

# The IBM Style Guide

Conventions for Writers and Editors

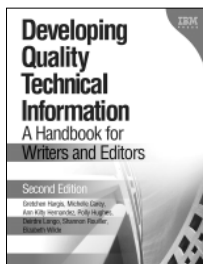
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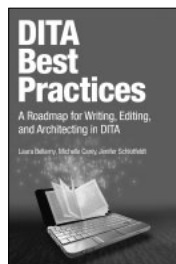
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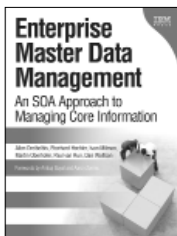
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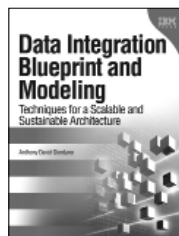
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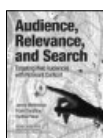
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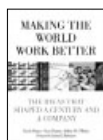
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# **The IBM Style Guide**

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# **The IBM Style Guide: Conventions for Writers and Editors**

**Francis DeRespinis, Peter Hayward, Jana Jenkins,  
Amy Laird, Leslie McDonald, Eric Radzinski**

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# Foreword

Why do we communicators become so attached to our style guides? We believe they are necessary to promote consistency, especially at a time when we hope to use topic-based content in numerous scenarios to improve our customers' experience. If the topics we write are not consistently presented, they will not fit together easily. If they are consistently presented, they will seem to speak with the same voice even though they are written by many individuals.

However, a style guide appears to have a power and influence beyond a simple desire for consistency. It seems to represent what we value about the art of technical writing at a time when we continue to widen the scope of whomever we call a technical communicator.

On the bright side, a well-informed style guide that represents a set of writing rules helps inform our discussions with people in the wide-ranging enterprise community. We want to encourage contributions to a body of useful information from people who are typically not well versed in the standards of writing for publication. Likely, many of the rules and recommendations that we record in our style guides are unknown among a general, albeit college-educated audience. For example, if our enterprise audience members use commas, they do so by hunch rather than by punctuation rules.

The requirement that we work across the enterprise with content contributors means that we will work with people who vaguely remember punctuation and grammar (even spelling) from elementary school. We no longer call it grammar school, which I almost wrote in the previous sentence, for good reason. There isn't much focus anymore on "grammar."

Having a style guide in our back pockets as editors and reviewers means that we needn't face arguments over writing style based on the strength of opinion. I recall some years ago being asked to work with a corporate attorney who was a very poor writer. The request came from the CEO for whom the attorney worked. When I entered the attorney's office, the air bristled with tension around the coming battle. Luckily, when I pointed out that there were basic rules concerning punctuation and grammar and spoke about them in an objective manner, I won over the attorney. He welcomed advice that did not appear to him to be a matter of personal opinion.

A well-organized style guide can provide guidelines for new Darwin Information Typing Architecture (DITA) authors as they make the transition from desktop publishing to structured XML. A DITA style guide, something I recommend to all the teams I coach, includes information about the proper use of XML elements. For example, I urge writers to use titles for the sections they build in concept information types. Although DITA allows writers to begin a section with a paragraph and no title, a best practice is to include titles with every section. Section titles provide a way to divide a concept topic into well-structured parts.

Style guides that include authoring guidelines for the correct application of DITA elements help build consistency in authoring that facilitates the use of topics in multiple contexts.

On the dark side, style guides can become battlegrounds in organizations that use the rules as a club to block innovation and experimentation. It is critical that the writers, information architects, and editors responsible for maintaining a style guide be responsive to changing practices. When a style guide grows with the author and user communities, it remains a vital resource.

I find style guides to be invaluable and often quite fascinating. Making *The IBM Style Guide* available to the author community is long overdue. We need the kind of guidance and example that a world-class style guide like this one seeks to provide. We face the challenges of a global authoring community with many levels of experience and education in the field of information development. All of those in the community need the advice that a changing and growing style guide provides.

The wealth of standards and examples in *The IBM Style Guide* has been developed over two decades and represents the experience and good judgment of the IBM information-development community. The council responsible for *The IBM Style Guide* meets regularly to update the information and consider new proposals from information developers throughout IBM's global organization.

I especially like the combination of correct and incorrect examples. It's challenging to discover interesting new practices, especially those that clearly support DITA. It should make the lives of many editors now working in the DITA environment significantly easier. Authors will find first-rate advice on writing usable procedures or creating tables that make the readers' life easier. Editors and authors will find fascinating tidbits in the comprehensive section on word usage. It is simply fun to read the examples of what is preferred and what "not to use."

So, let's celebrate style guides that help us resolve arguments and support our need to create readable, usable, and minimalist information. Let's celebrate style guides that help us to recognize that there are some standards for grammar, punctuation, and spelling that we should not forget at a time when instant messages and tweets appear to be taking over the world. Let's celebrate style guides when they continue to change with the times.

I congratulate the IBM team that has put together a genuinely helpful and thoughtful volume. I trust that the wider community of information developers will welcome this addition to our resources and profit from the advice.

JoAnn Hackos, PhD  
President  
Comtech Services, Inc

# About this publication

For more than 20 years, the IBM Style and Word Usage Council has been an influential and integral part of the IBM community. Consisting of highly experienced editors from across IBM, this volunteer team is dedicated to supporting their colleagues in creating and producing the highest quality information possible for IBM clients around the world. The council is responsible for managing the IBM Style and Word Usage guidelines.

The IBM Style guidelines define the corporate style, demonstrate good writing practices, and ensure a consistent voice and tone for all external IBM information. The Word Usage guidelines provide advice on preferred spellings, potential ambiguities, and terms for writers to avoid so that information is clear and consistent. These guidelines do not attempt to teach basic grammar and writing principles. The council references *Merriam-Webster's Collegiate Dictionary* and *The Chicago Manual of Style* as resources for more exhaustive guidance.

The council meets on a weekly basis to evaluate style and word usage suggestions from worldwide colleagues, watch industry directions and developments, and discuss findings from their respective teams.

Over the years, the names on the council have changed, but the passion and respect for the work has not. This book represents many years of work by many dedicated volunteers, and we are excited to share this work with a larger audience. Over the years, at conferences and other industry venues, requests have been made to access the IBM Style guidelines, but for various reasons, these requests could not be fulfilled until now. On behalf of the council, we are pleased to share this information and hope that it provides the basis for your company or personal writing guidelines and acts as an inspiration to create quality information for any audience.

Francis, Peter, Jana, Amy, Leslie, and Eric

# Acknowledgments

We are grateful to our colleagues and to our families who supported us as we worked on this book. With a project this size, you need some understanding from your family as you work late nights and some patience from your colleagues as they wait for you to grab another cup of coffee on the mornings following those late nights.

We of course want to express our sincere appreciation to our colleagues on the IBM Style and Word Usage Council for their contributions. The council members provided tremendous support of our efforts to pull this book together and did not complain when we asked them to attend additional reconciliation meetings and answer numerous questions as we took over meeting agendas. In addition to the book authors, the current council roster includes the following people:

- Phil Appleby, chair for many years and current co-chair
- Ida Audeh
- Kathleen Callaway
- Simcha Gralla
- Kathy Hancock
- Dave Harlan
- Ann Harris
- Cathy Johnson
- Larry Morlan
- Jenifer Servais
- Aimee Tabor

We are very grateful to Neil Dewhurst of the Hursley iBuild team for setting up a DITA build for us. We are also very grateful to our fellow writer of this book, Peter Hayward, whose DITA skills and assistance made our production work that much easier for all of us.

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We want to thank Michelle Carey for her contribution to the messages topic, Carla Quinn for her contribution to the glossaries topic, and Ronnie Seagren for her contribution to the indexing topics.

We also want to thank and acknowledge all the talented editors who have been part of the council through the years, including Elizabeth Wilde, the founding chair, for their contributions and care-taking of the guidelines.

Finally, we want to thank those throughout the worldwide IBM community whose comments and suggestions over the years have helped keep the IBM Style and Word Usage guidelines in step with the ever-evolving discipline of technical writing.



# About the authors

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After receiving his Master of Arts in Teaching from Harvard University, Fran embarked on a career in public school education in the Hudson Valley of New York. Eight years later and after one final cold and much too snowy winter, he fled to sunny South Florida where he began his career with IBM as the first Entry Systems Division production control specialist for the IBM Personal Computer products. Fran moved on to become a developer and writer of in-store IBM PC training materials for retail sales, a software division liaison for compatibility testing and software application development, a software product planner, and finally, in 1984, he began his current work as a technical editor for software products in Research Triangle Park, North Carolina.

Fran edits Service Availability and Performance Management software documentation and is a co-chair of the IBM Style and Word Usage Council. He lives in Raleigh, North Carolina, with his wife, Tricia, their two dogs, and a house full of good books.

## **Peter Hayward**

Having gained a PhD from the University of London, Peter's early career was in academic research, observing the life of plants. That was followed by some years in the book trade, both retail and wholesale. He joined IBM 15 years ago on a European-funded project to create a system for searching large databases of images, using image content as well as image metadata. He moved into software development and then to information development, and now works as an editor in the IBM Hursley Laboratory in England. From writing research papers and helping to copy edit a scientific journal, to editing books and catalogs, and now writing and editing technical documentation, the business of stringing words together has always played a part in Peter's career.

Peter lives with his wife, Sandra, near Winchester in Hampshire. His three sons have long since fled the familial abode. When not at work, he prefers to abandon the computer in favor of Victorian technology and the smell of hot steam oil; that is, playing with model steam trains in the back garden. He also finds time to be a Methodist local preacher and for walking in the local countryside and more distant mountains.

## **Jana Jenkins**

Jana joined IBM in 1983 and is currently Manager, World Wide Information Development and Content Community. As a manager on the Corporate User Technologies team, Jana is responsible for leading IBM's Information Development community, overseeing communication, delivery, and implementation of strategies, standards, and best practices. She also chairs the Total Information Experience Quality Governance Board, an enterprise-level board composed of content experts from across the business units, with the mission to improve and support client information quality. Jana has held several positions during her tenure with IBM, including instructor, technical writer, technical editor, and manager. She is recognized within the company as a Corporate Master Inventor. She is currently Chair of the Interface Technologies Invention Development Team. She promotes creative problem solving and innovation throughout the company and mentors new inventors as they consider the possibilities.

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## **Amy Laird**

Amy joined IBM in 2003 and is a technical editor of user assistance for model-driven development software. She is the team lead for a group of editors and is an advocate of plain language and minimalism. Amy has a background in writing, marketing, and publishing. She has edited several books and she created the corporate style guide at another global company.

Amy has a BA in English Literature from the University of Toronto, an MA in Language and Professional Writing from the University of Waterloo, a post-graduate certificate in Book and Magazine Publishing from Centennial College, and is a Certified Proofreader with the Editors' Association of Canada. She lives in her hometown, Ottawa, Ontario, with her partner, Pete.

## **Leslie McDonald**

Leslie has worked in a wide range of roles and areas since joining IBM in 1983. She began her career by working on IBM internal business applications as a programmer, tester, and application support team lead. In the early 1990s, she moved into software product development in the IBM Canada Lab. She worked mostly on compilers, first as a test team lead and then as a development coordinator, before turning her attention to technical writing. Later, Leslie spent five years in IBM Global Services, mostly as a writer, particularly in the sales support area. In 2005, Leslie moved back to the IBM Canada Lab as a DB2 editor.

Leslie has a BA in Economics and Economic History from the University of Toronto and a Certificate in Technical and Professional Writing from York University. She lives in Toronto with her husband, Richard (a fellow IBM employee), and cats.

## **Eric Radzinski**

Eric joined IBM in 1996 as a technical writer documenting heterogeneous data access technologies. After spending six years as a writer, team lead, part-time editor, and part-time QA engineer, Eric transitioned into a full-time editing assignment. For the past nine years, Eric has been the editor and information architect for the IBM DB2 and IMS Tools portfolio, which consists of well over 100 individual products developed on four continents by culturally diverse teams that include both IBMers and IBM business partners. He has been a member of the IBM Style and Word Usage Council since 2002.

Eric received a BA in English with a focus on technical writing from San Jose State University in 1993. He lives in San Jose, California, with his wife, Tina, and their three children: Jacob, Joshua, and Chloe.

# Language and grammar

Follow these guidelines to apply a clear and consistent writing style.

## Abbreviations

Abbreviations include initialisms, acronyms, and shortened words. An initialism is an abbreviation that is pronounced as individual letters, for example, IBM. An acronym is an abbreviation that forms a pronounceable word, for example, NATO.

### General guidelines

Use abbreviations when the following conditions are true:

- Their meanings are clear.
- They make the information easier to understand.
- They are recognized more easily than their spelled-out forms, for example, HTML.
- Space is limited, for example, in a table or detailed diagram.

Avoid abbreviations when the following conditions are true:

- Their meanings are unclear.
- They make the information more difficult to understand.
- They occur infrequently in the information, for example, only two or three times in a large amount of content.
- They are derived from Latin.
- They abbreviate IBM product names.

- They abbreviate names or entities that are owned by other companies, and the owning company does not use those abbreviations.
- They might be a registered trademark for a different product or entity.

Follow these general guidelines for abbreviations:

- Choose the indefinite article *a* or *an* according to how an abbreviation is spoken. Use *a* before an abbreviation that begins with a consonant sound. Use *an* before an abbreviation with a vowel sound.

**Examples**

a PDF document  
an XML activity

- If an abbreviation can be plural, form the plural by adding a lowercase *s*. The abbreviation for a unit of measurement is both singular and plural.

**Examples**

user IDs  
RFPs  
1 mm  
10 mm

- Do not use an abbreviation as a noun unless the sentence makes sense when you substitute the spelled-out form of the term.

**Example (incorrect)**

The tutorials are available as PDFs. [portable document formats]

**Examples (correct)**

The tutorials are available as PDF files.  
Enhancements in this release include a redesigned GUI.  
The procurement process begins with an RFP.

- Do not use abbreviations as verbs.

**Example (incorrect)**

You can FTP the files to the server.

**Example (correct)**

You can use the FTP command to send the files to the server.

- Do not use an apostrophe and the letter *s* (*'s*) to show the possessive form of an abbreviation. Make the abbreviation an adjective, or use the abbreviation in a prepositional phrase.

**Example (incorrect)**

HTML's properties are editable.

**Examples (correct)**

HTML properties are editable.

The properties of HTML are editable.

For more information about using abbreviations, see *Developing Quality Technical Information*, Chapter 5, "Use technical terms only if they are necessary and appropriate" and "Define each term that is new to the intended audience."

## Spelled-out forms of abbreviations

Follow these guidelines for spelling out abbreviations:

- Do not spell out an abbreviation that is commonly known to the target audience. Commonly known terms vary by audience; each writing and editing team must determine which abbreviations are familiar to the audience.

**Examples**

DOS

HTML

HTTP

PDF

TCP/IP

- If an abbreviation is not commonly known, or if you are unsure whether it is commonly known, spell out the term at its first occurrence in text, followed by the abbreviation in parentheses. If information has a defined, linear reading path, consider spelling out an abbreviation at its first occurrence in a major section, such as at the beginning of each chapter in a book, or in an overview topic instead of in each subtopic.

**Examples**

massively parallel processing (MPP)

minimum recovery time (MRT)

customer service representative (CSR)

- Confirm the capitalization for the spelled-out form of an abbreviation; many spelled-out abbreviations do not require initial uppercase letters.

**Examples (incorrect)**

Graphical User Interface (GUI)

Local Area Network (LAN)

Service-Oriented Architecture (SOA)

**Examples (correct)**

graphical user interface (GUI)

local area network (LAN)

service-oriented architecture (SOA)

- Most spelled-out forms of language and protocol names have initial uppercase letters.

**Examples**

Hypertext Transfer Protocol (HTTP)

Unified Modeling Language (UML)

Web Services Description Language (WSDL)

Wireless Application Protocol (WAP)

- When you spell out an abbreviation, do not capitalize letters in the middle of a word to show the origin of an initialism.

**Example (incorrect)**

eXtensible markup language (XML)

**Example (correct)**

Extensible Markup Language (XML)

- In most cases, when you spell out an abbreviation, do not include wording that repeats part of the spelled-out version of the abbreviation. For example, do not use *DASD device*, because the second *D* stands for *device*, or *JCL language*, because the *L* stands for *language*. However, there are rare exceptions. For example, it is standard to refer to a *CICS® system*, although *CICS* stands for *Customer Information Control System*.

## Periods with abbreviations

Follow these guidelines for using periods in abbreviations:

- Omit periods in uppercase abbreviations.

### **Examples (incorrect)**

E.S.T.

I.D.

U.S.

### **Examples (correct)**

EST

ID

US

- Include periods in lowercase abbreviations that relate to time or that can be confused with words.

### **Examples**

a.m.

p.m.

hr.

yr.

no.

- Omit periods in abbreviations for units of measurement, unless they can be confused with words.

### **Examples (incorrect)**

b.p.s

r.p.m.

in

### **Examples (correct)**

bps

rpm

in.



- Omit periods in abbreviations for academic degrees.

#### Examples

BA  
MA  
PhD

- Include periods in abbreviations for social titles.

#### Examples

Dr.  
Ms.  
Jr.

- If an abbreviation that requires a period occurs at the end of a sentence, do not include another period.

#### Example (incorrect)

The meeting starts at 9:00 a.m..

#### Example (correct)

The meeting starts at 9:00 a.m.

## Latin abbreviations

Do not use Latin abbreviations; use their English equivalents instead. Latin abbreviations are sometimes misunderstood.

Latin abbreviation	English equivalent
e.g.	Use <i>for example</i> .
etc.	Use <i>and so on</i> when you list a clear sequence of elements, such as “1, 2, 3, and so on” or “Monday, Tuesday, Wednesday, and so on.” Otherwise, rewrite the sentence to replace <i>etc.</i> with something more descriptive, such as “and other output.”
i.e.	Use <i>that is</i> .

## Abbreviations in headings and titles

Avoid using abbreviations in headings and titles, unless an abbreviation is well known or the spelled-out form is too long. If you use an abbreviation for the first time in a heading or title, ensure that you include the spelled-out form either in the heading or title or in the text that immediately follows the heading or title.

### Examples

#### **Creating Unified Modeling Language diagrams**

You can use Unified Modeling Language (UML) diagrams to model complex systems.

#### **Creating UML diagrams**

You can use Unified Modeling Language (UML) diagrams to model complex systems.

#### **Creating Unified Modeling Language (UML) diagrams**

You can use UML diagrams to model complex systems.

## Abbreviations in glossaries

For the abbreviation, provide a *See* reference that points to the spelled out term; do not provide a definition.

### Example

#### **DBCS**

See double-byte character set.

For the spelled-out term, provide a definition; do not provide a *See* reference to the abbreviation. Put the abbreviated term in parentheses after the spelled-out term.

### Example

#### **double-byte character set (DBCS)**

A set of characters in which each character is represented by 2 bytes. These character sets are commonly used by national languages such as Japanese and Chinese that have more symbols than can be represented by a single byte.

## Abbreviations in indexes

For abbreviations that are unambiguous and that are recognized more easily than their spelled-out forms, index only the abbreviations. Examples are *AIX*<sup>®</sup>, *CORBA*, *HTML*, *SQL*, *PDF*, *XML*, *TCP/IP*, and *UNIX*.

### Example

<i1>AIX

For other abbreviations, create main entries for both the abbreviation and the spelled-out form. Place the secondary and tertiary entries under the abbreviation. Under the spelled-out form, place a *See* reference to the abbreviation.

#### Example

```
<i1>ECI
  <i2>requests
  <i2>security
  <i2>transaction IDs
<i1>External Call Interface
  <i2>See ECI
```

## Abbreviations for units of time

In running text, avoid abbreviating units of time, such as seconds, minutes, hours, days, months, or years. Abbreviate units of time only when space is limited, such as in tables or in detailed diagrams. **When you must abbreviate units of time, use these abbreviations for both the singular and plural forms and insert a period after them: sec., min., hr., d., mo., and yr.**

## Anthropomorphism

Do not attribute human characteristics to inanimate objects, which are incapable of human behavior and emotions.

As much as possible, focus technical information on users and the actions that they perform, not on a product and the actions that it performs.

**Exception for marketing content:** A product focus is acceptable in marketing content. For details and examples, see “Exceptions for marketing content” on page 274.

#### Examples (avoid a product focus)

The Delivery Information window *allows* you to specify the name of the sender.

This menu *enables* you to create diagrams.

The configuration *expects* the disk to have parity protection.

The Replicator page *lets* you synchronize your local database with replica databases.

If you double-click a file, the system *offers* to download it to your local directory.

The website *permits* you to save your credit card information.

### Examples (prefer a user focus)

In the Delivery Information window, specify the name of the sender.

Use this menu to create diagrams.

Before you configure the disk, ensure that it has parity protection.

On the Replicator page, you can synchronize your local database with replica databases.

Double-click a file to download it to your local directory.

You can save your credit card information on the website.

In cases where you must focus on a product, do not use verbs that humanize objects, such as *ask*, *decide*, *expect*, *say*, *see*, *think*, or *want*. However, inanimate objects such as hardware and software can perform actions, and some verbs are appropriate for both people and things. For example, a program can *search* for a text string, or an application can *read* data from a file.

### Examples (anthropomorphic verbs)

The application *asks* you for a value.

The control partition *decides* to switch roles.

