

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Each coefficient has an unique property that differs it from others.

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Tip #23

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Tip #23: Common mistakes (16)

- Avoid it!

ArchLint requires two inputs on the system under analysis: a high-level component specification and the history of revisions.

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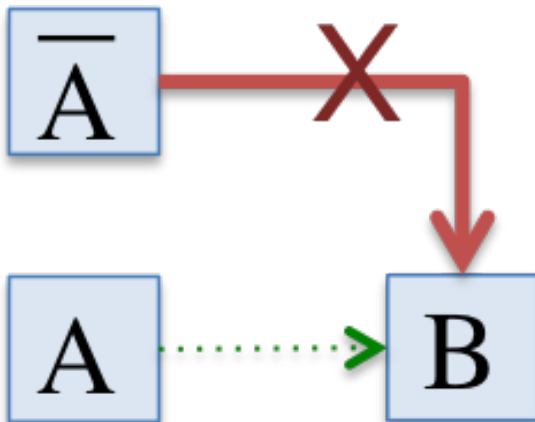
Tip #24: Make itemsets clear

- You can enumerate items throughout the text
 - However, it is better to make the items clear

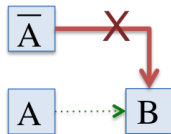
(oc) only can



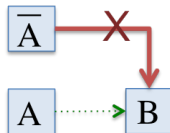
(oc) only can



(oc) only can



(oc) only can



Tip #25: Beware Sizes

- Figures, tables, etc. must have the appropriate size!
 - If small, “Do you want me to read?”
 - If big, “Do you need to take up space?”

LaTeX

It was suggested to move class B to module B.

LaTeX

It was suggested to move `class B` to `module B`.

LaTeX

It was suggested to move `class~B` to `module~B`.

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Tip #26: Avoid weird line breaks

- To avoid undesirable line breaks, use tilde:
 - *before* identifiers (e.g., `B` and `V`) and cite command (`\cite`)
 - *after* dots that are not the end of the sentence (e.g., `et al.` and `w.r.t.`)

BibTeX

```
@inproceedings{doi21.312.123,  
  author = {Jonathan Aldrich, Craig Chambers, David Notkin},  
  title = {ArchJava: connecting software architecture to implementation},  
  booktitle = {Proceedings of 22nd Int. Conference on Software Engineering},  
  year = {2002},  
  pages = {187--197},  
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@inproceedings{archjava,
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}
```

Tip #27: BibTeX

- Keep your BibTeX perfect
- Some guidelines:
 - Good organization (indentation), authors separated by “and”, standardization (e.g., booktitle), capitalization of the title (e.g., {Java}), etc.

We do **not** claim that our approach is complete. (emphasize)

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LaTeX: `\bf not` or `\textbf{not}`

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This type of violation is known as *divergence*. (a very relevant word)

Tip #28

We do **not** claim that our approach is complete. (emphasize)

LaTeX: `{\bf not}` or `\textbf{not}`

This type of violation is known as *divergence*. (a very relevant word)

LaTeX: `{\em divergence}` or `\textit{divergence}`

Tip #28

We do **not** claim that our approach is complete. (emphasize)

LaTeX: `{\bf not}` or `\textbf{not}`

This type of violation is known as *divergence*. (a very relevant word)

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Class **ArrayList** is supertype of **Collection**. (identifiers)

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Therefore, we consider target dependency (c, t) . (formulas)

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LaTeX: `(c, t)`

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LaTeX: `\$(c, t)\$`

Tip #28: Writing Patterns

- It is crucial to define a pattern when you write papers
- It can be any pattern, but **never** mixed them up

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Thanks!!!