If the system *sees* a new device, it changes the settings automatically.

The Merge Certificate window *tells* you about the new certificate information.

If a connector is disabled, the system *thinks* that the entire channel is disabled.

When the controller *wants* to create a resource, it constructs a list of storage locations.

### Examples (appropriate verbs)

The application *prompts* you for a value.

The control partition *switches* roles.

If the system *detects* a new device, it changes the settings automatically.

The Merge Certificate window *displays* the new certificate information.

If a connector is disabled, the system *operates* as if the entire channel is disabled.

Before the controller *creates* a resource, it constructs a list of valid storage locations.

For more information about avoiding a product focus, see *Developing Quality Technical Information*, Chapter 2, “Present information from the user’s point of view” and “Focus on real tasks, not product functions.”

## Articles

Include definite and indefinite articles, and apply them correctly.

Do not omit the articles *a*, *an*, and *the*. Articles increase clarity and ease translation.

### Examples (incorrect)

- 1. Create project.
- Delete object from editor.
- File could not be found.

### Examples (correct)

- 1. Create a project.
- Delete an object from the editor.
- The file could not be found.

Choose the indefinite article *a* or *an* according to how an abbreviation, word, or number is spoken. Use *a* before an abbreviation, word, or number that begins with a consonant sound. Use *an* before an abbreviation, word, or number that begins with a vowel sound.

If an abbreviation is pronounced as a series of letters, choose the article according to the pronunciation of the first letter. If an abbreviation is pronounced as a word, choose the article according to the pronunciation of the word.

For file name extensions that begin with a period, such as `.exe`, assume that the period is pronounced as *dot*, and use the indefinite article *a*.

### Examples of terms that begin with consonant sounds

Use <i>a</i> with	Consonant sound
<code>.mbtest</code> file	<i>D</i> , as in <i>dot</i>
historical	<i>H</i> , as in <i>hit</i>
LAN	<i>L</i> , as in <i>land</i>
one	<i>W</i> , as in <i>won</i>
ROM	<i>R</i> , as in <i>romp</i>
SYSGEN	<i>S</i> , as in <i>system</i>
unit	<i>Y</i> , as in <i>you</i>
x4	<i>B</i> , as in <i>by four</i>

### Examples of terms that begin with vowel sounds

Use <i>an</i> with	Vowel sound
HTTP	A, as in <i>ache</i>
LU	E, as in <i>elf</i>
MVS	E, as in <i>empty</i>
RPQ	A, as in <i>are</i>
SOA	E, as in <i>estimate</i>
SQL	E, as in <i>estimate</i>

For more information about using articles, see *Developing Quality Technical Information*, Chapter 5, “Make the syntax of sentences clear.”

## Capitalization

In general, use a lowercase style in text and use sentence-style capitalization for headings.

### Capitalization styles

Items such as headings, captions, labels, or interface elements generally follow one of two capitalization styles: sentence-style capitalization or headline-style capitalization.

**Sentence-style capitalization:** This style is predominantly lowercase; capitalize only the initial letter of the first word in the text and other words that require capitalization, such as proper nouns. Examples of proper nouns include the names of specific people, places, companies, languages, protocols, and products.

#### Examples of sentence-style capitalization

Business models  
Creating Boolean expressions  
Planning network architectures  
Properties and settings for printing  
Requirements for Linux and UNIX operating systems

**Headline-style capitalization:** This style uses initial uppercase letters for all significant words in the text.

In headline-style capitalization, capitalize the initial letter of the following words:

- The first and last words of the text
- All nouns, pronouns, adjectives, verbs, adverbs, and subordinating conjunctions, such as *after*, *although*, *because*, *before*, *how*, *if*, *than*, *that*, *though*, *until*, *when*, *where*, *whether*, and *while*
- Any word in a hyphenated compound that is not an article, preposition, or coordinating conjunction
- The last word in a hyphenated compound, regardless of its part of speech

In headline-style capitalization, do not capitalize the initial letter of the following words:

- Articles, except as the first word
- Coordinating conjunctions
- Prepositions, except as the first or last word
- The *to* in an infinitive

The following list shows the headline-style capitalization of common words:

a	during	Much	This
an	for	nor	to
and	Hers	or	versus
Another	Him	Our	We
Any	His	Ours	What
Anyone	How	Output	When
Anything	I	over	Where
Are	If	regarding	Whereas
as	in	Several	Which
at	input	She	While
Away	into	Some	Who
Be	Is	Such	Whom
Because	It	Than	Why
beside	Its	That	with
between	Itself	the	without
Both	Many	Their	yet
but	Me	Theirs	You
by	Mine	Them	Your
concerning	More	These	Yours
Do	Most	They	

**Examples of headline-style capitalization**

Punctuating Lists and Glossaries

Variables to Be Determined by the Program

IBM 3684 Point-of-Sale Terminal

**Capitalization and abbreviations**

Confirm the capitalization for the spelled-out form of an abbreviation; many spelled-out abbreviations do not require initial uppercase letters.

**Examples (incorrect)**

Graphical User Interface (GUI)

Local Area Network (LAN)

Service-Oriented Architecture (SOA)

**Examples (correct)**

graphical user interface (GUI)

local area network (LAN)

service-oriented architecture (SOA)

Most spelled-out forms of language and protocol names have initial uppercase letters.

**Examples**

Hypertext Transfer Protocol (HTTP)

Unified Modeling Language (UML)

Web Services Description Language (WSDL)

Wireless Application Protocol (WAP)

When you spell out an abbreviation, do not capitalize letters in the middle of a word to show the origin of an initialism.

**Example (incorrect)**

eXtensible markup language (XML)

**Example (correct)**

Extensible Markup Language (XML)



## Capitalization and colons

In general, use a lowercase letter on the text that immediately follows a colon.

### Examples

Three security measures are evaluated: a firewall, an encryption key, and a password.

The deletion is final: you cannot restore an element after you delete it.

Use an uppercase letter on the text that immediately follows a colon when the text is one of the following items:

- Item in a vertical list
- Note that follows a label
- Proper noun
- Quotation
- Subheading on the same line as a heading

### Examples

You can use the following background colors:

- Blue
- Green
- Red

**CAUTION:** Do not remove or install this unit without using the provided lift tool.

You can use the editor with the following programming languages: Java, C, and C++.

The manager's instructions were clear: "Submit the report by Monday."

Input/output operations: Move mode and locate mode

## Capitalization and figures

Use sentence-style capitalization for figure captions and for callouts in figures and illustrations.

## Capitalization in general text

As much as possible, use a lowercase style in running text, and apply the following capitalization guidelines:

- Use lowercase for names and terms unless the name or term is a proper noun. Translators are wary of translating terms that have initial uppercase letters. In general, if a term should be translated, use lowercase.

**Examples (incorrect)**

To illustrate the concept, create a Class diagram.  
Run the Transformation.  
The company is hiring Software Developers.

**Examples (correct)**

To illustrate the concept, create a class diagram.  
Run the transformation.  
The company is hiring software developers.

- Do not use uppercase letters for emphasis. To call attention to important hints, tips, guidance, restrictions, or advice that might be overlooked, consider using a note that has a meaningful label.

**Examples (incorrect)**

The option that you select is VERY important.  
Do NOT change the default settings.

**Examples (correct)**

The option that you select is very important.  
**Important:** Do not change the default settings.

- Do not create terms with internal uppercase letters.

**Example (incorrect)**

CopyPool

**Example (correct)**

copy pool

- Do not start a sentence with a lowercase term; rewrite the sentence.

**Examples (incorrect)**

onmouseover events can add visual interest.  
if expressions, unlike if statements, return a value.

**Examples (correct)**

You can add visual interest by using onmouseover events.  
Unlike if statements, if expressions return a value.

- Do not capitalize the names of features and components unless they are sold separately or are trademarked.

**Examples (incorrect)**

Use the Command-Line Interface to ...  
Open the Table Partitioning feature.

**Examples (correct)**

Use the command-line interface to ...  
Open the table partitioning feature.

- Do not capitalize collective or generic terms, such as agent names.

**Examples (incorrect)**

The Dispatcher  
The Image Display Monitor  
The Paging Supervisor

**Examples (correct)**

The dispatcher  
The image display monitor  
The paging supervisor

## Capitalization in glossaries

Use the following capitalization in glossaries:

- Use lowercase for glossary terms unless a term is a proper noun or requires capitalization for other reasons.
- Use sentence-style capitalization for glossary definitions.

## Capitalization in headings and titles

In general, use sentence-style capitalization for headings.

Use sentence-style capitalization for these items:

- Headings in books (except the book title)
- Topic titles and headings in information centers

- Titles and headings in online information, such as tutorials, samples, developerWorks® articles, technotes, and websites
- Titles of white papers and marketing content

Use headline-style capitalization for these items:

- Titles of books
- Titles of CDs
- Titles of stand-alone information units, such as information centers, quick start guides, and courses

If a headline-style title has a subtitle, apply these capitalization guidelines:

- Use headline-style capitalization for a subtitle that is displayed on the same line as the title, is short, or is essential to the title.
- Use sentence-style capitalization for a subtitle that is displayed separately from the title, is lengthy, or is supplementary to the title.

When you cite a heading in text, use the capitalization that is used in the source unless the original heading is in all uppercase letters. In that case, use headline-style capitalization in the citation.

## Capitalization and hyphens

Apply the following capitalization guidelines to hyphenated words:

- When a hyphenated word occurs at the beginning of a sentence, capitalize only the first element in the word unless a subsequent element is a proper noun or proper adjective.

### Examples (incorrect)

Power-Saving techniques are important for notebook users.

All-american manufacturing is less common than it used to be.

### Examples (correct)

Power-saving techniques are important for notebook users.

All-American manufacturing is less common than it used to be.

- When a hyphenated word occurs at the beginning of a heading with sentence-style capitalization, capitalize only the first element in the word unless a subsequent element is a proper noun or proper adjective.

### Examples (incorrect)

Case-Sensitive languages

Non-European-Based companies

**Examples (correct)**

Case-sensitive languages  
Non-European-based companies

- When a hyphenated word occurs in a heading with headline-style capitalization, capitalize the first element in the word; the last element in the word, regardless of its part of speech; and any element that is not an article, preposition, or coordinating conjunction.

**Examples (incorrect)**

Designing Interfaces for Non-English-speaking Users  
Self-contained Sensors  
Once-a-day Notifications

**Examples (correct)**

Designing Interfaces for Non-English-Speaking Users  
Self-Contained Sensors  
Once-a-Day Notifications

## Capitalization in indexes

Use lowercase for index terms unless a term is a proper noun or requires capitalization for other reasons.

## Capitalization in interfaces

The primary reference for capitalization in a product interface is the design guidelines for that product. If a product does not have interface design guidelines, apply the following capitalization to interface elements:

### Sentence-style capitalization

- Check box labels
- Field labels
- Group box labels
- Hover help running text
- List box entries
- Messages
- Navigation links
- Radio button labels
- Status bar text
- Web page titles and web navigational elements

## Headline-style capitalization

- Button labels
- Column headings
- Icon labels
- Menu names and menu items
- Palette titles
- Portlet titles
- Tab titles
- Toolbars and toolbar button labels
- Tooltip labels
- Window titles

When you write about an item that is displayed in an interface or on a device, match the capitalization and spelling of the item in your writing.

## Capitalization of letters as letters

If you refer to a letter, use the capitalization that is appropriate for the context unless it causes confusion. For example, if you refer to a letter in the middle of a word, use the capitalization that occurs in the middle of the word.

### Examples

The *H* in *HTML* stands for *Hypertext*.

Double the letter *m* in the word *programming*.

Before the repair, the printer did not print uppercase *A*'s or lowercase *t*'s.

To form the plural of a single letter, add an apostrophe and the letter *s*.

If you refer to a letter and the capitalization is irrelevant, use an uppercase letter.

### Examples

With some fonts, readers can mistake *N*'s for *M*'s.

Beginner typists often mistype *P*'s and *Z*'s.

## Capitalization in lists

Capitalize the first word of each item in a vertical list.

### Example

The routine makes the following conversions:

- An EBCDIC value to a real number
- A real number to an EBCDIC value
- An EBCDIC value to an integer
- An integer to an EBCDIC value

In definition lists, capitalize the first word of each term or descriptive name, unless it must be lowercase, and capitalize the first word of each definition.

### Example

#### All

You can perform all operations on resources.

#### Create

You can view, edit, and add resources.

#### Modify

You can view and edit resources.

## Capitalization for tables in text

Use sentence-style capitalization for these table elements:

- Cell contents
- Column headings
- Row labels
- Table captions

## Capitalization of computer-related terms

Use lowercase for terms unless other capitalization is specified in the following table or by industry or product guidelines.

Item and advice	Examples
<p><b>Conditions, status, bytes, and bits</b></p> <p>Use lowercase for the name of a bit, byte, condition, indicator, or for status. Do not enclose the name in quotation marks. When you use more than one adjective for a bit, byte, condition, indicator, or status, hyphenate only for clarity and readability.</p> <p><b>Symbolic names of bits</b></p> <p>Use uppercase for the symbolic name of a bit unless different capitalization is required by a case-sensitive system or programming language.</p>	<p>... turns on the terminal-error indicator.</p> <p>... sets the adapter lock bit.</p> <p>The processing unit must be loaded again to recover from a no-operation status that results from a data-unsafe condition.</p> <p>... sets the TJBOWAIT bit.</p> <p>... tests the NIPPTLST bit in the parameter table entry.</p>
<p><b>Control words, status words, and special codes</b></p> <p>Use lowercase for the name of a control word, status word, or special code.</p>	<p>The program status word ...</p> <p>The program-check new PSW ...</p> <p>The channel-address word ...</p> <p>The instruction-length code ...</p>
<p><b>Data areas</b></p> <p>Use lowercase for the spelled-out name of a data area.</p> <p><b>Symbolic names of data areas</b></p> <p>If the programming language is not case sensitive, use uppercase for the symbolic name of a data area in a program.</p>	<p>A data control block ...</p> <p>The page table entry ...</p> <p>The image construction area ...</p> <p>Use the OUTBUF data area to ...</p> <p>The INAREA data area ...</p>
<p><b>Data sets and libraries</b></p> <p>Use lowercase for the descriptive name of an operating-system data set or system library.</p> <p>Use uppercase for the symbolic name of a system data set or library unless different capitalization is required by a case-sensitive system or programming language. Do not use a shortened form of the symbolic name as a descriptive name.</p>	<p>The link parameter ...</p> <p>The parameter library ...</p> <p>The system abend data set ...</p> <p><b>Incorrect</b></p> <p>The LINK library ...</p> <p>The PARM library ...</p> <p>The DUMP data set ...</p> <p><b>Correct</b></p> <p>SYS1.LINKLIB</p> <p>SYS1.PARMLIB</p> <p>SYS1.DUMP data set</p>
<p><b>Dumps</b></p> <p>Use lowercase for dump names unless they are abbreviations; in that case, use uppercase.</p>	<p>The indicative dump ...</p> <p>The console dump ...</p> <p>The SVC dump ...</p>



Item and advice	Examples
<p><b>File names and directory names</b></p> <p>Use lowercase for file names and directory names for operating systems and application programs that are not case sensitive. For a case-sensitive operating system or application program, use the capitalization that is used in the operating system or application program.</p>	<p>Copy the files from the <code>olddir</code> directory to the <code>newdir</code> directory.</p>
<p><b>Hardware components</b></p> <p>Use lowercase for the names of hardware components unless they are labeled; in that case, use the same capitalization as the label.</p>	<p>The paper-level sensor ...  The accumulator ...  The address register ...  In drive A ...  The On/Off switch ...  Press the Power button.  (The word <i>Power</i> is printed with an initial uppercase letter on or near the button on a device.)  Press the power button.  (The button is not labeled, but it is otherwise identified as the power button on a device.)</p>
<p><b>Logs</b></p> <p>Use lowercase for the descriptive name of a log.</p>	<p>The system log ...  The history log ...</p>
<p><b>Machine instructions, channel commands, and device orders</b></p> <p>Use initial uppercase letters for the spelled-out name of a machine instruction, channel command, or device order, except for words that are articles, prepositions, or coordinating conjunctions.</p> <p>Use uppercase letters for the abbreviation of an instruction, a command, or an order.</p>	<p>The Zero-and-Add instruction ...  The Transfer-in-Channel command ...  The Erase-Unprotected-to-Address order ...</p> <p>The ZAP instruction ...  The TIC command ...  The EUA order ...</p>
<p><b>Macros</b></p> <p>Use uppercase for the name of a macro.</p>	<p>The ATTACH macro ...  The DTF macro ...  The ENQ macro ...  The FREEMAIN macro ...</p>

Item and advice	Examples
<p><b>Programming concepts and general classes of programs</b></p> <p>Use lowercase for words that denote programming concepts or general classes of programs.</p>	<p>In exchange buffering ...  An emulation ...  The simulators ...  In recovery management ...</p>
<p><b>Programming keywords</b></p> <p>Use uppercase for a keyword unless otherwise required by a case-sensitive programming language.</p> <p>When the keyword is represented by a descriptive word or phrase, use lowercase.</p>	<p>The JOB statement ...  The DD statement ...  The COPY routine ...</p> <p>The routing code ...  The entry-point address ...  The trace module ...  The damage-assessment routine ...</p>
<p><b>Programming languages</b></p> <p>When you refer to a programming language rather than a compiler, use initial uppercase letters for the official name of the language and lowercase for its short name unless the name of the language is always spelled in uppercase, such as COBOL.</p>	<p><b>Official names</b></p> <p>The Assembler Language for OS  The RPG II Language (not Report Program Generator II Language)</p> <p><b>Short names</b></p> <p>In assembler language ...  In RPG II language ...</p>
<p><b>Programs or functions</b></p> <p>A program or function that is an integral part of a system is usually equivalent to a component, and its name is shown in lowercase. However, in some cases, such a program or function is important enough to be treated as though it is a separate product. To decide how to treat the name of such a program or function, refer to the naming conventions for your product, or consider how the names of other programs and functions that are addressed in the same context are treated.</p>	<p>Use the disaster recovery function to ...  The Performance Optimizer program included in this product ...</p>

Item and advice	Examples
<p><b>Software components</b></p> <p>The term <i>software component</i> applies to various entities in an operating system. The term is sometimes applied to a set of routines, sometimes to a program, and sometimes to a set of programs. Some components are products that can be ordered separately, and some are integral parts of a program or system.</p> <p>A group of related routines often has a collective name such as <i>facility</i>, <i>feature</i>, <i>option</i>, <i>support</i>, or <i>utility</i>.</p> <p>Use lowercase for these terms when they refer to integral parts of the system. Use initial uppercase letters for these terms when they can be ordered as separate products. Maintain the original capitalization when a feature that was previously sold separately becomes an integral part of another product.</p>	<p>The job scheduler ...  The initiator ...  Application Dictionary Services ...</p>
<p><b>Stages during system or program execution</b></p> <p>Use lowercase for the names of operating system or program stages.</p> <p>To describe these stages, use the word <i>at</i> or <i>during</i>, and do not add the word <i>time</i> except when you refer to the run stage: for example, <i>at run time</i>.</p>	<p><b>Incorrect</b></p> <p>At nucleus initialization time ...  During system generation time ...  At assembly time ...  After compile time ...</p> <p><b>Correct</b></p> <p>After nucleus initialization ...  During system generation ...  Before assembly ...  After compilation ...</p>
<p><b>Storage areas and their divisions</b></p> <p>Use lowercase for the names of areas and divisions of main storage, real storage, and virtual storage.</p>	<p>The pageable link-pack area ...  The nonpageable dynamic area ...  The fixed build-list (BLDL) table ...</p>

## Contractions

Do not use contractions in technical information.

Contractions can cause difficulty for translation and for users whose primary language is not English. For example, *it's* can be interpreted as *it is* or *it has*. Contractions can also contribute to an overly informal tone.

The contraction *what's* in the phrase *what's new* is acceptable in content that presents new and changed items between versions of products or information.

**Exception for marketing content:** Contractions are acceptable in some marketing content. For details and examples, see “Exceptions for marketing content” on page 274.

### Examples (incorrect)

You can't edit the default profiles.

The database doesn't back up the information automatically.

For information about new features in IBM® Lotus® Notes® 8.5, see “What is new in this release.”

### Examples (correct)

You cannot edit the default profiles.

The database does not back up the information automatically.

For information about new features in IBM® Lotus® Notes® 8.5, see “What's new in this release.”

For more information about writing for translation, see *Developing Quality Technical Information*, Chapter 11, “Applying quality characteristics to information for an international audience.”

For more information about tone, see *Developing Quality Technical Information*, Chapter 7, “Write with the appropriate tone.”

## Prepositions

Use prepositions effectively to clarify the relationship between elements in a sentence.

Follow these guidelines for using prepositions:

- Include prepositions that increase clarity.

### Example (ambiguous)

Unload the file using the **ULOAD** utility.

### Example (clear)

Unload the file by using the **ULOAD** utility.

For more information about using prepositions for clarity, see *Developing Quality Technical Information*, Chapter 5, “Make the syntax of sentences clear.”

- Omit unnecessary prepositions. For example, omit the prepositions in phrasal verbs when the verb alone provides the same meaning.

**Examples (incorrect)**

click on  
print out  
start up

**Examples (correct)**

click  
print  
start

For more information about unnecessary prepositions, see *Developing Quality Technical Information*, Chapter 5, “Remove roundabout expressions and needless repetition.”

- Avoid using too many prepositions in a sentence. Too many prepositions can clutter the text.

**Example (awkward)**

The report is a list of the status of all of the event monitors for this process.

**Example (improved)**

The report lists the status of all event monitors for this process.

- Use a preposition at the end of a sentence to avoid an awkward or stilted construction.

**Example (awkward)**

Click the item for which you want to search.

**Example (improved)**

Click the item that you want to search for.

For more information about ending sentences with prepositions, see *Developing Quality Technical Information*, Chapter 7, “Use correct grammar.”

- Use a prepositional phrase instead of an apostrophe and the letter *s* (*'s*) to show the possessive form of abbreviations, brand names, product names, or inanimate objects.

**Example (incorrect)**

The GUI's layout is intuitive.  
Use Rational® Software Architect's views to model systems or applications.  
Edit the object's properties.

### Examples (correct)

The layout of the GUI is intuitive.

Use the views in Rational® Software Architect to model systems or applications.

Edit the properties of the object.

- To determine which prepositions to use with interface elements, see “Graphical user interface elements” on page 206.

## Pronouns

Make clear pronoun references, avoid pronouns that are gender specific, and use the appropriate relative pronoun for the context.

### Ambiguous pronoun references

Ensure that the noun to which a pronoun refers is clear. Avoid sentences in which a pronoun can refer to more than one noun or in which a pronoun refers to an unstated noun.

#### Examples (incorrect)

Maria told Susan that her report was late.

If the field is populated with default text, it does not change.

Ensure that you apply the fix packs to the servers. These provide critical security.

Back up the files weekly. This is important for several reasons.

#### Examples (correct)

Maria told Susan that Susan’s report was late.

If the field is populated with default text, the text does not change.

Ensure that you apply the fix packs to the servers. These fix packs provide critical security.

Back up the files weekly. This practice is important for several reasons.

For more information about ambiguous pronoun references, see *Developing Quality Technical Information*, Chapter 5, “Avoid vague referents.”

## Gender-neutral pronouns

Many terms and titles, such as *customer engineer*, *programmer*, *teacher*, or *administrative assistant*, do not apply exclusively to one gender. Therefore, to make your writing inclusive, avoid using gender-specific pronouns. Do not use *he*, *him*, *himself*, or *his* unless the person you refer to is male, and do not use *she*, *her*, *herself*, or *hers* unless the person you refer to is female.

Use these techniques to avoid gender-specific pronouns:

- Use the imperative mood.

**Example (incorrect)**

The operator should turn the blue switch on her right to Remote.

**Example (correct)**

Turn the blue switch on the right to Remote.

- Use the second person: *you*, *your*, *yours*, or *yourself*.

**Example (incorrect)**

The user can now move his cursor in four directions.

**Example (correct)**

You can now move your cursor in four directions.

- Use plural nouns and plural pronouns: *they*, *their*, *theirs*, *them*, or *themselves*.

**Example (incorrect)**

A customer engineer must be trained on the hardware and software that he services.

**Example (correct)**

Customer engineers must be trained on the hardware and software that they service.

Do not use these techniques to avoid gender-specific pronouns:

- Do not use constructions that combine pronouns.

**Examples (incorrect)**

he or she	he/she	(s)he
him or her	him/her	s/he
his or her	his/her	
his or hers	his/hers	

- Do not use a singular noun and a plural pronoun: *they*, *their*, *theirs*, *them*, or *themselves*.

**Example (incorrect)**

Each employee is expected to clean their work area before they go home.

**Example (correct)**

All employees are expected to clean their work areas before they go home.

In examples or scenarios, you can use a person's name and then use a gender-specific pronoun to refer to that name. Vary the use of proper names in documentation. Use names that represent various ethnic backgrounds, genders, and locations.

### Examples

If Marco keeps an accurate record of his programming time, he can easily create a report.  
Sabrina is a senior administrator. She meets daily with her staff to assign tasks.

For more information about gender-neutral pronouns, see *Developing Quality Technical Information*, Chapter 7, “Use unbiased language.”

## Personal pronouns

Use the pronouns that are appropriate for the person of the verb. In technical information, follow these general guidelines for personal pronouns:

- Avoid the first-person pronouns *I* and *we*, except in these situations:
  - In the question portion of frequently asked questions (FAQs)
  - In articles, white papers, or documents that have listed authors and in which the authors describe their own actions or opinions
- Use the second-person pronoun *you* as much as possible. The subject of an imperative sentence is understood to be *you*.
- Avoid third-person pronouns that are gender specific.

For more information about personal pronouns, see *Developing Quality Technical Information*, Chapter 2, “Present information from the user's point of view.”

## Relative pronouns

Do not use the words *that*, *which*, and *who* interchangeably.

- Use *that*, without a comma, to introduce a restrictive clause. A restrictive clause is essential to the meaning of the sentence; if the clause is removed, the meaning of the sentence changes.

### Example of a restrictive clause

The system units that have two drives installed are floor-standing models.

In the restrictive example, some system units have two drives, and some do not. Only the units that have two drives installed are floor-standing models.

- Use *which*, preceded by a comma, to introduce a nonrestrictive clause. A nonrestrictive clause is parenthetical to the meaning of the sentence; if the clause is removed, the essential meaning of the sentence does not change.



**Example of a nonrestrictive clause**

The system units, which have two drives installed, are floor-standing models.

In the nonrestrictive example, all the system units are floor-standing models, and they all have two drives installed.

- Use *who*, not *that* or *which*, to refer to a person. However, you can use the possessive form *whose* with both animate and inanimate objects.

**Example (incorrect)**

Database administrators that require additional information ...

**Example (correct)**

Database administrators who require additional information ...

For more information about relative pronouns, see *Developing Quality Technical Information*, Chapter 7, “Correct pronoun problems.”

## Spelling

In general, use US English spelling in all publications.

**Examples (incorrect, not US English spelling)**

axe  
catalogue  
colour  
metre  
organise  
paycheque  
programme

**Examples (correct, US English spelling)**

ax  
catalog  
color  
meter  
organize  
paycheck  
program

If certain publications, such as marketing materials, are distributed only in regions that use a different spelling, such as UK English, decide which spelling is appropriate.

For the spelling and definition of nontechnical words, use the latest edition of *Merriam-Webster's Collegiate Dictionary* or see Merriam-Webster Online at [www.m-w.com](http://www.m-w.com). When the dictionary lists multiple spellings for a word, usually the first spelling is preferred.

For the spelling and definition of technical words, see the IBM Terminology website at [www.ibm.com/software/globalization/terminology](http://www.ibm.com/software/globalization/terminology).

For word usage information, see “Word usage” on page 300.

For more information about checking spelling, see *Developing Quality Technical Information*, Chapter 3, “Use tools that automate checking for accuracy.”

For more information about consistent spelling, see *Developing Quality Technical Information*, Chapter 7, “Use correct and consistent spelling.”

## Verbs

Use clear and succinct verbs with the appropriate mood, person, tense, and voice.

### General guidelines

Keep verbs clear and concise:

- Avoid using words that primarily function as verbs as nouns or adjectives. Verbs that are commonly misused as nouns or adjectives include *configure*, *compile*, *debug*, *fix*, and *install*.

#### Examples (incorrect)

after the compile  
during the install  
the debug function

#### Examples (correct)

after the compilation  
during the installation  
the debugging function

For more information about misusing verbs as nouns, see *Developing Quality Technical Information*, Chapter 5, “Avoid long strings of nouns.”

- Avoid using a phrasal verb (a verb and a preposition) if the verb alone provides the same meaning.

#### Examples (incorrect)

call up  
click on  
print out  
start up

**Examples (correct)**

call  
click  
print  
start

For more information about precise verbs and phrasal verbs, see *Developing Quality Technical Information*, Chapter 5, “Focus on the meaning” and “Choose direct words.”

- When you write a sentence that includes two coordinate clauses, do not omit the verb from the second clause.

**Example (incorrect)**

The file names are displayed in uppercase characters and the other file attributes in lowercase characters.

**Example (correct)**

The file names are displayed in uppercase characters, and the other file attributes are displayed in lowercase characters.

- When you use a verb phrase at the beginning of a sentence with a present participle, such as *creating*, or a past participle, such as *created*, make sure that the verb phrase modifies the correct word. Failure to do so results in a dangling modifier.

**Examples (incorrect)**

Having configured your environment, the program is ready to be used.  
Cleared of the corrupted data, you can now repopulate the repository.

**Examples (correct)**

After you configure your environment, you can use the program.  
After you clear the corrupted data, you can repopulate the repository.

For more information about dangling modifiers, see *Developing Quality Technical Information*, Chapter 7, “Correct dangling modifiers.”

## Mood

Use the appropriate mood for the information type:

- Use the imperative mood for requests or instructions, such as in procedures.

**Examples**

Before you install the product, back up your files.  
Select one or more check boxes.

- Use the indicative mood to specify information, such as facts and explanations.

#### **Examples**

The product provides a powerful way to store information.  
The computer cancels the action and stops all processing.

- Do not use the subjunctive mood in technical documentation.

#### **Examples (incorrect)**

If you were to save the file ...  
It is important that the file be saved ...

#### **Examples (correct)**

If you save the file ...  
**Important:** Save the file ...

For more information about mood, see *Developing Quality Technical Information*, Chapter 7, “Use the appropriate mood.”

## **Person**

Use the appropriate person for the information type.

### **First person**

Avoid using first person, which is indicated by the personal pronouns *I* and *we*. The first person focuses on the writer, not on the reader or the information being presented. The first person can also contribute to an overly informal tone.

#### **Examples (incorrect)**

I find some servers more difficult to configure.  
Let’s start by planning the home page for the website.  
We can add a model to the project that we created in the previous step.

#### **Examples (correct)**

Some servers can be more difficult to configure.  
Start by planning the home page for the website.  
You can add a model to the project that you created in the previous step.

The use of first person is acceptable in these situations:

- In the question portion of frequently asked questions (FAQs)
- In articles, white papers, or documents that have listed authors and in which the authors describe their own actions or opinions

#### **Examples (incorrect)**

**Q:** How does one change the properties of a class?

Tests were conducted on servers in three different environments.

#### **Examples (correct)**

**Q:** How do I change the properties of a class?

We conducted tests on servers in three different environments.

## **Second person**

As much as possible, use the second person, which is indicated by the personal pronoun *you*. The second person focuses on the reader.

#### **Example**

When you create a database, you must provide a unique name.

To instruct the user to perform an action, use the imperative mood. The subject of an imperative sentence is understood to be *you*.

#### **Example**

To begin processing, press Enter.

## **Third person**

Use the third person to describe concepts, facts, and results. The third person focuses on the information being presented. Most often, technical information is about things, not people. Therefore, the third person is indicated by nouns and third-person pronouns such as *it* and *they*. When you use the third person, do not use gender-specific pronouns, such as *he* and *she*, unless the context requires them.

#### **Examples**

The first three exercises show how to build complex models.

Specify whether users can add themselves to a project.

Peter recorded his test results in a spreadsheet program.

For more information about person, see *Developing Quality Technical Information*, Chapter 2, “Present information from the user’s point of view.”

## Tense

Write in the simple present tense as much as possible.

### Example (incorrect)

When you open the latch, the panel will slide forward.

### Example (correct)

When you open the latch, the panel slides forward.

Use past or future tense only when you cannot use present tense or it does not make sense to use present tense.

### Example (incorrect)

If you selected **New** in the previous window, the current window will display the recommended default values.

Cancel a broker deployment only if you are sure that the broker never responds to the deployment request.

### Example (correct)

If you selected **New** in the previous window, the current window displays the recommended default values.

Cancel a broker deployment only if you are sure that the broker will never respond to the deployment request.

For more information about tense, see *Developing Quality Technical Information*, Chapter 7, “Use the present tense.”

## Voice

Use active voice as much as possible. Active voice focuses on the performer of the action and is often clearer, shorter, and more direct than passive voice.

### Examples of passive voice and active voice

**Passive:** The Limits window is used to specify the minimum and maximum values.

**Active:** In the Limits window, specify the minimum and maximum values.

**Passive:** Up to 500 files can be stored in the database.

**Active:** You can store up to 500 files in the database.

Passive voice is acceptable when any of these conditions are true:

- The system performs the action.
- It is more appropriate to focus on the receiver of the action.
- You want to avoid blaming the user for an error, such as in an error message.
- The information is clearer in passive voice.
- Specific information types, such as glossary definitions, require passive voice.

#### **Examples of appropriate use of passive voice**

The file is saved when you press Enter.

When you use the **recover** command, any lost data is recovered.

Error: An incorrect value was entered.

For more information about voice, see *Developing Quality Technical Information*, Chapter 7, “Use active voice.”

# Punctuation

Follow these guidelines to apply correct and consistent punctuation.

For more information about punctuation, see *Developing Quality Technical Information*, Chapter 7, “Use consistent and appropriate punctuation.”

## Punctuation marks and special characters

Ensure that references in text to punctuation marks and special characters are clear. Special characters include symbols such as the ampersand (&) and the at sign (@).

Some punctuation marks and special characters are known by different English names in different geographic areas. For example, the number sign (#) is commonly referred to as the pound sign in the US and the hash sign in the UK. Use the names that are listed in the table in this topic.

## Individual punctuation marks or special characters

Follow these guidelines for individual punctuation marks or special characters:

- Do not refer to an individual punctuation mark or special character by its symbol alone. Use the name alone, or use the name followed by the symbol in parentheses. Use the name alone if the punctuation mark or special character is standard, such as a comma or period, and including the symbol would clutter the text. Include the symbol in parentheses when a punctuation mark or special character is not well known or when including the symbol improves clarity.

### Examples (incorrect)

A menu item with ... indicates that further user input is required.

Insert . after each sentence.

Use \* as a wildcard.

If the first character of the file name is >, the file name is rejected.



**Examples (correct)**

A menu item with an ellipsis (...) indicates that further user input is required.

Insert a period after each sentence.

Use an asterisk (\*) as a wildcard.

If the first character of the file name is a greater than symbol (>), the file name is rejected.

- If you refer to the punctuation mark or special character again close to the first occurrence, you can either repeat the name without the symbol in parentheses or refer to the punctuation mark or special character generically.

**Examples**

Use the forward slash (/) in a path name. Do not use the forward slash for any other purpose.

Use the forward slash (/) in a path name. Do not use this character for any other purpose.

- Do not use symbols instead of words in running text.

**Examples (incorrect)**

Specify a user name & password.

Type a telephone #.

The available space is the size of the disk - the amount of space that is required for the installation.

**Examples (correct)**

Specify a user name and password.

Type a telephone number.

The available space is the size of the disk minus the amount of space that is required for the installation.

- When you write about a user interface, do not include a punctuation mark, such as a colon or ellipsis, that is part of an interface element label unless one of the following conditions applies:
  - The omission of the punctuation mark causes confusion.
  - You use a tool that extracts the wording from the label, including any punctuation, for use in the documentation.

**Example (incorrect in most cases)**

Click **Save As...** and then type a file name.

**Example (correct in most cases)**

Click **Save As** and then type a file name.

## Series of punctuation marks or special characters

Follow these guidelines for a series of punctuation marks or special characters:

- Introduce the series with a complete sentence that ends with a colon.
- Place the series of symbols on the following line.
- To ensure that readers clearly interpret the items in the series, follow these guidelines:
  - Do not enclose the series in parentheses.
  - Do not separate the items with punctuation marks, such as commas.
  - Do not include coordinating conjunctions, such as *and*, between the items.
  - Do not punctuate the series with a final period. If the series includes a period, avoid placing it at the end of the series.
  - Do not include the names of the punctuation marks or special characters.

### Example

The password can contain any of the following characters:

# & . ^ ~

- Avoid using characters that are not supported in most standard code pages, especially in online information that is translated. In addition to standard punctuation marks, most code pages support the following special characters:

! # \$ % & \* + / < > @ \ ^ ~

- To sort punctuation marks and special characters, use the following ASCII sort sequence unless you use a tool that imposes a different sort sequence:

(space) ! " # \$ % & ' ( ) \* + , - . / : ; < = > ? @ [ \ ] ^ \_ ` { | } ~ ¢ > ≤ ÷ °

## Common punctuation marks and special characters

Use the names in the following table to refer to punctuation marks and special characters.

Symbol	Name	Symbol	Name	Symbol	Name
`	Acute accent	\$	Dollar sign	¶	Paragraph mark or carriage return
&	Ampersand	[ [ ] ]	Double brackets (pl.), opening double brackets, or closing double brackets	( )	Parentheses (pl.), opening parenthesis, or closing parenthesis
< >	Angle brackets (pl.), opening angle bracket, or closing angle bracket	" " or " "	Double quotation marks (pl.), opening quotation marks, or closing quotation marks (not <i>quotes</i> or <i>quote marks</i> )	%	Percent sign

Symbol	Name	Symbol	Name	Symbol	Name
' or '	Apostrophe	—	Em dash	Π	Pi symbol
*	Asterisk (not star)	–	En dash	±	Plus or minus sign
@	At sign	=	Equal sign (not <i>equals sign</i> )	+	Plus sign
\	Backslash	€	Euro sign	£	Pound sign
[ ]	Braces (pl.) opening brace, or closing brace (not curly brackets)	!	Exclamation point (not <i>exclamation mark</i> or <i>bang</i> )	?	Question mark
[ ]	Brackets (pl.), opening bracket, or closing bracket (not <i>square brackets</i> )	/	Forward slash (not <i>solidus</i> , <i>slash</i> , or <i>virgule</i> )	®	Registered trademark symbol
^	Caret or circumflex	`	Grave accent	§	Section indicator
¢	Cent sign	≥	Greater than or equal to symbol	;	Semicolon
✓	Check mark	>	Greater than symbol	' ' or " "	Single quotation marks, opening quotation mark, or closing quotation mark (not <i>quotes</i> or <i>quote marks</i> )
:	Colon	≤	Less than or equal to symbol		Space To explicitly indicate a space, use an open box symbol (□).
,	Comma	<	Less than symbol	~	Tilde
©	Copyright symbol	-	Minus sign or hyphen	™	Trademark symbol
†	Dagger	×	Multiplication sign	_	Underscore When it is under a character, use <i>underline</i> .
°	Degree symbol	≠	Not equal to symbol		Vertical bar
÷	Division sign	#	Number sign		
...	Ellipsis (s.) or ellipses (pl.)	.	Period (not <i>full stop</i> ) Use <i>dot</i> for the character in a web address or file name extension.		

## Apostrophes

Use an apostrophe in only some plural and possessive forms.

### Apostrophes in plurals

Most plural forms do not require an apostrophe. For example, form the plural of words, abbreviations, and numbers by adding the letter *s* alone.

Use an apostrophe and the letter *s* (*'s*) to form the plural of single letters.

#### Examples (incorrect)

Before the repair, the printer did not print uppercase *As* or lowercase *ms*.

Beginner typists often mistype 9s, *P*s, and *Z*s.

Several financial analysts classify the 1980's and 1990's as a bull market.

The basic learning requirements for any industry are often known as the ABC's.

#### Examples (correct)

Before the repair, the printer did not print uppercase *A's* or lowercase *m's*.

Beginner typists often mistype 9s, *P's*, and *Z's*.

Several financial analysts classify the 1980s and 1990s as a bull market.

The basic learning requirements for any industry are often known as the ABCs.

### Apostrophes in possessives

Follow these guidelines for using apostrophes in possessives:

- In general, use *'s* to show the possessive form of people.

#### Examples

Maria's computer needs a new processor.

The editor's desk is at the end of the hall.

- Avoid using *'s* to show the possessive form of inanimate objects. Make the possessive noun an adjective, or use the possessive noun in a prepositional phrase.

#### Example (incorrect)

Edit the object's properties.

#### Examples (correct)

Edit the object properties.

Edit the properties of the object.

- Do not use 's to show the possessive form of abbreviations, brand names, or product names.

**Examples (incorrect)**

The TCB's first eight words are used to save floating-point register 1.  
Use Rational Software Architect's views to model systems or applications.

**Examples (correct)**

The first eight words of the TCB are used to save floating-point register 1.  
Use the views in Rational Software Architect to model systems or applications.

- Do not use 's to show the possessive form of IBM unless you refer to only the company and do not identify goods or services.

**Example (incorrect)**

IBM's WebSphere® Application Server product family includes over 50 products.

**Examples (correct)**

The IBM WebSphere® Application Server product family includes over 50 products.  
IBM's focus on work/life balance is respected in the technology industry.

## Colons

Use a colon to indicate that closely related information follows.

### Colons in running text

Follow these guidelines for using colons in running text:

- Use a colon after an independent clause to introduce an inline list.

**Examples (incorrect)**

The product improved in: accessibility, ease of use, and functionality.  
Remember to: encrypt the hard disk drive and set a password.

**Examples (correct)**

The product improved in three categories: accessibility, ease of use, and functionality.  
Remember to take these security measures: encrypt the hard disk drive and set a password.

- Use a colon after the label of a note.

**Examples**

**Important:** Back up all data before you begin the migration.

**Tip:** You can also edit the object properties by right-clicking an object.

- Use a colon between two independent clauses to amplify, elaborate on, or show a close relationship to the first clause.

**Example**

Plan the configuration carefully: the initial settings are difficult to change after you add user accounts.

- Do not insert a space before a colon, and insert one space after.

## Colons in headings and titles

Do not use a colon at the end of a heading or title.

**Example (incorrect)**

Creating test cases:

**Example (correct)**

Creating test cases

Use a colon between a heading and subheading or between a title and subtitle. Do not insert a space before the colon, and insert one space after the colon. Capitalize the first letter of the subheading or subtitle.

**Examples**

Getting started: Model-driven development in the Java domain

When You Think Midmarket, Think IBM: Strategic Offerings for Midsize Businesses

## Colons after introductory text

Use a colon after the introduction to a vertical list, including a procedure or substeps in a procedure. To avoid translation problems, make the introduction a complete sentence. If a sentence intervenes between the introduction and the first item, use a period after both the introduction and the intervening sentence. For more information about introducing lists and procedures, see “Lists” on page 75 and see “Procedures” on page 84.

### Example (vertical list)

When you configure the computer, set the following items:

- Date and time
- Drive startup sequence
- Passwords

### Example (procedure)

To install the product, complete the following steps:

1. Click **Install program**.
2. In the wizard, follow the instructions on each page.
3. Click **Finish**.

### Example (substeps)

1. Connect the cables:
  - a. Connect the keyboard cable.
  - b. Connect the mouse cable.

Use a colon or a period after the introduction to a figure or table. For more information about introducing figures and tables, see “Figures” on page 90 and see “Tables” on page 96.

### Examples

The diagram should end with a stop node, as shown in the following figure:

The following table lists the UML properties and their corresponding C++ elements.

## Colons and capitalization

In general, use a lowercase letter on the text that immediately follows a colon.

### Examples

Three security measures are evaluated: a firewall, an encryption key, and a password.

The deletion is final: you cannot restore an element after you delete it.

Use an uppercase letter on the text that immediately follows a colon when the text is one of the following items:

- Item in a vertical list
- Note that follows a label
- Proper noun
- Quotation
- Subheading on the same line as a heading

### Examples

You can use the following background colors:

- Blue
- Green
- Red

**CAUTION:** Do not remove or install this unit without using the provided lift tool.

You can use the editor with the following programming languages: Java, C, and C++.

The manager's instructions were clear: "Submit the report by Monday."

Input/output operations: Move mode and locate mode

## Colons with numbers

Use colons to separate units of time. Do not insert a space before or after the colon.

### Examples

The status meeting starts at 9:30 a.m.

The last build finished running at 18:54:30.

Use colons to express ratios. Do not insert a space before or after the colon.

### Examples

Consumer sales increased 5:1 last quarter.

Reclaim space in your data center with 20:1 server consolidation.

## Commas

Use a comma to separate elements in a sentence, such as items in a series, clauses, or introductory phrases. If a sentence is complex or longer than 25 words, consider rewriting it, separating it into multiple sentences, or presenting its contents in a vertical list.

### Commas between clauses

Use a comma between independent clauses that are separated by a coordinating conjunction unless the clauses are short or closely related. Coordinating conjunctions are *and*, *but*, *or*, *nor*, *for*, *so*, and *yet*.

### Examples

Not only are companies outsourcing development, but they are outsourcing critical projects.

Click **Save** and type a file name.



*Then* is not a coordinating conjunction. You cannot join independent clauses with *then* unless you add a semicolon or a coordinating conjunction.

#### Examples (incorrect)

Click **Start** then select a program.

Click **Start**, then select a program.

#### Examples (correct)

Click **Start**; then select a program.

Click **Start** and then select a program.

Do not use a comma between an independent clause and a dependent clause that are separated by a coordinating conjunction unless the sentence might be misread without a comma.

#### Examples (incorrect)

The message includes an error code, and is displayed in three languages.

The host greeted the last participant who joined the conference call and started the meeting.

#### Examples (correct)

The message includes an error code and is displayed in three languages.

The host greeted the last participant who joined the conference call, and started the meeting.

## Commas after introductory words and phrases

Use a comma after most introductory words, clauses, and phrases.

#### Examples

However, most hardware components conform to this standard.

First, you create a project.

After you remove the lid, proceed to step 4.

In the diagram editor, right-click a diagram.

To move the model element, click **Refactor** > **Move**.

## Commas between items in a series

Use commas to separate items in a series of three or more. Use a comma before the conjunction that precedes the final item.

**Exception for marketing content:** In marketing content, use a comma before a conjunction only for clarity. For details and examples, see “Exceptions for marketing content” on page 274.

### Examples

A message window describes an error, explains how to correct it, and provides the controls to correct it.

Present the items in a meaningful order, such as alphabetically, numerically, or chronologically.

Do not add commas or conjunctions between the items in a series of special characters.

### Example (incorrect)

The name can contain any of the following characters:

#, &, ., ^, and ~.

### Example (correct)

The name can contain any of the following characters:

# & . ^ ~

## Commas with nonrestrictive clauses

Always use a comma before a nonrestrictive clause, which begins with the word *which*. Do not use a comma before a restrictive clause, which begins with the word *that*.

### Examples

The Recovery log, which is generated automatically, shows the cause of the problem.

The Recovery log that contains the most recent information is located in the `current_logs` folder.

For more information about using commas with nonrestrictive clauses, see *Developing Quality Technical Information*, Chapter 7, “Correct pronoun problems.”

## Commas as separators in numbers

Specific rules apply to using commas as separators in numbers based on the length of the numbers and how they are used in a sentence. For details about using commas as separators in numbers, see “Separators in numbers” on page 159.

## Commas with quotation marks

In most cases, place commas inside closing quotation marks. For details about using commas with quotation marks, see “Quotation marks with other punctuation” on page 66.

## Dashes

Do not use en dashes or em dashes in technical information.

### En dashes

The en dash (–) derives its name from typesetting: the length of an en dash is the width of an uppercase *N* in the same font. En dashes are longer than hyphens (-) and shorter than em dashes (—). Most keyboards do not have a key for an en dash.

Do not use en dashes; use hyphens instead.

#### Examples (en dashes)

letters A–J

numbers 1–5

Leave a clearance of 1.02–1.77 in. (26–45 mm).

#### Examples (hyphens)

letters A - J

numbers 1 - 5

Leave a clearance of 1.02 in. - 1.77 in. (26 mm - 45 mm).

## Em dashes

The em dash also derives its name from typesetting: the length of an em dash is the width of an uppercase *M* in the same font. Em dashes are longer than both hyphens and en dashes. Most keyboards do not have a key for an em dash, but many authoring tools provide a symbol for an em dash, and some authoring tools create an em dash if you type two hyphens together.

Do not use em dashes in technical information. More common punctuation marks, such as commas, parentheses, or a colon, provide the same result. Rewrite the text or use different punctuation.

**Exception for marketing content:** Em dashes are acceptable in marketing content. For details and examples, see “Exceptions for marketing content” on page 274.

### Examples (em dash)

Security, reliability, scalability, and availability—these are priorities for an enterprise system.  
Many employees—including managers—enroll in the stock-purchasing program.  
If you make a mistake—for example, a typographical error—you can correct it easily.  
You can apply a pattern in two ways—you can select an existing pattern or create a new one.

### Examples (common punctuation marks)

Security, reliability, scalability, and availability are priorities for an enterprise system.  
Many employees, including managers, enroll in the stock-purchasing program.  
If you make a mistake (for example, a typographical error), you can correct it easily.  
You can apply a pattern in two ways: you can select an existing pattern or create a new one.

## Ellipses

Avoid using ellipses in running text. If you use an ellipsis, apply the correct spacing.

### Ellipses in running text

Usually, an ellipsis in text indicates a pause or an omission. Avoid using ellipses in technical information because the omission can be unclear and because ellipses can contribute to an overly informal tone. In general, include information that is important and eliminate information that is not.

**Exception for marketing content:** An ellipsis to show a pause is acceptable in some marketing content. For details and examples, see “Exceptions for marketing content” on page 274.

### Ellipses in examples and quotations

You can use an ellipsis in an example or quotation if you can convey the information without presenting the entire text. However, do not use ellipses at the beginning or end of a direct quotation; start and end quotations with words, even when the text is truncated.

#### Examples

Use *select* for check boxes and use *click* for radio buttons, as in the following examples:

- Select the **Prompt before saving** check box to ...
- Click **Prompt before saving** to ...

He started the seminar by explaining that “many small businesses ... are not profitable for a few years.”

## Ellipses in user interfaces

Usually, an ellipsis in a user interface element indicates that more user input is required to complete an action. When you write about a user interface, do not include ellipses that are part of an interface element label unless one of the following conditions applies:

- The omission of the ellipsis causes confusion.
- You use a tool that extracts the wording from the label, including any punctuation, for use in the documentation.

### **Example (incorrect in most cases)**

Click **Save As...** and type a file name.

### **Example (correct in most cases)**

Click **Save As** and type a file name.

## Spacing and punctuation with ellipses

For ellipses in user interfaces, apply the spacing that the interface design guidelines for the product specify, or be consistent with existing instances in the interface.

For ellipses in text, some authoring tools provide an ellipsis symbol with default spacing between the periods. If you do not use a symbol and you type an ellipsis, do not insert spaces between the periods in the ellipsis.

For both ellipsis symbols and typed ellipses in text, follow these spacing guidelines:

- Insert one space before the ellipsis.
- Insert one space after the ellipsis, unless a punctuation mark follows the ellipsis. In that case, do not insert a space between them.
- Keep all the periods in an ellipsis together on one line.

### **Examples**

Use a comma after most introductory words, clauses, and phrases, as in the following examples:

- To create a diagram, ...
- In general, ...

He concluded the seminar with this advice: “Plan for startup costs ... and expect the unexpected.”

## Exclamation points

Do not punctuate sentences with exclamation points because their tone can be interpreted negatively, for example, as aggressive, condescending, or overly informal.

Convey urgency or emphasis with the appropriate words, not with exclamation points. To call attention to important hints, tips, guidance, restrictions, or advice that might be overlooked, consider using a note that has a meaningful label.

### Examples (incorrect)

Complete this step first!

You must change the default settings!

You completed the first lesson in the tutorial!

### Examples (correct)

You must complete this step first.

**Important:** You must change the default settings.

You completed the first lesson in the tutorial.

For more information about tone, see *Developing Quality Technical Information*, Chapter 7, “Write with the appropriate tone.”

## Hyphens

Use hyphens to increase clarity by connecting related information. For example, use hyphens in compound adjectives to show which words modify another word, and use hyphens with numbers to show how they relate to measurements, words, or other numbers.

### Hyphens with prefixes and suffixes

In most cases, do not use a hyphen to connect a prefix or suffix to a word. Typically, a hyphen is unnecessary if a reader can read the word accurately without a hyphen.

To determine whether to hyphenate a prefix, consult *Merriam-Webster’s Collegiate Dictionary*. If the dictionary does not contain a word or provide a precedent, follow the guidelines for hyphenating prefixes in *The Chicago Manual of Style*. Both references favor a closed style for prefixes, which omits the hyphen when possible.

Generally, hyphenate a prefix only to prevent misreading or ambiguity. Specifically, hyphenate a prefix in the following situations:

- When *Merriam-Webster* uses a hyphen (for example, *bi-level*, *co-edition*)
- When you must distinguish the word from a homonym (for example, *co-op*, *re-cover*, *re-create*, *re-sign*)
- When the root word is capitalized or a numeral (for example, *pre-2000*)
- When the root word consists of more than one word (for example, *non-English-speaking citizens*, *pre-latency-period transaction*)
- In some words in which identical letters would be next to each other (for example, *anti-intellectual*, *bell-like*, *co-opt*, *de-emphasize*)
- When the prefix is *self-*, *all-*, or *ex-* (meaning *formerly*)

The following table lists common prefixes and examples of when to omit or use a hyphen:

Prefix	Examples
ante	antedate, anteroom
anti	antilogical, antispeculation, <i>but</i> anti-inflammatory, anti-intellectual
bi	biannual, bidirectional, biweekly, <i>but</i> bi-level
bio	biochemical, bioengineering
co	coauthor, coexistence, cooperate, coordinate, corequisite, coworker, <i>but</i> co-edition, co-opt
counter	counterclockwise, countermeasures
extra	extralinguistic, extrapartition
infra	infrared, infrastructure
inter	interactive, intercept
intra	intranode, intrapartition, intrarecord, intrasystem
macro	macroinstruction, macrostructure
meta	metaclass, metadata, metafile, metatable
micro	microchip, microcircuit, microcode, microfiche
mid	midterm, midyear
mini	minicomputer, minicourse, minidisk
multi	multichannel, multimedia, multiplexer, multipoint, multiprocessor, multitiered
non	noncontiguous, nonheap, noninteractive, nonlinear, nonpaired, nonsystem, nonzero
over	overlay, override, overstrike

Prefix	Examples
post	postediting, postinstallation, postmortem, postoperation, postrequisite
pre	preapply, preassembled, precompile, predefined, preenrollment, preestablish, preinstallation, preoperational, preprocessor, preruntime, preunite
pro	progovernment, proinsulin, pronuclear
pseudo	pseudocode, pseudorandom, pseudotext
re	redit, reentrant, reexamine, resynchronize, <i>but</i> re-cover (cover again), re-create (create again)
semi	semicolon, semiconductor, <i>but</i> semi-indirect
sub	subaddress, subarea, subcapacity, subclass, subfile, subnet, subnetwork
super	superclass, superobject, superscript
supra	supranational, supravital
trans	transinformation, transvalue
ultra	ultrafiche, ultraviolet
un	unavailable, uncommitted, unformatted, unordered
under	underlying, underrun, underused

## Hyphens with compound words

To clarify which noun is being modified, avoid long compound phrases and noun strings, and use hyphens where appropriate. Consider using a prepositional phrase after a noun instead of a compound adjective.

For more information about avoiding noun strings, see *Developing Quality Technical Information*, Chapter 5, “Avoid long strings of nouns.”

When you write compound phrases, use hyphens to avoid ambiguity, but do not use hyphens unnecessarily. Follow these guidelines:

- Hyphenate compound adjectives and adverbs before a noun if readers might misinterpret the term or phrase.

### Examples (ambiguous)

operating system file (a system file that is operating *or* the file for the operating system)  
 well formed XML  
 once only delivery

### Examples (clear)

operating-system file (the file for the operating system)  
 well-formed XML  
 once-only delivery



- Do not use a hyphen after an adverb or adjective that ends in *-ly* because such terms are never ambiguous.

**Examples (incorrect)**

fully-qualified path  
highly-parallel processing  
monthly-maintenance schedule

**Examples (correct)**

fully qualified path  
highly parallel processing  
monthly maintenance schedule

- In most cases, when a compound adjective follows a noun, do not hyphenate it. In some cases, a hyphen is necessary to avoid ambiguity.

**Examples**

The command is case sensitive.  
Several programming languages are object oriented.  
The issue is thought provoking. (The issue is thought of as provoking.)  
The issue is thought-provoking. (The issue provokes thoughts.)

- Hyphenate all the words that function as the compound adjective before the noun.

**Examples**

state-of-the-art technology  
multiple-phase-commit transactions

- Hyphenate the prefix to a hyphenated compound.

**Example**

non-case-sensitive languages

- When hyphenated compounds in a series have the same first word or last word, repeat the common word. Omitting words makes translation more difficult and slows comprehension.

**Examples (incorrect)**

F-, U-, and V-mode files  
For type-1, -2, and -3 SVC routines

**Examples (correct)**

F-mode, U-mode, and V-mode files  
For type-1, type-2, and type-3 SVC routines

## Hyphens and capitalization

Apply the following capitalization guidelines to hyphenated words:

- When a hyphenated word occurs at the beginning of a sentence, capitalize only the first element in the word unless a subsequent element is a proper noun or proper adjective.

### **Examples (incorrect)**

Power-Saving techniques are important for notebook users.

All-american manufacturing is less common than it used to be.

### **Examples (correct)**

Power-saving techniques are important for notebook users.

All-American manufacturing is less common than it used to be.

- When a hyphenated word occurs at the beginning of a heading with sentence-style capitalization, capitalize only the first element in the word unless a subsequent element is a proper noun or proper adjective.

### **Examples (incorrect)**

Case-Sensitive languages

Non-European-Based companies

### **Examples (correct)**

Case-sensitive languages

Non-European-based companies

- When a hyphenated word occurs in a heading with headline-style capitalization, capitalize the first element in the word; the last element in the word, regardless of its part of speech; and any element that is not an article, preposition, or coordinating conjunction.

### **Examples (incorrect)**

Designing Interfaces for Non-English-speaking Users

Self-contained Sensors

Once-a-day Notifications

### **Examples (correct)**

Designing Interfaces for Non-English-Speaking Users

Self-Contained Sensors

Once-a-Day Notifications

## Hyphens with numbers

Use hyphens in some spelled-out numbers and in some number compounds. For details about using hyphens with numbers, see “Expressing numbers” on page 155.

## Hyphens with ranges

Follow these guidelines for using hyphens with ranges:

- Use a hyphen to show a range of items, such as numbers, letters, pages, dates, or codes. Insert a space before and after the hyphen.

### Examples

numbers 12 - 15

pages 100 - 107

X'41' - X'FE'

September - December

- Do not use words such as *from* or *between* to show a range; it is not clear whether the items are the boundaries of the range or are included in the range.

### Examples (incorrect)

letters from A - J

messages between IGY3009 and IGY3020

### Examples (correct)

letters A - J

messages IGY3009 - IGY3020

- If a number range is part of a compound adjective, hyphenate only the number and unit. You can omit the unit from the first compound in a number range.

### Examples (incorrect)

a 1-character-through-8-character field

a 1-through-8-character field

### Examples (correct)

a 1-character through 8-character field

a 1- through 8-character field

For details about how to show a range of measurements, see “Ranges of numbers” on page 159.

## Parentheses

Use parentheses to identify items such as abbreviations, symbols, and measurements, but avoid using parentheses in running text.

### Parentheses with abbreviations, symbols, and measurements

If you write out the name of an abbreviation, punctuation mark, or special character, enclose the abbreviation, mark, or character in parentheses following the text. If you provide a measurement, you can include an equivalent value from an alternative system in parentheses following the measurement.

#### Examples

The Object Management Group (OMG) maintains specifications for the Unified Modeling Language (UML).

Object names cannot contain characters such as dollar signs (\$) or question marks (?).

One rack unit is 44.45 mm (1.75 in.) high.

### Parentheses to form plurals

Do not use the letter *s* in parentheses (*s*) to indicate that a noun can be singular or plural. Some languages form plural nouns differently than English, and the construction (*s*) can cause translation problems. Instead, use the plural form or, if it is important to indicate both singular and plural options, use the phrase *one or more*.

#### Example (incorrect)

Select the item(s) from the list.

#### Examples (correct)

Select the items from the list.

Select one or more items from the list.

### Parentheses in running text

Avoid using parentheses in running text because text in parentheses is decreased in importance. In general, include information that is important and eliminate information that is not. Parentheses can also interrupt the flow of a sentence. Try to rewrite the text or use other punctuation instead of parentheses. If you must write a sentence that includes text in parentheses, ensure that the sentence is grammatically correct and technically accurate if you omit the parenthetical text.

**Examples (incorrect)**

The fan (and the enclosure) are optional.

The installation finished (but some files might not have been installed).

To remove static electricity, touch the device to a (metal) part of the system.

**Examples (corrected to eliminate the parentheses)**

The fan and the enclosure are optional.

The installation finished, but some files might not have been installed.

To remove static electricity, touch the device to a metal part of the system.

If the parenthetical text is not a complete sentence, include the parenthetical text in the sentence to which it pertains. Do not use an initial uppercase letter on the first word unless it is otherwise required, and do not insert a period inside the parentheses.

**Examples (incorrect)**

You can sort the work items by their state (open, working, or closed.)

Install the bracket (Included in the kit).

**Examples (correct)**

You can sort the work items by their state (open, working, or closed).

You can sort the work items by their state: open, working, or closed. [Preferred]

Install the bracket (included in the kit).

Install the bracket, which is included in the kit. [Preferred]

If the parenthetical text is a complete sentence, you can either include the parenthetical sentence in the sentence to which it pertains or you can enclose it in parentheses as a separate sentence. If you include the parenthetical sentence in the sentence to which it pertains, do not use an initial uppercase letter on the first word, and do not insert a period inside the parentheses. If the parenthetical text is a separate sentence, use an initial uppercase letter on the first word, and insert the period inside the parentheses.

**Examples**

You cannot include punctuation marks in the name (you are prompted to remove punctuation marks if you include them).

You cannot include punctuation marks in the name. (You are prompted to remove punctuation marks if you include them.)

You cannot include punctuation marks in the name. You are prompted to remove punctuation marks if you include them. [Preferred]

## Periods

Use periods correctly.

### Periods in running text

Use a period at the end of a sentence. After a period, use the spacing that your authoring tool provides. If you insert spacing manually, insert only one space after a period.

### Periods with abbreviations

Follow these guidelines for using periods in abbreviations:

- Omit periods in uppercase abbreviations.

#### **Examples (incorrect)**

E.S.T.

I.D.

U.S.

#### **Examples (correct)**

EST

ID

US

- Include periods in lowercase abbreviations that relate to time or that can be confused with words.

#### **Examples**

a.m.

p.m.

hr.

yr.

no.

- Omit periods in abbreviations for units of measure, unless they can be confused with words.

#### **Examples (incorrect)**

b.p.s

r.p.m.

in

**Examples (correct)**

bps  
rpm  
in.

- Omit periods in abbreviations for academic degrees.

**Examples**

BA  
MA  
PhD

- Include periods in abbreviations for social titles.

**Examples**

Dr.  
Ms.  
Jr.

- If an abbreviation that requires a period occurs at the end of a sentence, do not include another period.

**Example (incorrect)**

The meeting starts at 9:00 a.m..

**Example (correct)**

The meeting starts at 9:00 a.m.

## Periods with file name extensions

Include a period before a file name extension. Assume that the period in a file name extension, such as `.exe`, is pronounced as *dot*, and use the indefinite article *a*.

**Example**

Save your notes in a `.txt` file.

## Periods in headings and titles

Do not end a heading with a period.

### **Example (incorrect)**

Creating test cases.

### **Example (correct)**

Creating test cases

In books, use a period in titles for chapters and appendixes. Insert the period after the name of the entity and the identifying number or letter and before the descriptive name.

### **Examples**

Chapter 1. Introduction to InfoBase

Appendix A. Performance considerations

Appendix B. Conversion tables

## Periods after introductory text

Use a period or a colon after the introduction to a figure or table. For more information about introducing figures and tables, see “Figures” on page 90 and see “Tables” on page 96.

### **Examples**

The diagram should end with a stop node, as shown in the following figure:

The following table lists the UML properties and their corresponding C++ elements.

Use a period after the introduction to a vertical list, including a procedure or substeps in a procedure, when a sentence intervenes between the introduction and the first item. For more information about introducing lists and procedures, see “Lists” on page 75 and see “Procedures” on page 84.

### **Example (vertical list)**

When you configure the computer, set the following items. The order in which you set them does not matter.

- Date and time
- Drive startup sequence
- Passwords



### Example (procedure)

To install the product, complete the following steps. This procedure installs the program in the default location.

1. Click **Install program**.
2. In the wizard, follow the instructions on each page.
3. Click **Finish**.

### Example (substeps)

1. Connect the cables. The connectors are color coded.
  - a. Connect the keyboard cable to the red keyboard connector.
  - b. Connect the mouse cable to the blue mouse connector.

## Periods with lists

Write lists so that all or none of the items start with complete sentences. If list items comprise only complete sentences, include a period after each sentence.

### Example (complete sentences)

1. Remove the cover.
2. Remove the adapter.
3. Replace the adapter.
4. Replace the cover.

If list items comprise only sentence fragments, do not include any end punctuation.

### Example (fragments)

Consider these factors when you design a web page:

- Background patterns and images
- Font styles and colors
- Layout options

If a list contains list items that start with sentence fragments, and one or more of the fragments are followed by complete sentences, include periods after all sentence fragments and sentences.

### Example

Session management can store session-related information in several ways:

- In application server memory. This storage option is local to the application server and cannot be shared with other application servers.
- In a database.
- In another WebSphere Application Server instance.

## Periods with numbers

Use a period on the line (.), not a raised dot (·), as a decimal separator unless the comma (,) is a legal requirement in the particular country for which you are writing.

### Examples (incorrect in most cases)

The clearance is 4·6 cm (1·8 in.).

The clearance is 4,6 cm (1,8 in.).

### Example (correct in most cases)

The clearance is 4.6 cm (1.8 in.).

## Periods with parentheses

If the parenthetical text is not a complete sentence, do not insert a period inside the parentheses.

### Example (incorrect)

You can sort the work items by their state (open, working, or closed.)

### Example (correct)

You can sort the work items by their state (open, working, or closed).

If the parenthetical text is a complete sentence, you can either include the parenthetical sentence in the sentence to which it pertains or in parentheses as a separate sentence. If you include the parenthetical sentence in the sentence to which it pertains, do not insert a period inside the parentheses. If the parenthetical text is a separate sentence, insert the period inside the parentheses.

### Examples

You cannot include punctuation marks in the name (you are prompted to remove punctuation marks if you include them).

You cannot include punctuation marks in the name. (You are prompted to remove punctuation marks if you include them.)

## Periods with quotation marks

In most cases, place periods inside closing quotation marks. For details about using periods with quotation marks, see “Quotation marks with other punctuation” on page 66.

## Quotation marks

Use double quotation marks (") and single quotation marks (') correctly.

### Terminology for quotation marks

The term *quotation mark* refers generically to a double quotation mark character or a single quotation mark character. When you refer to quotation marks in text, specify whether you mean double quotation marks or single quotation marks.

To refer to the position of the characters, use the terms *opening* and *closing*.

#### Example

Ensure that each set of opening quotation marks has a matching set of closing quotation marks.

Do not use the term *quotes* to refer to quotation marks or to the text between quotation marks. Use the term *quote* only as a verb, and use *quotation* as the noun.

#### Examples (incorrect)

Enclose the value in quotes.

The introduction includes an infamous quote.

#### Examples (correct)

Enclose the value in double quotation marks.

The introduction includes an infamous quotation.

## Quotation marks for emphasis

Do not use quotation marks to emphasize words or phrases. Quotation marks can clutter the text. To emphasize words as words, use italic font. To call attention to information that might be overlooked, consider using a note that has a meaningful label.

#### Examples (incorrect)

The service processor is also referred to as the 'baseboard management controller.'

"Do not" close the lid until the unit is seated.

#### Examples (correct)

The service processor is also referred to as the *baseboard management controller*.

**Important:** Do not close the lid until the unit is seated.

## Double quotation marks

Use double quotation marks for the following items:

- Quotations

### Examples

A related article reported that “stock price does not always reflect the intrinsic value of a company.”

The minutes for the meeting stated “18 attendees voted in favor of the proposal.”

- Words that are used in a special sense

### Examples

You can use this functionality to “push” data to the server.

The “enhanced” version has fewer features than the standard version.

Use double quotation marks for a word that is used in a special sense only if no other word clearly expresses the meaning. Do not overuse quotation marks for this purpose. Using a word in a special sense can cause problems for translation.

- References to topic titles, section titles, chapter titles, or online information

### Examples

For more information about rule creation, see “Rules” and “Creating rules.”

For a historical analysis of design methodology, see Chapter 2, “Methods and madness.”

To learn about resiliency solutions, see the recorded webcast “Mitigating risk in an ever-changing world.”

- Names of these items, when they have sentence-style capitalization:

- Notebooks
- Pages
- Panes
- Portals
- Portlets
- Windows
- Wizards

### Examples

In the “Open the remote database” window ...

In the “Set up backup files” wizard ...

On the “Warnings and messages” page ...

## Single quotation marks

Use single quotation marks for the following items:

- Quotation marks inside double quotation marks

### Example

After the conference, he explained “When she said ‘Know your target audience,’ I knew we had work to do.”

- Code examples, code syntax, and programming elements that require single quotation marks

### Examples

```
&NAME = 'JANE B. DORMANZ'
```

```
Execution PARM='CORE=200000,DBRC=N'
```

- Hexadecimal numbers

### Examples

```
X'C1'
```

```
X'14'
```

## Quotation marks with other punctuation

In most cases, place commas and periods inside closing quotation marks, and place other punctuation marks outside.

### Examples

For more information, see the chapter named “Semantic tagging,” which provides examples and a tutorial.

She said, “You meet all the requirements for promotion.”

Unless a punctuation mark is part of the syntax, do not place a punctuation mark inside the quotation marks of these items:

- Coding statements
- Symbolic names
- Hexadecimal, binary, or octal values
- Other programming elements that use quotation marks

## Examples

If you use the keyword operand `PGMID= "PAYCOM"`, you must ...

In the program segment, ensure that the value is `X'FF'`.

Use the following code in the calendar application:

```
vout("Mon", "Tues", "Wed", "Thurs", "Fri")
```

When possible, rewrite the text to move the comma away from the quotation marks of these items.

## Typographical considerations for quotation marks

You can generate quotation marks directly through the keyboard or by using tagging in an authoring tool. Use the correct characters for the context and be consistent.

Some contexts require these typographic characters:

- Opening quotation mark (‘): Unicode X'2018'
- Closing quotation mark (’): Unicode X'2019'
- Opening quotation marks (‘‘): Unicode X'201C'
- Closing quotation marks (’’): Unicode X'201D'

Other contexts require straight keyboard characters:

- Straight single quotation mark ('): Unicode X'0027'
- Straight double quotation marks ("): Unicode X'0022'

For example, always use keyboard characters for code examples, code syntax, and hexadecimal numbers that use the format `X'nn'`.

If you use typographic characters in an authoring tool, they might not transfer well to other tools or programs. In many cases, it is safer to consistently use straight keyboard characters.

## Semicolons

Use a semicolon to separate independent clauses or items in a series that has internal punctuation. If a sentence is complex, difficult to read, or longer than 25 words, consider rewriting it, separating it into multiple sentences, or presenting its contents in a vertical list.

## Semicolons between independent clauses

Use a semicolon between independent clauses that are not connected by a coordinating conjunction. Coordinating conjunctions are *and*, *but*, *or*, *nor*, *for*, *so*, and *yet*. Use a coordinating conjunction when you need to show the relationship between clauses; use a semicolon when the relationship between clauses is clear.

### Examples

Remove the lid carefully; place it on a soft surface.

Type the command as shown; the program is case sensitive.

Use a semicolon between independent clauses that are connected by a conjunctive adverb or a transitional phrase. Conjunctive adverbs include *also*, *besides*, *consequently*, *conversely*, *finally*, *however*, *instead*, *likewise*, *next*, *otherwise*, *similarly*, *specifically*, *still*, *subsequently*, *then*, and *therefore*. Transitional phrases include *at the same time*, *for example*, *in addition*, and *on the contrary*.

### Examples

AS/400e™ is sold worldwide; however, the US market remains a major focus.

Enter a command; for example, type **SETUP**.

Right-click the selected text; then click **Text Properties**.

## Semicolons between items in a series

Use a semicolon between items in a series that has internal punctuation.

### Examples

Save the executable file, `run.exe`; the readme file, `rm.txt`; and the image for the splash screen, `screen.jpg`.

You can press the yellow, green, or blue button; the off switch; or the mouse button.

For more information about misusing semicolons, see *Developing Quality Technical Information*, Chapter 7, “Check for sentence fragments.”

## Slashes

Avoid using forward slashes (/) and backslashes (\) in most text and in dates.

## Slashes in running text

Follow these guidelines for using slashes in running text:

- In most cases, do not use slashes in text because they can be ambiguous. For example, *1/2* can mean *one half*, *one and two*, *one of two*, and *one or two*. Rewrite the text using *and*, *of*, or *or*:

### Examples (incorrect)

The meeting has a scheduled tea/coffee break.

You must complete 3/4 tasks.

An emergency contact is often a relative/close friend.

### Examples (correct)

The meeting has a scheduled tea and coffee break.

You must complete three of four tasks.

An emergency contact is often a relative or close friend.

- Do not use the construction *and/or*, which can cause confusion and problems for translation. Instead, clarify the options by using *and* or *or*, or by stating the choices, such as *option A*, *option B*, or *both*.

### Example (incorrect)

Connect your printer and/or scanner to the computer.

### Examples (correct)

Connect your printer and scanner to the computer.

Connect your printer or scanner to the computer.

Connect your printer, scanner, or both to the computer.

For more information about writing for translation, see *Developing Quality Technical Information*, Chapter 11, “Applying quality characteristics to information for an international audience.”

- In a few cases, use a forward slash between words when the slash construction is an industry standard.

### Examples

client/server

I/O

input/output

publish/subscribe

read/write



- Do not insert a space before or after a forward slash or backslash.

**Example (incorrect)**

input / output

**Example (correct)**

input/output

## Slashes in dates

Do not use slashes in dates. For guidelines on how to express dates, see “Dates” on page 178.

## Slashes in fractions

Whenever possible, use decimal numerals instead of fractions to represent fractional parts of units.

**Examples (avoid)**

1 1/2

3 3/4

**Examples (prefer)**

1.5

3.75

## Slashes in mathematical equations

Use a forward slash (/) as an operational symbol for division. Do not insert a space before or after the forward slash.

**Example**
$$(a + b)/(c + d) = -5$$

## Slashes in path names

When you refer to a subdirectory by using a full path name, such as `/usr/bin/samples`, use a forward slash (/) or backslash (\) according to the convention of the operating system. For information that applies to multiple operating systems, be consistent and describe the convention if necessary.

**Example**

Windows operating systems use a backslash (\) to delimit directories in a directory path. AIX operating systems and web addresses use a forward slash (/) as a delimiter. This information uses forward slashes for all delimiters. Depending on your operating system, you might have to enter directory paths differently from what is shown in the examples.

If a path does not fit on one line, end the first line after an existing forward slash or backslash, and continue the path on the next line. Do not add a hyphen to indicate a break in a path.

**Example (incorrect)**

```
C:\Documents and Settings\Administrator\IBM\Lotus\Symphony\appli-
cations\eclipse\plugins
```

**Example (correct)**

```
C:\Documents and Settings\Administrator\IBM\Lotus\Symphony\
applications\eclipse\plugins
```

## Slashes in web addresses

Follow these guidelines for using slashes in web addresses:

- If the protocol of a web address is HTTP, you can typically omit the protocol, colon, and forward slashes (`http://`); most browsers default to an HTTP connection. However, some tools convert addresses into live links and require the full address, including `http://`. If the protocol is not HTTP, include the protocol in the web address.

**Examples (incorrect)**

```
http://www.ibm.com
ftp.ibm.com
```

**Examples (correct)**

```
www.ibm.com
ftp://ftp.ibm.com
```

- Do not include a forward slash at the end of a web address.

**Examples (incorrect)**

```
www.ibm.com/
```

**Examples (correct)**

```
www.ibm.com
```

- If a web address does not fit on one line, end the first line after an existing forward slash (/) or double forward slash (//), and continue the address on the next line. Do not add a hyphen to indicate a break in a web address.

**Example (incorrect)**

```
www.ibm.com/software/commerce/net.-
commerce/action.html
```

**Example (correct)**

www.ibm.com/software/commerce/  
net.commerce/action.html

# **Formatting and organization**

Follow these guidelines to format and organize information so that it stands out and is easy to locate.

## **Headings**

Use headings to organize information into a logical structure.

### **Format of headings**

Format headings consistently and logically:

- In books and topic-based information, do not number headings other than chapter titles. Numbering headings and subheadings is acceptable in articles, white papers, quick start guides, and other shorter publications.
- Make sure that the typographic style is consistent for each heading of a particular level in your publication. Use the formatting features of your authoring tool to apply a consistent style.
- Avoid placing one heading directly after another without text between the two. If the text that separates headings is trivial, one of the headings might be unnecessary. Consider reorganizing the information.

## Wording of headings

Make headings brief and descriptive. Use the appropriate type of heading for each information type:

- Use gerunds for headings of tasks. If the subject is a functional overview, use a heading such as *Introduction* or *Overview* rather than a pseudo-task-oriented heading that begins with *Understanding*, *Introducing*, or *Learning*.

### Examples (incorrect)

Install the client program  
Understanding client/server communications

### Examples (correct)

Installing the client program  
Introduction to client/server communications

- Use nouns or noun phrases for headings of concepts or reference information.

### Examples

Industrial waste solutions  
Keyboard shortcuts for transformations

- If a heading is clearly about a singular item, use the singular form. If the item can be either singular or plural, use the plural form.

### Examples

Unpacking the system  
Changing payment instructions

- Use question-style headings, such as “How do I subscribe to updates?” only in troubleshooting topics and frequently asked questions (FAQs). Do not use question-style headings in concept, task, and reference topics.

**Exception for marketing content:** Questions are sometimes allowed as headings in marketing documents. For details and examples, see “Exceptions for marketing content” on page 274.

## Punctuation with headings

Use appropriate punctuation in headings:

- Do not end a heading with a period or colon.
- Use a colon between a heading and subheading; do not use parentheses or dashes. Do not insert a space before the colon, and insert one space after the colon. Capitalize the first letter of the subheading.

### **Examples**

Configuring Maximo® Database Properties: WebSphere® Application Server  
Plug and receptacle types: By country or region

- In books, use a period in titles for chapters and appendixes. Insert the period after the name of the entity and the identifying number or letter and before the descriptive name.

### **Examples**

Chapter 1. Introduction to InfoBase  
Appendix A. Performance considerations  
Appendix B. Conversion tables

## **Abbreviations in headings**

Avoid using abbreviations in headings unless an abbreviation is well known or the spelled-out form is too long. If you use an abbreviation for the first time in a heading, ensure that you include the spelled-out form either in the heading or in the text that immediately follows the heading.

### **Examples**

#### **Creating Unified Modeling Language diagrams**

You can use Unified Modeling Language (UML) diagrams to model complex systems.

#### **Creating UML diagrams**

You can use Unified Modeling Language (UML) diagrams to model complex systems.

#### **Creating Unified Modeling Language (UML) diagrams**

You can use UML diagrams to model complex systems.

## **Lists**

Use a vertical list to visually organize a long series at the end of a sentence or a series of parallel sentences or paragraphs.

Lists can make information easier to read and to translate, if they are not too long. Avoid in-sentence enumerations in technical information. Do not overuse lists; text that consists of a series of vertical lists that are loosely tied together with short introductory sentences can look more like an outline than a finished work.

## Unordered lists

Use an unordered (bulleted) list when the sequence of list items is not significant. In an unordered list, arrange list items in a logical way. If there is no better method for arranging them, put them in alphabetical order. If you group items in a way that is not obvious, briefly explain how you grouped them. Where applicable, list the products of your own company first, for example in lists of hardware or software.

### Example

When you configure the computer, you can use the program to set the following items:

- Date and time
- Passwords
- Drive startup sequence

## Ordered lists

Use an ordered (numbered) list when the sequence is significant, for example, when writing procedures or ranking items. If the items in a list represent rules or other types of information that you want to refer to, you can refer to them by number. For example, in a list of rules, the item numbered 1 is implied to be Rule 1. For guidelines about writing procedural steps, see “Procedures” on page 84.

### Example

Write comment statements according to the following rules:

1. Use an asterisk in the first column.
2. Do not exceed 80 characters.
3. Do not place a comment statement between an instruction and its continuation line.

## Definition lists

Use definition (or term) lists to describe terms or explain concepts. Use bold for the term or descriptive name unless your library or tool has overriding coding requirements, such as italic for message variables, program keywords, or program variables. Use a period at the end of the definition.

Make sure that terms or descriptive names and their definitions are visually separated. Capitalize the first word of each term or descriptive name, unless it usually would not be capitalized, for example, *num\_circles* or *prodname*, and capitalize the first word of each definition.

Avoid using an unordered list with bold, as shown in the following incorrect example. Instead, use a definition list. You can write the definition list in one of three styles, as shown in the three correct examples. In the first correct example, the term that is defined is the first word of a

defining sentence. In the second correct example, the defined term is not part of the defining sentence. In the third correct example, the definition is a fragment (glossary style). Be consistent when writing definition lists; do not mix these three styles.

#### **Example (incorrect)**

The following five access levels are associated with resources:

- **All** is the highest level of access. You can delete and perform all operations on resources.
- **Create** gives you privileges to view, edit, and add resources.
- **Modify** gives you privileges to view and edit resources.
- **Read-only** limits you to viewing resources.
- **None** prevents you from viewing or performing any other operations on resources.

#### **Example (correct)**

When the defined term is the first word of a defining sentence.

The following five access levels are associated with resources:

##### **All**

Is the highest level of access. You can delete and perform all operations on resources.

##### **Create**

Gives you privileges to view, edit, and add resources.

##### **Modify**

Gives you privileges to view and edit resources.

##### **Read-only**

Limits you to viewing resources.

##### **None**

Prevents you from viewing or performing any other operations on resources.

#### **Example (correct)**

When the defined term is not part of the defining sentence.

The following five access levels are associated with resources:

##### **All**

You can delete and perform all operations on resources. All is the highest level of access.

##### **Create**

You can view, edit, and add resources.

##### **Modify**

You can view and edit resources.

##### **Read-only**

You can only view resources.

##### **None**

You cannot view or perform any other operations on resources.



**Example (correct)**

When the definition is a fragment (glossary style).

The batch job processing option contains the following components:

**Batch job**

The job that allocates data sets and builds and configures a runtime environment.

**Batch parameter member**

The member that includes all of the configuration values for all the products that you can configure in the runtime environment.

**RTE utility**

A utility that creates the batch parameter member for an existing runtime environment.

## Capitalization in lists

Capitalize the first word of each item in a vertical list.

**Examples**

The routine makes the following conversions:

- An EBCDIC value to a real number
- A real number to an EBCDIC value
- An EBCDIC value to an integer
- An integer to an EBCDIC value

Run the routines in this order:

1. Initialization routine
2. Processing routine
3. Exit routine

## Wording of list items

Use list items that are grammatically parallel. For example, do not mix passive voice with active voice or declarative sentences with imperative sentences.

**Examples (incorrect)**

When the 4123 stops:

1. Measure the amount of oil in the casing.
2. The new filter should be inserted.
3. You must inspect the bearings.

XYZ Manager has the following features:

- A graphical user interface.
- It is compatible with ABC Manager.
- It can be used on many types of systems.

### Examples (correct)

When the 4123 stops, perform these tasks:

1. Measure the amount of oil in the casing.
2. Insert the new filter.
3. Inspect the bearings.

XYZ Manager has the following features:

- It has a graphical user interface.
- It is compatible with ABC Manager.
- It can be used on many types of systems.

**Remember:** To avoid translation problems, consider using complete sentences or noun phrases for list items.

## Length of lists

Use at least two list items in an ordered list. You can have one item in an unordered list if the intention is to match the format of other unordered lists in the same area.

Long lists of items can be overwhelming. Try to keep lists to a maximum of nine items. If a list exceeds this limit, consider using more than one list. Longer lists of reference information in alphabetical order can be acceptable because readers browse reference lists to select the data that they need rather than reading them from beginning to end.

## Alphabetization and sorting methods of lists

To manually sort lists of items that have no other obvious sorting criteria, use letter-by-letter alphabetization. The sorting of indexes and glossaries is usually controlled by the authoring tool, not by the writer.

To alphabetize items in a list, excluding index entries, use the letter-by-letter method, rather than the word-by-word method. The differences between the methods are shown in the following example:

<b>Letter-by-letter alphabetization (use this method)</b>	<b>Word-by-word alphabetization (do not use this method)</b>
form	FOR statement
format	form
FORMAT statement	format
forms control	FORMAT statement
FOR statement	forms control

If an item includes a hyphen, slash, or apostrophe, ignore the punctuation and treat the item as a single word.

#### **Example of letter-by-letter alphabetization of keywords that contain hyphens**

END-IF  
ENDING  
END\_INVOKE

If the list of items to be sorted contains symbols or numbers, use this sorting order: symbols, numbers, alphabetic characters. For numbers, you might also want to create a spelled-out version if you think that users might look for the word that way. For symbols, use the following ASCII sort sequence unless you are using a tool that imposes a different sort sequence:

(space or null) ! " # \$ % & ' ( ) \* + , - . / : ; < = > ? @ [ \ ] ^ \_ ` } | ~ ¢ > ≤ ÷ °

## **Punctuation in lists**

Write lists so that all or none of the items start with complete sentences. If list items comprise only complete sentences, include a period after each sentence. If list items comprise only sentence fragments, do not include any end punctuation.

If a list contains list items that start with sentence fragments, and one or more of the fragments are followed by complete sentences, include periods after all sentence fragments and sentences.

#### **Examples (incorrect)**

Session management can store session-related information in several ways:

- In application server memory – this storage option is local to the application server and cannot be shared with other application servers.
- In a database – this distributed storage option is known as database persistent sessions.
- In another WebSphere Application Server instance – this distributed storage option is known as memory-to-memory sessions.

Session management can store session-related information in several ways:

- In application server memory. This storage option is local to the application server and cannot be shared with other application servers.
- In a database
- In another WebSphere Application Server instance

### **Examples (correct)**

Session management can store session-related information in several ways:

- In application server memory. This storage option is local to the application server and cannot be shared with other application servers.
- In a database. This distributed storage option is known as database persistent sessions.
- In another WebSphere Application Server instance. This distributed storage option is known as memory-to-memory sessions.

Session management can store session-related information in several ways:

- In application server memory. This storage option is local to the application server and cannot be shared with other application servers.
- In a database.
- In another WebSphere Application Server instance.

Apply the same rules to nested lists (lists within lists). Punctuate the lead-in wording to a nested list as you would punctuate the lead-in wording to a list.

### **Example**

1. Remove the cover:
  - a. Loosen the captive screws on the side of the cover.
  - b. Slide the cover toward the back of the computer until the cover clicks.
  - c. Lift the cover straight up.
2. Remove the adapter.

## **Lead-in wording**

Generally, use a sentence to introduce a list that is not a procedure. In a task topic, a lead-in sentence is optional if the list directly follows a “Before you begin,” “Prerequisites,” “Restrictions,” or similar heading. For guidelines about how to introduce a procedure, see “Procedures” on page 84 of the printed book.

**Translation consideration:** To avoid possible translation problems, use complete sentences to introduce lists and not phrases. Machine translators often translate at the sentence-level and return the best results when they have a complete sentence to parse.

**Exception for marketing content:** Using a fragment to introduce a vertical list is acceptable in marketing content. For details and examples, see “Exceptions for marketing content” on page 274.

#### **Example (incorrect)**

Examples of this type of interaction include:

#### **Example (correct)**

The following statements are examples of this type of interaction:

Use a colon at the end of the lead-in sentence, unless another sentence intervenes between the lead-in sentence and the first list item. If a sentence intervenes, use a period to end both the lead-in sentence and the intervening sentence.

#### **Examples**

The following types of interruptions are possible. The initial processing for each type is performed by a different interruption-handling component in the supervisor.

- Supervisor call (SVC) interruptions are requests for supervisor services.
- Timer and external interruptions are....

The routine makes the following conversions:

- An EBCDIC value to a real number
- A real number to an EBCDIC value
- An EBCDIC value to an integer
- An integer to an EBCDIC value

You can transfer data in the following ways:

- Use virtual storage as a buffer for holding a few rows of data.
- Use disk space as a buffer for holding many rows of data.
- Use multiprocessing to run each update in a different thread.

#### **Before you begin**

- Back up the database.
- Ensure that you have CONTROL authority.

You can use an imperative sentence to introduce a numbered list.

#### **Example**

Run the routines in this order:

1. Initialization routine
2. Processing routine
3. Exit routine

Do not continue the lead-in sentence after the list, and do not use a conjunction at the beginning or end of a list item.

### **Examples (incorrect)**

When you configure the computer, you can use the program to:

- Set the date and time
- Set passwords and
- Set the drive startup sequence when you configure the computer

When you configure the computer, you can use the program to:

- set the date and time
- set passwords and
- set the drive startup sequence when you configure the computer.

### **Example (correct)**

When you configure the computer, you can use the program to set the following items:

- Date and time
- Passwords
- Drive startup sequence

## **Nested lists**

Avoid nesting ordered and unordered lists beyond two levels, and never nest more than three levels; restructure the information instead. Procedural steps should have no more than two levels; restructure the information instead.

When you create nested ordered lists to display in an outline format, use the following numbering scheme unless your authoring tool uses a different scheme.

- Begin each first-level item with an Arabic numeral, followed by a period.
- Begin each second-level item with a lowercase letter, followed by a period.
- If a third-level item is required, begin the item using a numbering scheme that is distinct from that of the first and second levels.

### **Example**

1. Remove the cover.
2. Install the adapter:
  - a. Insert the adapter into the slot.
  - b. Connect the adapter cable to the connector on the system board.
3. Install the cover.

When you create nested unordered lists, make sure that the bullet symbol for the first level is different from the bullet symbol for the second level.

### Example

The following choices are on the menu:

- DPI settings
  - Set Write Access Managers
  - Set Trap Receivers
- Reset configuration

For information about adding lists using DITA, see *DITA Best Practices: A Roadmap for Writing, Editing, and Architecting in DITA*, Chapter 3, “Adding lists” and Chapter 4, “Adding lists.”

For more information about writing lists effectively, see *Developing Quality Technical Information*, Chapter 5, “Keep lists short” and “Use lists appropriately,” and Chapter 7, “Present list items consistently.”

## Procedures

Use ordered (numbered) lists to describe tasks with more than one sequential step. Follow these general guidelines for writing numbered procedure steps.

### Introducing the procedure

Use one of the following approaches to introduce a procedure:

- A lead-in sentence or infinitive phrase (one that starts with the word *To*)
- A heading such as “Procedure”
- A combination of a lead-in sentence or infinitive phrase with a heading such as “Procedure”

**Translation consideration:** To avoid translation problems, consider using a lead-in sentence instead of an infinitive phrase. Ensure that you use only one method of introducing a procedure consistently throughout your entire library.

If you use a sentence to introduce a procedure, use a colon at the end of the lead-in sentence unless another sentence intervenes between the lead-in sentence and the procedure. If a sentence intervenes, use a period to end both the lead-in sentence and the intervening sentence. If you use an infinitive phrase to introduce a procedure, use a colon at the end of the phrase.

### **Example (incorrect)**

#### **Installing XYZ Manager**

1. Click Install program.
2. Select a feature.

### **Examples (correct)**

Example of using only a “Procedure” heading

#### **Installing XYZ Manager**

XYZ Manager provides an installation wizard that you use to install XYZ Manager on Linux, UNIX, and Windows systems.

#### **Procedure**

1. To start the XYZ Manager installation wizard, click **Install program**.
2. Select a feature.

Example of using only a lead-in sentence followed by another sentence

#### **Installing XYZ Manager**

XYZ Manager provides an installation wizard that you use to install XYZ Manager on Linux, UNIX, and Windows systems.

To install XYZ Manager, complete the following steps. This procedure installs the program in the default location.

1. To start the XYZ Manager installation wizard, click **Install program**.
2. Select a feature.

Example of using only an infinitive phrase

#### **Installing XYZ Manager**

XYZ Manager provides an installation wizard that you use to install XYZ Manager on Linux, UNIX, and Windows systems.

To install XYZ Manager:

1. To start the XYZ Manager installation wizard, click **Install program**.
2. Select a feature.

Example of using a “Procedure” heading and an infinitive phrase

#### **Installing XYZ Manager**

XYZ Manager provides an installation wizard that you use to install XYZ Manager on Linux, UNIX, and Windows systems. Alternatively, you can install XYZ Manager by using a response file.



## Procedure

To install XYZ Manager by using the installation wizard:

1. To start the XYZ Manager installation wizard, click **Install program**.
2. Select a feature.

Use a colon at the end of a sentence that introduces a subprocedure (nested ordered list) unless another sentence intervenes between the lead-in wording and the subprocedure. If a sentence intervenes, use a period to end both the lead-in sentence and the intervening sentence.

## Examples (correct)

1. Configure the multicast IP addresses:
  - a. In the **Start address** field, type the ...
  - b. In the **Pool size** field, type the ...
1. Connect the cables. The connectors are color-coded.
  - a. Connect the keyboard cable to the keyboard connector.
  - b. Connect the mouse cable to the mouse connector.

## Writing steps

Write one step for each significant user action, but avoid being too granular. For all but novice computer users, use arrows to show a sequence of menu selections. If you tell the user to press Enter to complete the action, do so as part of the step, not in a separate step. If an ellipsis, colon, or other punctuation is part of an interface element label, do not include that punctuation in the description of the action.

## Examples (incorrect)

1. Click **File**.
2. Click **Print**.
1. Type **yes**.
2. Press **Enter**.
1. Click **Print....**
2. Enter a value in the **Threshold:** field.

### Examples (correct)

1. Click **File > Print**.
1. Enter *yes*.
1. Click **Print**.
2. Enter a value in the **Threshold** field.

Avoid writing excessively long procedures. Try to break up long procedures into smaller tasks. Procedural steps should have no more than two levels; restructure the information instead.

If a procedure consists of only one step, present it as a sentence or short paragraph, and do not number it.

Do not use *please* in any instructions. Terms of politeness are superfluous, convey the wrong tone for technical material, and are not regarded the same way in all cultures.

Use the imperative mood in the first sentence of each step. If it is necessary to provide an explanation, do so in the same step, after the imperative sentence, not in a new step. If possible, avoid describing the result of each step; instead, in the next step, orient the user to the location where that step is performed.

### Example (incorrect)

1. Click **Install program**.
2. The Installation window lists the available features. Select a feature.

### Examples (correct)

1. Click **Install program**. The Installation window lists the available features.
2. Select a feature.
1. Click **Install program**.
2. In the Installation window, select a feature from the list.

If you orient the user to the location where the action is performed or explain the purpose of the action, do so before describing the action.

### Examples (incorrect)

1. Select a feature from the list in the Installation window.
1. Click **Replace** to overwrite the previous version.

### Examples (correct)

1. In the Installation window, select a feature from the list.
1. To overwrite the previous version, click **Replace**.

If the procedure includes snippets of code as examples, place the code (or a link to the code, if the code is in a separate topic) in the step that it applies to. If the example of code applies to the whole task, place the code or link after the last step. Label the link to the code so that the purpose of the code is clear to users, for example, “Code for an SQL table.”

## Indicating optional and conditional steps

If a step is optional, begin the step with the word *Optional*. If your authoring tool provides a semantic element to generate the word *Optional*, use that element.

### Example

1. Optional: Click **Set password**. In the **Password** field, type a password.

If a step is conditional, state the condition or begin the step with an *if* clause.

### Examples

1. Master repository only: In the **IP address** field, type the IP address.
1. If data options are on the menu, click the option that is appropriate for your environment.

## Handling nonsequential actions

Do not use sequential steps to describe actions that are not sequential. When a procedure has mutually exclusive alternatives or any kind of branching condition, do not present the alternatives as sequential steps. Describe the branching condition in a single step, using an unordered list as a sublist or list of subprocedures to present the alternatives. Do not insert the word *or* between alternatives.

### Examples (incorrect)

1. If you did not set a password, go to step 3.
2. If you did set a password, type the password and click **Continue**.
3. ...
1. If you did not set a password, go to step 3, or
2. If you did set a password, type the password and click **Continue**.
3. ...
1. If you did not set a password, go to step 2, or if you did set a password, type the password and click **Continue**.
2. ...

### Example (correct)

1. Choose the appropriate method to log in to the system:
  - If you did not set a password, go to step 2.
  - If you did set a password, type the password and click **Continue**.
2. ...

### Example (incorrect)

1. Click **Configure**.
2. To add a subnet, click **Add** and type the address.
3. To delete a subnet, select the subnet and click **Delete**.
4. To perform an action on all subnets, click **All Subnets**.

### Example (correct)

1. Click **Configure** to do any of the following tasks:
  - To add a subnet, click **Add** and type the address.
  - To delete a subnet, select the subnet and click **Delete**.
  - To perform an action on all subnets, click **All Subnets**.
2. ...

## Ending the procedure

Do not include actions that are outside the scope of the procedure. Do not continue with steps for another procedure. If a subsequent procedure is necessary, direct the user to it after the final step in a cross-reference or, in online documentation, in a link. Otherwise, direct the user to other procedures in a paragraph that follows the procedure, or provide a link. Avoid using a statement at the end of a procedure that only informs the user that the procedure is complete.

### Example (incorrect)

To set a password:

1. Click **Set password**.
2. In the **Password** field, type the password and click **OK**.
3. To delete the password, click **Delete password**.

### Example (correct)

To set a password:

1. Click **Set password**.
2. In the **Password** field, type the password and click **OK**.

### Related tasks

Deleting passwords

**Example (incorrect)**

To install the adapter:

1. Remove the cover.
2. ...
3. ...
4. Replace the cover. The adapter is now installed. You must now configure the adapter.  
See “Configuring adapters.”

**Example (correct)**

To install the adapter:

1. Remove the cover.
2. ...
3. ...
4. Replace the cover.

After you install the adapter, you must configure it.

**Parent topic:** Installing and configuring adapters

**Previous topic:** Planning to install adapters

**Next topic:** Configuring adapters

**Example (correct)**

To install the adapter:

1. Remove the cover.
2. ...
3. ...
4. Replace the cover.

After you install the adapter, you must configure it. See “Configuring adapters” for instructions.

For information about writing tasks using DITA, see *DITA Best Practices: A Roadmap for Writing, Editing, and Architecting in DITA*, Chapter 1, “Task orientation.”

For more information about writing procedures, see *Developing Quality Technical Information*, Chapter 2, “Provide clear step-by-step instructions,” Chapter 5, “Keep lists short” and “Use lists appropriately,” and Chapter 7, “Present list items consistently.”

## Figures

Use figures within blocks of text to clarify or complement your information. Figures include non-textual visual elements such as graphics, illustrations, and screen captures.

## Figure captions and legends

Include captions and legends if you must refer to your figures by figure title and number or if your figures are not self-explanatory or explained by the surrounding text. Otherwise, captions and legends are optional.

If you can describe a figure briefly and clearly without using a verb form, use a caption (less than a complete sentence). Use sentence-style capitalization. Do not use a period (.) at the end of a caption.

If you have to include a verb form to avoid ambiguity, use a legend (a complete sentence). A legend consists of one or more complete sentences that explain the figure.

A combined caption and legend begins with a caption and continues with one or more sentences that explain the figure. Use sentence-style capitalization. Use a period after the caption and after each sentence in the legend.

**Font recommendation:** Captions are shown in italic type. Many formatters produce italic captions by default.

### Example (incorrect)

*Figure 22. Functions of the assembler.*

### Examples (correct)

*Figure 22. Functions of the assembler*

*Figure 22. The assembler converts the source program into an object program.*

*Figure 22. Functions of the assembler. The assembler converts the source program into an object program.*

In the caption for a figure, do not include the word *figure*, *table*, *chart*, or any other word that is redundant with the label.

### Examples (incorrect)

*Figure 6. Illustration of component relationships*

*Figure 6. Component relationships figure*

### Example (correct)

*Figure 6. Component relationships*

If a figure is long and prints on more than one page, repeat the caption on the successive page.

Each section of the figure should contain some designation to indicate that it spans more than one page. The preferred method is to include “(Part x of y)” at the end of the caption. However, you might have to use another method, such as “(continued),” depending on the tool that you are using.

## Figure numbering

Number figures consecutively throughout your documentation, including those in the appendixes. Your environment and tools might number figures differently. For example, if your authoring tool numbers your figures by starting with *Figure 1* in each separate web-based topic, consider not numbering your captions.

Drawings, plates, photographs, icons, bitmaps, illustrations, and other figures and tables can be included without numbers and captions when they are self-explanatory or are explained by the surrounding text. It is not necessary to refer to them by figure or table titles or numbers.

If a figure must be split into two or more parts, qualify the figure number that precedes the caption or legend as shown in the following example.

### Example

*Figure 7 (Part 1 of 3). Use of IF statements*

*Figure 7 (Part 2 of 3). Use of IF statements*

*Figure 7 (Part 3 of 3). Use of IF statements*

The separate parts of such figures must have the same caption. (If different captions are necessary, create the parts as separate figures.) However, when combined captions and legends are used with a multiple-part figure, the legend portions can be different.

**Font recommendation:** Captions are shown in italic type. Many formatters produce italic captions by default.

## Figure references

When making references to figures, use correct capitalization and appropriate placement. Note that a table can be referred to as a *table* or a *figure*. See “Tables” on page 96 of the printed book.

Use regular text instead of an inline link when a reference is near a figure. Always introduce a figure with a sentence immediately preceding it, and use a period or a colon to end the sentence. If you present the same type of information in two or more consecutive figures, you do not have to introduce each specific figure, but you must introduce the group of figures.

### Example

You can modify any of the properties that are included in the following figure.

The previous figure illustrates how the components fit together.

In text references, when a reference is not near a figure, use initial capital letters for the word *Figure*. (Italics are used here for emphasis; do not use italics in your actual text references.)

If a document has both figures and tables and they are labeled as such, include the page numbers or hypertext links in cross-references to them in the text. Do this only when it is not possible to use regular text to refer to the figure or table. This retrievability aid prevents the reader from turning to the page for *Figure x* when looking for *Table x* and vice versa. If your text formatter cannot provide the page numbers or hypertext links in cross-references to figures and tables, consider captioning them all as figures and numbering them in a single sequence.

It is not necessary to use a cross reference to a figure or table in text if the figure or table is not referred to, or if it is referred to in such a way that the figure or table can be identified without a number.

Enclose a subheading for a figure caption within parentheses and add it to the end of the descriptive wording.

### Examples

*Figure 7. Run times for test programs (in microseconds)*

*Figure 8. Real storage requirements (KB equals 1024 bytes)*

If parts of a figure are labeled, use sentence-style capitalization for the labels.

### Examples

Client code

iSeries® or zSeries® server

## Figure placement

Place a figure as close as possible to the principal reference to it.

- If the reference and the figure are in the same topic, implement one of these solutions:
  - To refer to a figure that is close to the reference, use a text reference. For example, write “To see a complete list of requirements, see the following figure.”
  - To refer to a figure that is not close to the reference, create a link to the figure. For example, write “To see a complete list of the requirements, see *Process steps*.”
- If the figure is on a separate page or in a separate topic, use a link to the page or topic that contains the figure.

## Callouts in illustrations

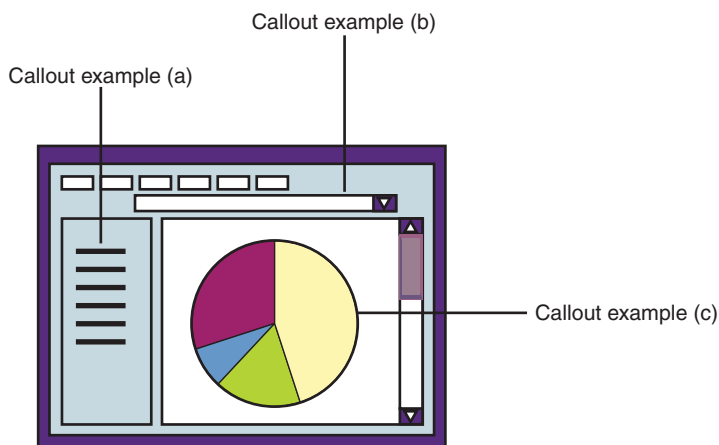
When including illustrations or drawings in your information, include brief, appropriate sets of words or symbols that are connected by lines or arrows to parts of the illustration. These *callouts*



provide immediate information about the various parts of the illustration. Use sentence-style capitalization for the callouts in an illustration.

When you number the callouts in an illustration, start with the callout in the upper-left corner of the illustration and number the callouts clockwise. If the callouts are in a row, number them from left to right. If the callouts are in a column, number them from top to bottom.

Example of a callout:



When you number illustrations that indicate steps in a procedure, display the steps in the sequence in which they are performed. To avoid confusion with the steps in a procedure, you can use letters to identify the callouts in the illustration.

## Screen captures

Copying user interface elements in a form that readers can use as visual reference can be helpful in providing orientation, reducing confusion, and increasing retrievability. The decision to include screen captures can be complex, and you might want to consult your translation coordinator, information architect, management, and other interested parties as you consider the issues that are involved.

Do not translate or mirror screen captures. Capture the images from the national language versions of your product. Follow all international design guidelines for graphics, including guidelines that relate to cultural issues, acceptable graphic file formats, and expansion guidelines to ensure that the amount of space required for text is available.

Screen captures can be useful and successful when they achieve one or more of these objectives:

- Illustrate a user interface that is fairly complex or difficult to explain in text
- Help the user find a small element in a complex user interface

- Provide accessibility alternatives
- Show the results of a series of steps or user actions
- Orient readers who are reading the publication without the user interface in front of them

Screen captures can be less successful in these situations:

- Too many are used; for example, they are used to document the interface, as opposed to documenting the tasks that users want to do.
- They are used inconsistently, for example, by providing screen captures for some complex processes and no screen captures for others.
- Simple user interfaces are displayed that provide no additional help for the user.
- Inappropriate borders, highlighting, or other design elements are added, inhibiting quick identification.
- Poor-quality captures are used.

Consider these issues when you create screen captures:

- The ease of creating translated screen captures
- The accuracy of screen captures
- Maintenance in future releases
- Potential legal considerations for content that might be the intellectual property of another company

When you decide to include screen captures, follow these guidelines:

- Use captures of windows and other user interface elements sparingly.
- Include the cursor, mouse pointer, or menus only when their presence is significant.
- Capture just the part of the screen or window that users must focus on.
- Show the user interface elements exactly as they are displayed for most users for quick recognition.
- Keep your captures in proportion to each other.
- Annotate screen captures where it helps the reader find a user interface element.
- Note the user interface actions that are required for each capture and any system prerequisites that are required to duplicate the data. Share these detailed instructions with translators and language testers.

For information about including graphics when using DITA, see *DITA Best Practices: A Roadmap for Writing, Editing, and Architecting in DITA*, Chapter 3, “Including graphics.”

For information about using graphics effectively, see *Developing Quality Technical Information*, Chapter 10, “Use graphics that are meaningful and appropriate,” and “Choose graphics that complement the text.”

## Tables

Often, text that is difficult to understand in paragraph form becomes clear in a table format. Tables help highlight relationships among similar pieces of information and are easily scanned for quick reference.

### Text in tables

Follow these guidelines for the use of text in tables:

- Use grammatically parallel text for all cells in a column.
- Follow the normal rules of punctuation.
- Use sentence-style capitalization for these table elements:
  - Cell contents
  - Column headings
  - Row labels
  - Table captions
- Follow standard highlighting conventions inside a table.
- If you repeat a word or phrase in all cells in a column, consider rewording the column heading to include that word or phrase and eliminate the repetitiveness.
- If there is no information in a cell, leave the cell blank. Industry-standard screen readers are able to correctly interpret blank cells.
- If you use table notes, enclose them within the table. If your authoring tool does not support using footnotes within a table, use a note list and superscript numbers to achieve the required result. Use superscript numbers rather than letters to indicate table notes. However, if superscript is not available, include in the table an explicit phrase such as “See note 1.”

### Example

**Table 1** Device specifications

Model	Height	Depth	Width
Tower	440 mm (17.3 in.)	747 mm (29.4 in.)	218 mm (8.6 in.)
5U <sup>1</sup> rack	218 mm (8.6 in.)	696 mm (27.4)	424 mm (16.7 in.)

<sup>1</sup>A unit (U) is 4.45 cm (1.75 in.)

Arrange the items in the first column of the table in a logical way, for example, largest to smallest or vice versa. If there is no better criterion for arranging them, put the items in alphabetical order. Although the use of captions and legends is optional, you can use a caption to describe the contents of the table. If necessary, use a legend to explain the organization of the table. When you do use captions or legends in your information, use them consistently for all of your tables. If the organization of the table requires more explanation than can fit in the caption or legend, explain it in the text. If the organization of the table is obvious, do not explain it.

Always introduce a table with a sentence immediately preceding it, and use a period or a colon to end the sentence. If you present the same type of information in two or more consecutive tables, you do not have to introduce each specific table, but you must introduce the group of tables.

## Formatting tables

Follow these guidelines for formatting tables:

- Top-align and left-align the text in all table body cells. This helps clarify the row and column boundaries.
- Avoid putting too much information into a single table, and avoid creating a table that requires horizontal scrolling when it is viewed online. If possible, break large amounts of information into separate tables.
- Avoid scaling text in tables to smaller than 80%, or 8-point type.
- Use column widths that are proportional to the amount of information that the cells contain.
- Use a consistent format for all tables in the information unit. For example, if some tables do not have horizontal rules, do not use horizontal rules in any tables in the information unit.

**Accessibility consideration:** Consult other resources for more complete accessibility requirements for tables; however, consider the following accessibility requirements. Identify row and column headers for data tables. Do not use tabs or spaces to arrange tabular information. Instead, use data tables to display tabular data. Row and column headers enable screen readers to provide information about the relationship of data cells in a table to some visually impaired users. When a document format does not support the ability to define row and column headers, do not use data tables in the documentation. Some formats such as simple text-based documents do not support the ability to define row and column headers. Avoid tables in those types of documents.

## Table headings

Follow these guidelines for table headings:

- Make sure that column headings are tagged in accordance with accessibility requirements. The specific tags that you must use depend on the tool that you use.

- Use sentence-style capitalization for column headings.
- Left-align the text in all column headings.

#### Example (incorrect)

In Table 2, the left column lists the levels, and the right column lists the types of messages that are logged at each level:

**Table 2** Levels

Level	Messages logged
1	Logs all error messages and completion messages after major steps of an operation
2	Logs all error messages and messages before and after major steps of an operation
3	Logs all error messages and messages before and after each step of an operation
0	At this level, message logging is turned off.

#### Example (correct)

Table 3 describes the types of messages that are logged at each level.

**Table 3** Message logging by level

Level	Messages logged
0	Turns off message logging
1	Logs all error messages and completion messages after major steps of an operation
2	Logs all error messages and messages before and after major steps of an operation
3	Logs all error messages and messages before and after each step of an operation

### Table captions and legends

Include captions and legends if you must refer to your tables by table title and number or if your tables are not self-explanatory or are explained by the surrounding text. Otherwise, captions and legends are optional.

If you can describe a table briefly and clearly without using a verb form, use a caption (less than a complete sentence). Use sentence-style capitalization for a caption. If you have to include a verb form to avoid ambiguity, use a legend (a complete sentence).

Do not use a period (.) at the end of a caption unless it is followed by a legend.

**Font recommendation:** Captions are shown in italic type. Many formatters produce italic captions by default.

**Example (incorrect)**

*Table 22. Functions of the assembler.*

**Examples (correct)**

*Table 22. Functions of the assembler*

*Table 22. Functions of the assembler. The assembler converts the source program into an object program.*

In the caption for a table, do not include the words *table*, *chart*, or any other word that is redundant with the label.

**Example (incorrect)**

*Table 2. System requirements table*

**Example (correct)**

*Table 2. System requirements*

A legend consists of one or more complete sentences that explain the figure or table. Use a period at the end of a legend.

**Example**

*Table 22. The assembler converts the source program into an object program.*

A combined caption and legend begins with a caption and continues with one or more sentences that explain the figure. Use sentence-style capitalization. Use a period after the caption and after each sentence in the legend.

**Example**

*Table 22. Functions of the assembler. The assembler converts the source program into an object program.*

If a table is long and prints on more than one page, repeat the caption on the successive page.

Each section of the table should contain some designation to indicate that it spans more than one page. The preferred method is to include “(Part *x* of *y*)” at the end of the caption. However, you might have to use another method, such as “(continued),” depending on the tool that you are using.

## Table numbering

Number tables consecutively throughout your documentation, including tables in the appendixes. Your environment and tools might number tables differently. For example, if your authoring tool numbers your tables by starting with *Table 1* in each separate web-based topic, consider not numbering your captions.

You can refer to a table as a table or as a figure. If your tables are captioned as *Table*, use separate numbering sequences for figures and tables and either include a separate list of tables in the front matter or do not list them at all.

### Example

#### Figures

- |                                       |   |
|---------------------------------------|---|
| 1. ID Workbench overview, AIX client  | 7 |
| 2. ID Workbench overview, OS/2 client | 9 |

#### Tables

- |                        |   |
|------------------------|---|
| 1. Common task summary | 6 |
| 2. Simple sample       | 8 |

If your tables are captioned as *Figure*, number the tables in the same sequence with the figures and, if you provide a list of figures in the front matter, include the tables in the same list.

### Example

#### Figures

- |                                       |   |
|---------------------------------------|---|
| 1. Common task summary                | 6 |
| 2. ID Workbench overview, OS/2 client | 7 |
| 3. Simple sample                      | 8 |
| 4. ID Workbench overview, AIX client  | 9 |

If a table must be split into two or more parts, qualify the table number that precedes the caption or legend as shown in the following example.

### Example

*Table 7 (Part 1 of 3). Message logging by level*

*Table 7 (Part 2 of 3). Message logging by level*

*Table 7 (Part 3 of 3). Message logging by level*

The separate parts of such tables must have the same caption. (If different captions are necessary, the parts should be separate tables.) However, when combined captions and legends are used with a multiple-part table, the legend portions can be different.

## Table references

In text, refer to a table as a table or as a figure, depending on how it is captioned. If a table is captioned *Table*, place the caption or legend above the table; if it is captioned *Figure*, place the caption or legend below the table. If a table has no caption, refer to it as either a table or a figure, whichever is more appropriate. If a publication has no illustrations other than tables and you are using captions, caption the tables as tables.

Use regular text instead of an inline link when a reference is near a table or figure.

### Examples

You can modify any of the properties that are included in the following table.

The previous figure illustrates how the components fit together.

In text references, when a reference is not near a table, use initial capital letters for *Figure* and *Table*. (Italics are used here for emphasis; do not use italics in text references.)

If a document has both figures and tables and they are labeled as such, include the page numbers or hypertext links in cross-references to them in the text. Do this only when it is not possible to use regular text to refer to the figure or table. This retrievability aid prevents the reader from turning to the page for *Figure x* when looking for *Table x* and vice versa. If your text formatter cannot provide the page numbers or hypertext links in cross-references to figures and tables, consider captioning them all as figures and numbering them in a single sequence.

Enclose a subheading for a table caption within parentheses and add it to the end of the descriptive wording.

### Examples

*Table 7. Run times for test programs (in microseconds)*

*Table 8. Real storage requirements (KB equals 1024 bytes)*

It is not necessary to use a cross-reference to a table in text if the table is not referred to, or if it is referred to in such a way that the table can be identified without a number.



## Table placement

Place a table as close as possible to the principal reference to it.

- If the reference and the table are in the same topic, implement one of these solutions:
  - To refer to a table that is in close proximity to the reference, use a text reference. For example, write “To see a complete list of requirements, see the following table.”
  - To refer to a table that is not in close proximity to the reference, create a link to the table. For example, write “To see a complete list of the requirements, see *Process steps*.”
- If the table is on a separate page or in a separate topic, use a link to the page or topic that contains the table.

For information about creating tables using DITA, see *DITA Best Practices: A Roadmap for Writing, Editing, and Architecting in DITA*, Chapter 4, “Creating tables.”

For more information about using tables, see *Developing Quality Technical Information*, Chapter 5, “Segment information into tables,” Chapter 10, “Maintain consistent placement of document elements, and “Ensure that all users can access the information.”

## Highlighting

Use font styles, capitalization, and punctuation to distinguish elements and to show emphasis in text.

**Important:** For information that is written for the web, you can use bold instead of italic.

The following tables list the recommended highlighting and capitalization conventions. The first table is organized by element type, and the second table is organized by the type of highlighting to use. You might have to make judgment calls about situations such as matching the style of existing information or following product style conventions. Do not highlight any element that is not shown in these tables.

**Table 1** Highlighting by element type

Type of element	Highlighting	Examples
<p>Most elements, most of the time. For example, in most cases do not highlight the following elements:</p> <ul style="list-style-type: none"> <li>• APIs, classes, and methods</li> <li>• Column names in text</li> <li>• Database names</li> <li>• Database table names</li> <li>• Hardware button names</li> <li>• Keyboard keys</li> <li>• Program names</li> <li>• Storage areas</li> <li>• Table names in text</li> <li>• Tasks</li> <li>• Trademarks</li> <li>• Web addresses and URLs</li> </ul>	<p>No highlighting, unless it is difficult to distinguish the names from surrounding text or the element is a value entered by the user. Highlight these elements by using monospace.</p> <p>Use emphasis sparingly so that it does not lose its impact.</p>	<p>The Edit the Database window opens.</p> <p>Press Enter.</p> <p>Use the <code>keep</code> program to store the newoutput class.</p> <p>For more information about this program, see <a href="http://www.ibm.com">www.ibm.com</a>.</p>
<p>Titles of windows and similar elements:</p> <ul style="list-style-type: none"> <li>• Notebook names</li> <li>• Notebook page names</li> <li>• Pane names</li> <li>• Panel names</li> <li>• Portal names</li> <li>• Portlet names</li> <li>• Window names</li> <li>• Wizard names</li> </ul>	<p>No highlighting when headline-style capitalization is used in the interface.</p> <p>When sentence-style capitalization is used in the interface, enclose the name in double quotation marks.</p>	<p>Open the Preferences notebook.</p> <p>In the User panel, type the name of the user.</p> <p>You can tour the User Experience Workbench Portal.</p> <p>Use the “Expense reimbursement” portlet to track the status of requests for expense reimbursement.</p> <p>When you click the icon, the “Open the remote database” window opens.</p> <p>You can use the “Set up backup files” wizard ...</p>
<p>Citations:</p> <ul style="list-style-type: none"> <li>• CDs</li> <li>• Diskettes</li> <li>• Readme files</li> <li>• Release notes</li> <li>• Titles of books</li> <li>• Information centers</li> </ul>	<p>Italic</p> <p>No highlighting for information center citations</p>	<p>See <i>The Chicago Manual of Style</i>.</p> <p>See the DB2® Information Center.</p>

**Table 1** Highlighting by element type

Type of element	Highlighting	Examples	
Column headings in a table	Bold, although references to column headings in standard text are not highlighted.	<table><tr><td><b>Compiler</b></td></tr></table> The <b>Compiler</b> column lists ...	<b>Compiler</b>
<b>Compiler</b>			
Command names, and names of macros and utilities that you can type as commands	Bold monospace	Use the <b>BROWSE</b> command. Use the <b>mqsistop</b> command. Use the <b>Copy file</b> command. Use the <b>Restore Licensed Program</b> command. The <b>db2trc</b> utility ... The <b>ATTACH</b> macro ...	
Directory names	Monospace	Move the <code>install.exe</code> file into the <code>newuser</code> directory.	
Environment variable names in text	Name: Bold monospace Value: Monospace For cross-platform information, use the words <i>environment variable</i> rather than dollar signs (\$) or percent signs (%).	Set the <b>ProgramFiles</b> environment variable to <code>true</code> .	
Examples and code examples	Monospace	<code>DCL IND1 FIXED BIN(15);</code>	
File names and file extensions	Monospace	Run the <code>install.exe</code> file. Extract all the data from the <code>.zip</code> file.	
Glossary terms	Bold	<b>style</b> The correctness and appropriateness of writing conventions and choices in words and phrases.	
Hardware label names	Enclose the name in double quotation marks.	The serial connector is labeled “COM1”.	

**Table 1** Highlighting by element type

Type of element	Highlighting	Examples
Interface controls: <ul style="list-style-type: none"> <li>• Check boxes</li> <li>• Containers</li> <li>• Fields</li> <li>• Folders</li> <li>• Icons</li> <li>• Items inside list boxes</li> <li>• Labels (such as <b>Tip:</b> or <b>Operating system considerations:</b>)</li> <li>• List boxes</li> <li>• Menu choices</li> <li>• Menu names</li> <li>• Multicolumn lists</li> <li>• Property sheets</li> <li>• Push buttons, radio buttons, and spin buttons</li> <li>• Tabs</li> </ul>	Bold (capitalization varies)	(For inexperienced users) From the <b>Installation</b> menu, click <b>Install a new feature</b> . (For experienced users) Click <b>Installation &gt; Install a new feature</b> . The information is in the <b>Preferences</b> folder. From the <b>Language</b> menu, click the language that you want to use. The default selection is <b>English</b> .
Java properties	Monospace	<pre>country = UK language = English code page = UTF-8</pre>
Key-value pairs	Monospace	<pre>user_category = expert</pre>
Keywords	Bold monospace	The <b>INSTALL_TYPE</b> keyword specifies the type of installation.
Letters as letters	Italic	The LUN address must start with the letter <i>L</i> .
Message text or prompts addressed to the user	Monospace	The system uses the following message: <code>Server busy</code> .
Parameter names in text: <ul style="list-style-type: none"> <li>• API structure parameters</li> <li>• Command parameters and arguments</li> <li>• Configuration parameters</li> </ul>	Bold monospace	Specify the <b>db2connect</b> parameter. Set the <b>-secure</b> parameter on the <b>send</b> command.
Path names	Monospace	Locate the C:\notes\data path.

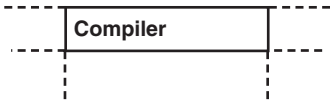
**Table 1** Highlighting by element type

Type of element	Highlighting	Examples
Process names	Bold monospace	List the threads associated with the <b>db2sysc</b> process.
Registry variables in text	Name: Bold monospace Value: Monospace	Set the <b>DB2_FORCE_NLS_CACHE</b> registry variable to <code>TRUE</code> .
Script names	Bold monospace	Run the <b>djxlink</b> script.
Tags in markup languages and XML	Enclose in angle brackets	Use the <syntax> element to ...
Text that the user must enter, including command names, parameters, and similar elements	Monospace	Type <code>exit</code> and press Enter.
Values of the following elements in text: <ul style="list-style-type: none"> <li>• API structure parameters</li> <li>• Command parameters and arguments</li> <li>• Configuration parameters</li> <li>• Environment variables</li> <li>• Keywords</li> <li>• Registry variables</li> </ul>	Monospace The default value is usually underlined.	Parameter values: <u>yes</u>   no   maybe
Variables	Italic Variables included in text that are to be typed are italic monospace.	Use the <b>OPEN</b> command with the <b>-f</b> parameter. For example: <code>OPEN -f file_name</code> where <i>file_name</i> is the name of the file you want to open.
Words: <ul style="list-style-type: none"> <li>• As words</li> <li>• As terms defined in text</li> <li>• That are new in text</li> <li>• That are used in a special sense</li> </ul>	Italic Words that are used in a special sense are not in italic. Enclose them in double quotation marks. Do not overuse double quotation marks. Make sure that they clarify rather than clutter the text.	Use the word <i>that</i> to introduce a restrictive clause. A nonswitched line is called a <i>point-to-point line</i> if it connects a single workstation to a computer. A <i>view</i> is a ... Do not test new features in a “live” version of the system.

**Table 2** Highlighting by font style and punctuation

Highlighting	When to use	Examples
No highlighting	<p>Most of the time.</p> <p>For example, in most cases do not highlight the following elements:</p> <ul style="list-style-type: none"><li>• APIs, classes, and methods</li><li>• Column names in text</li><li>• Database names</li><li>• Database table names</li><li>• Hardware button names</li><li>• Information center citations</li><li>• Keyboard keys</li><li>• Program names</li><li>• Storage areas</li><li>• Table names in text</li><li>• Tasks</li><li>• Trademarks</li><li>• Web addresses and URLs</li></ul> <p><b>Exceptions:</b> If it is difficult to distinguish the names from surrounding text or the element is a value entered by the user, use monospace. Use emphasis sparingly so that it does not lose its impact.</p> <p>Do not highlight titles of windows and similar elements when headline-style capitalization is used:</p> <ul style="list-style-type: none"><li>• Notebook names</li><li>• Notebook page names</li><li>• Pane names</li><li>• Panel names</li><li>• Portal names</li><li>• Portlet names</li><li>• Window names</li><li>• Wizard names</li></ul>	<p>The Edit the Database window opens.</p> <p>See the DB2 Information Center.</p> <p>Press Enter.</p> <p>Use the <code>keep</code> program to store the new output class.</p> <p>For more information about this program, see <a href="http://www.ibm.com">www.ibm.com</a>.</p> <p>Open the Preferences notebook.</p> <p>In the User panel, type the name of the user.</p> <p>You can tour the User Experience Workbench Portal.</p>

**Table 2** Highlighting by font style and punctuation

Highlighting	When to use	Examples
Bold	Interface controls: <ul style="list-style-type: none"><li>• Check boxes</li><li>• Containers</li><li>• Fields</li><li>• Folders</li><li>• Icons</li><li>• Items inside list boxes</li><li>• Labels (such as <b>Tip:</b> or <b>Operating system considerations:</b>)</li><li>• List boxes</li><li>• Menu choices</li><li>• Menu names</li><li>• Multicolumn lists</li><li>• Property sheets</li><li>• Push buttons</li><li>• Radio buttons</li><li>• Spin buttons</li><li>• Tabs</li></ul>	<p>(For inexperienced users) From the <b>Installation</b> menu, click <b>Install a new feature</b>.</p> <p>(For experienced users) Click <b>Installation &gt; Install a new feature</b>.</p> <p>The information is in the <b>Preferences</b> folder.</p> <p>From the <b>Language</b> menu, click the language that you want to use. The default selection is <b>English</b>.</p>  <p>Column heading named Compiler in bold text</p> <p>The Compiler column lists ...</p> <p><b>style</b> The correctness and appropriateness of writing conventions and choices in words and phrases.</p>
Bold monospace	<p>Command names, and names of macros and utilities that you can type as commands</p> <p>Environment variable names in text. For cross-platform information about environment variables, use the words <i>environment variable</i> rather than dollar signs (\$) or percent signs (%).</p> <p>Keywords</p> <p>Parameter names in text:</p> <ul style="list-style-type: none"><li>• API structure parameters</li><li>• Command parameters and arguments</li><li>• Configuration parameters</li></ul> <p>Process names</p> <p>Registry variable names in text</p> <p>Script names</p>	<p>Use the <b>BROWSE</b> command.</p> <p>Use the <b>mqsistop</b> command.</p> <p>Use the <b>Copy file</b> command.</p> <p>Use the <b>Restore Licensed Program</b> command.</p> <p>The <b>db2trc</b> utility ...</p> <p>The <b>ATTACH</b> macro ...</p> <p>Set the <b>ProgramFiles</b> environment variable to true.</p> <p>The <b>INSTALL_TYPE</b> keyword specifies the type of installation.</p> <p>Specify the <b>db2connect</b> parameter.</p> <p>Set the <b>-secure parameter</b> on the <b>send</b> command.</p> <p>List the threads associated with the <b>db2sysc</b> process.</p> <p>Set the <b>DB2_FORCE_NLS_CACHE</b> registry variable to <b>TRUE</b>.</p> <p>Run the <b>djxlink</b> script.</p>

**Table 2** Highlighting by font style and punctuation

Highlighting	When to use	Examples
Italic	<p>Citations:</p> <ul style="list-style-type: none"> <li>• Titles of books</li> <li>• Readme files</li> <li>• Release notes</li> <li>• Diskettes</li> <li>• CDs</li> </ul> <p>Emphasis of words (words as words)</p> <p>Letters as letters</p> <p>Terms that are new or defined in the text</p> <p>Variables (italic monospace when in text that the user must enter)</p> <p><b>Exception:</b> For information that is written for the web, you can use bold instead of italic.</p>	<p>See <i>The Chicago Manual of Style</i>.</p> <p>Use the word <i>that</i> to introduce a restrictive clause.</p> <p>The LUN address must start with the letter <i>L</i>.</p> <p>A nonswitched line is called a <i>point-to-point line</i> if it connects a single workstation to a computer.</p> <p>Use the <b>OPEN</b> command with the <b>-f</b> parameter. For example:</p> <pre>OPEN -f file_name</pre> <p>where <i>file_name</i> is the name of the file you want to open.</p>
Monospace	<p>Directory names</p> <p>Examples and code examples</p> <p>File names and file extensions</p> <p>Java properties</p> <p>Key-value pairs</p> <p>Message text or prompts addressed to the user</p> <p>Path names</p> <p>Elements that would otherwise be difficult to distinguish from surrounding text; see list under “No highlighting.”</p> <p>Text that the user must enter, including command names, parameters, and similar elements</p> <p>Values of the following elements in text. (The default value is usually underlined.)</p> <ul style="list-style-type: none"> <li>• API structure parameters</li> <li>• Command parameters and arguments</li> <li>• Configuration parameters</li> <li>• Environment variables</li> </ul> <p>For cross-platform information about environment variables, use the words <i>environment variable</i> rather than dollar signs (\$) or percent signs (%).</p> <ul style="list-style-type: none"> <li>• Keywords</li> <li>• Registry variables</li> </ul>	<p>Move the <code>install.exe</code> file into the <code>newuser</code> directory.</p> <pre>DCL IND1 FIXED BIN(15);</pre> <p>Run the <code>install.exe</code> file. Extract all the data from the <code>.zip</code> file</p> <pre>country = UK language = English code page = UTF-8 user_category = expert</pre> <p>The system uses the following message:</p> <pre>Server busy.</pre> <p>Locate the <code>C:\notes\data</code> path.</p> <p>Type <code>exit</code> and press Enter.</p> <p>When the <b>debug</b> parameter is set to <code>true</code> ...</p> <p>Parameter values: <u>yes</u>   no   maybe</p> <p>Set the <b>ProgramFiles</b> environment variable to <code>true</code>.</p> <p>Set the <b>DB2_FORCE-NLS_CACHE</b> registry variable to <code>TRUE</code>.</p>



**Table 2** Highlighting by font style and punctuation

Highlighting	When to use	Examples
Angle brackets (enclosed in)	Tags in markup languages and XML	Use the <syntax> element to ...
Double quotation marks	<p>Hardware label names</p> <p>Terms that are used in a special sense</p> <p>Titles of windows and similar elements that have sentence-style capitalization:</p> <ul style="list-style-type: none"> <li>• Notebook names</li> <li>• Notebook page names</li> <li>• Pane names</li> <li>• Panel names</li> <li>• Window names</li> <li>• Wizard names</li> </ul> <p>Titles of windows and similar elements that have sentence-style capitalization:</p> <ul style="list-style-type: none"> <li>• Notebook names</li> <li>• Notebook page names</li> <li>• Pane names</li> <li>• Panel names</li> <li>• Portal names</li> <li>• Portlet names</li> <li>• Window names</li> <li>• Wizard names</li> </ul> <p><b>Important:</b> Do not overuse quotation marks. Make sure that they clarify rather than clutter the text.</p>	<p>The serial connector is labeled “COM1”.</p> <p>Do not test new features in a “live” version of the system.</p> <p>When you click the icon, the “Open the remote database” window opens.</p> <p>In the “user” panel, type the name of the user.</p> <p>Use the “Expense reimbursement” portlet to track the status of requests for expense reimbursement.</p> <p>You can use the “Set up backup files” wizard ...</p>

For information about highlighting using DITA, see *DITA Best Practices: A Roadmap for Writing, Editing, and Architecting in DITA*, Chapter 3, “Highlighting new terms.”

For more information about using highlighting, see *Developing Quality Technical Information*, Chapter 7, “Provide practical and consistent highlighting.”

## Notes and notices

Use notes and notices with discretion. If you overuse notes, they lose their significance. Use the correct type of notice to indicate the possibility of damage or injury.

### Notes

To call attention to important hints, tips, guidance, restrictions, or advice that might be overlooked, use a meaningful label that describes the nature of the material. Consider labels such as

**Exception, Fast path, Important, Remember, Requirement, Restriction, and Tip.** Avoid using **Recommendation**; see *recommend* in “Word usage” on page 357. The label, and the colon that follows the label, must be bold.

### Examples

**Exception:** This function is not available in this version.

**Fast path:** Instead of creating a new configuration file, you can copy one of the sample configuration files that are in the `/samples` folder and modify it to meet your needs.

**Important:** Make sure that you select the correct service document before you commit your changes.

**Remember:** Memory requirements are affected by the size and complexity of your database system.

**Requirement:** You must have SYSADM authority.

**Restriction:** You cannot create a new subscription until you successfully complete this task.

**Tip:** For faster installation, accept the default settings.

Do not interrupt a paragraph with a note. A note must not be inline; it must stand alone. Do not indent note text, and do not use notes where they distort the appearance of the surrounding text.

If two or more notes are together, use a plural label on a separate line and arrange the notes in the appropriate type of list.

### Examples

#### Requirements:

- No assumed value is applied for the function attribute; you must specify a value.
- You must clear the temporary storage area before you can build a new query.

#### Tips:

1. Before you begin the configuration process, determine all of the required configuration values.
2. After you complete the configuration process, run some test queries to verify that you configured the system correctly.

If a note consists of more than one paragraph, consider reorganizing the information to make the note a subsection with a heading, rather than a note with a label. When a note is longer than one paragraph, differentiating the note text from the standard text is difficult.

### **Attention, CAUTION, and DANGER notices**

Use special headings for notices that alert customers to the possibility of damage to hardware, software, or data or to physical risk or danger.

#### **Attention notices**

Use an Attention notice to indicate the possibility of damage to a program, device, system, or data. Begin an Attention notice with the label **Attention** in bold, followed by a colon and the text of the notice on the same line. The Attention notice must be a separate paragraph, with space above and below the notice. In a procedure, place the Attention notice *before* the step in which the risk exists.

#### **Example**

1. Raise the main panel.
2. Remove the six bolts.
3. Unlatch the array board retainers.

**Attention:** Do not touch the plastic locating pins in the cover. You might bend or break them.

4. Remove the array board carefully.

#### **Example**

**Attention:** If the exporting and importing databases use different code-page values, the exported data corrupts the importing database.

Do not use the word *warning* in an Attention notice, either as the label or within the notice text. In some countries, the word *warning* is restricted to safety notices, which pertain to possible physical harm to people. In IBM publications, safety notices are either CAUTION or DANGER notices.

#### **CAUTION notices**

Use a CAUTION notice to call attention to a situation that is potentially hazardous to people because of some existing condition or a potentially dangerous situation that might develop because of some unsafe practice. For example, you might need a CAUTION notice to notify readers to use special care when they lift a piece of heavy equipment.

Consult the Safety department of your company before you use a CAUTION notice.

Set the **CAUTION** label in bold in all uppercase letters on a line by itself followed by a colon. If your authoring tool does not display the text of the notice in bold, create the text in bold manually. Always treat a CAUTION notice as a paragraph, with space above and below the notice. In a procedure, place the CAUTION notice *before* the step in which the risk exists.

#### Example

1. Use a screwdriver to remove the four screws.
2. Remove the back cover.

**CAUTION: Do not remove or install this unit without using the provided lift tool.**

3. Use the lift tool to lift the server out of the rack.

### DANGER notices

Use a DANGER notice to call attention to a situation that is potentially lethal or extremely hazardous to people. For example, after a computer side panel is removed, exposed high-voltage wires might be lethal.

Use the DANGER notice with discretion. Limit its use to situations where irreparable injury or loss of life might occur unless extreme care is used. Consult the Safety department of your company before you use a DANGER notice.

Set the **DANGER** label in bold and in all uppercase letters on a line by itself. Always enclose a DANGER notice in a box. If your authoring tool does not display the text of the notice in bold, create the text in bold manually. In a procedure, place the DANGER notice *before* the step in which the risk exists.

#### Example

1. Remove the four corner bolts.
2. Lift the protective cover.

#### **DANGER**

**Electrical voltage and current from power, telephone, and communication cables are hazardous. To avoid a shock hazard, never turn on any equipment when there is evidence of fire, water, or structural damage.**

3. Turn on the unit.

For information about creating notes using DITA, see *DITA Best Practices: A Roadmap for Writing, Editing, and Architecting in DITA*, Chapter 12, “Problem: Specifying the wrong note type or overusing the <note> element.”

For information about using notes appropriately, see *Developing Quality Technical Information*, Chapter 8, “Emphasize main points; subordinate secondary points,” and Chapter 9, “Provide helpful entry points.”

## Revision indicators

Revision indicators inform reviewers, translation centers, and customers of new and changed information. If you use revision indicators, use them consistently throughout your information.

Use revision indicators only for content changes. Do not use them for editorial changes or in legal notices. If you use revision indicators, describe their use in the summary of changes or preface of a book, a “What’s new for this release” topic, or a topic about online help conventions.

Use a convention that readers understand and that conforms to accessibility standards:

### Books

Changed and new information is indicated by a vertical bar (|) to the left of the change.

### Online information

Changed and new information is indicated at the beginning and end of the new or changed information. The revision indicator characters might be inserted by your authoring tool, but are typically double angle brackets (<< and >>).

You can use different revision indicators to differentiate between different sets of online-only updates. For example, you might use a plus sign (+) revision indicator to show the latest changes, with all earlier changes indicated by a vertical bar. You can retain these different revision indicators until the next edition. Never use more than three sets of revision indicators; a proliferation of different revision indicators can confuse the reader.

For a new version of a product, remove all revision indicators. When you update the publication, remove all revision indicators from a previous release. If you think that it is helpful to the reader to include revision indicators for a release update, you can leave them in, provided that you do this in all documentation for the product.

**Translation consideration:** Placing revision tags within a sentence can increase the number of new and changed words that are flagged for translation in a subsequent release. When revision tags within a sentence are removed for a subsequent release, the translation tool might flag the sentence as being changed because the new version, without the tags, does not match the earlier version, with the tags. This problem does not occur when the revision tags are placed outside the sentence. Place revision tags at the sentence level or at a higher structural level to lessen the possibility of unnecessary translation work in a subsequent release.

# Structure

Follow these guidelines to present information in a clear and logical structure.

## Topic-based information

Topic-based writing is an approach to writing well-structured, minimalist information that is usually presented online.

A *topic* is an independent unit of information with the following characteristics:

- It is meaningful when it is displayed alone.
- It follows the rules for a specific topic type.

A book establishes a progression of information that readers are expected to follow in a sequence. By contrast, online information encourages readers to approach topics from various directions. Writers of online information divide information into topics that can be read independently.

There are three main topic types:

- Task
- Concept
- Reference

For more information, see *DITA Best Practices: A Roadmap for Writing, Editing, and Architecting in DITA*, Chapter 1, “Topic-based writing in DITA,” and *Developing Quality Technical Information*, Chapter 8, “Organization.”

## Task topics

Task topics document the steps that users must complete to accomplish a task or goal.

Task topics provide procedures, typically in step-by-step instructions. Some task topics might list choices as bulleted points rather than steps, or they might describe a single action rather than a sequence of steps. Task topics also provide information about the context (where to perform a task and when), the rationale (why to perform a task), prerequisites, and examples.

Supertasks (high-level tasks) are the starting points for most users. Steps in a supertask often link to individual task topics. These tasks can be part of one supertask or many. For example, in database application programming, opening a database connection is a task that can be reused in several high-level application programming tasks.

As you write task information, note what concepts need to be documented, and to what depth, for users to complete the tasks successfully. Consider the probable skills and experience of users, and write with those characteristics in mind. For example, if users must configure TCP/IP and might not know about routers, create and link to a concept topic about routers.

If there are multiple ways to perform a task, consider documenting only the simplest or most common way. For example, you might explain how to do something from the main menu only and assume readers will discover that they can launch the same action by right-clicking an object, by dragging an object, or by clicking a toolbar button. The goal of minimalist writing is to reduce the amount of reading that users must do before they can successfully complete a task. If you must document alternative methods, document them in separate topics. For example, you might write two topics to cover importing data by using a GUI and importing data by using a command line. If you believe that an alternative is not intuitively obvious and you can document it in one sentence, include it as a tip after the main list of steps.

### Headings of task topics

Task topic headings must be precise, distinct, and clearly convey what the task is.

Follow these guidelines when you write task topic headings:

- Start the heading with a gerund phrase (a phrase that starts with an *-ing* verb).

#### **Examples (incorrect)**

Create database table

How to start the content integration server

#### **Examples (correct)**

Creating database tables

Starting the content integration server

- Use a plural heading unless the subject makes sense only in the singular.

**Examples (incorrect)**

Deleting an archive for BRMS  
Adding a disk to a Linux partition

**Examples (correct)**

Deleting archives for BRMS  
Adding disks to a Linux partition

- Describe the user's goal, not the tool that is used to perform the task.

**Examples (incorrect)**

Using the team server installation utility  
Working with security tokens

**Examples (correct)**

Installing the team server  
Protecting your system by using security tokens

- Make the topic heading specific enough so that a user who sees it in a list of search results knows exactly what the topic contains.

**Example (incorrect)**

Configuring components

**Example (correct)**

Configuring HTTP proxy servers on Linux systems

## Structure of task topics

Task topics follow a structure that can vary depending on the task. Start the task with a brief introduction. Next, if required, include prerequisites. Then, list all the steps to complete the task.

You can include a small amount of conceptual or reference information in a task if that information is directly related to the task. For larger amounts of conceptual and reference information, create separate topics, and link to them.

## Introductions for task topics

Start a task topic with an introductory paragraph that specifies the purpose or rationale for performing the task.



If the title of the task does not fully convey the context, effect, or objective of the task, provide that information in the introduction. Mention any restrictions that limit the user's ability to complete the task. If necessary, clarify who performs this task and under what circumstances.

## Prerequisites for task topics

A prerequisite is any requirement that must be met, any task that the user must perform, or any authority or privilege that must be set up before the user can start the current task. Not all tasks have prerequisites.

Follow these guidelines:

- List the prerequisites before the first step of the task.

### Example

You must have SYSADM authority or CREATE privilege on the table.

1. Start the Administration utility...

- If the prerequisite is explained in another task topic, link to the task topic, and label the link appropriately.

### Example

#### Prerequisite

[Creating a connection](#)

- When you link to a prerequisite task, do not create an inline link that is part of a sentence.

### Example (incorrect)

#### Prerequisite

Before you can access the LAN on the system, you must Create a new connection.

### Example (correct)

#### Prerequisite

Before you can access the LAN on the system, you must create a new connection.

See [Creating a connection](#) for instructions.

## Ending a task

At the end of a task, ensure that users know what to do next if the current procedure is one task in a series by providing a link to the next task topic.

### Example

1. In the object navigator, click **System > Network > IP Policies**.
2. Right-click **Virtual Private Networking** and click **Start**.

**Next:** [Testing the VPN connection](#)

### Steps in task topics

Use ordered (numbered) lists to describe tasks with more than one sequential step. For detailed information about writing steps, see “Procedures” on page 84.

### Length of task topics

Short tasks are typically easier to follow than long ones.

Try to limit the number of steps to nine. If you have trouble reducing the number of steps, try to find ways to chunk the task into subtasks.

Include only necessary conceptual or reference information in a task. Advanced users will be distracted by extra information. Add the lengthy conceptual and reference information to other topics, and provide links to that information from the task topic.

### Example of an effective task topic

This example shows a correct task example. This task topic is effective for the following reasons:

- The topic title uses a gerund.
- There is a clear introduction.
- The introduction specifies the purpose and rationale for doing the task.
- The prerequisite is included after the introduction and before the first step, and “Starting TCP/IP” is a link because the information is in a separate topic.
- All steps direct users where to go and what to do to complete the task.
- Steps 4 and 5 explain the purpose of a step before describing the action that the user should perform to complete the step.
- The “Tip” is not a step because it is not part of the procedure to start a connection, but is instead additional information.
- The next task that the user must complete to start a VPN connection is listed as “Next” instead of as a step or a related link.

### Example

#### Starting a VPN connection

To allow remote systems to connect to your local resources, you can start a virtual private network (VPN) connection on your system by using iSeries Navigator.

## Prerequisite

### Starting TCP/IP

To start a VPN connection:

1. In iSeries, click **Server > Network > IP Policies**.
2. Right-click **Virtual Private Networking** and click **Start**.
3. Click **Virtual Private Networking > Secure Connections > All Connections**.
4. In the right pane, right-click the connection that you want to start and click **Start**.
5. Verify that the **Status** column displays *Started* by refreshing iSeries Navigator.  
Click **File > System > Refresh**.

**Tip:** To start multiple connections, select each connection, right-click the selected group, and then click **Start**.

**Next:** Restarting the system

For more information, see *DITA Best Practices: A Roadmap for Writing, Editing, and Architecting in DITA*, Chapter 2, “Task topics” and *Developing Quality Technical Information*, Chapter 2, “Task orientation.”

## Concept topics

Concept topics explain ideas that the user must understand to complete a task.

Every concept topic performs at least one of the following functions:

- Introduces a solution, process, product, tool, or feature
- Provides background information and explains issues that users must know before working with a system or component or before starting a task
- Describes the benefits of using one approach rather than another or provides information about when one particular choice or tool is more appropriate than another
- Describes how one feature, tool, or product is related to others and how they work together or do not work together
- Describes any restrictions that limit the circumstances in which a tool can be used successfully
- Explains a glossary term in more detail
- Explains how and why some behavior changes as time passes or work progresses
- Helps users form a mental picture that builds on the experience and knowledge that they are already likely to have

Users typically read conceptual material before beginning a project or starting to use a product or tool. In contrast, users need task or reference topics when they perform a task.

Use minimalist writing techniques to create content that users can quickly understand. Do not attempt to explain the whole design philosophy of a product or component in a single concept topic.

## Headings of concept topics

The heading for a concept topic must be a specific, meaningful noun or noun phrase.

Follow these guidelines when you write concept topic headings:

- Use the plural forms of nouns unless the subject makes sense only in the singular.

### Examples (incorrect)

Buffer pool  
Authentications

### Examples (correct)

Buffer pools  
Authentication

- Place important words at the beginning of a heading to focus attention on those words.

### Example (incorrect)

Overview of installation for web servers

### Example (correct)

Web server installation overview

- Do not use a gerund for a concept heading because gerunds indicate tasks.

### Examples (incorrect)

Working with the WebFacing Tool  
Working online and offline

### Examples (correct)

WebFacing tool  
Advantages of working online or offline

- Make the topic heading specific enough so that a user who sees it in a list of search results knows what the topic contains.

**Examples (incorrect)**

Environment  
Requirements

**Examples (correct)**

Client-server environment  
Security requirements

**Structure of concept topics**

Write most conceptual information in paragraphs and unordered lists.

If the explanation is long and complex, use subheadings to break the concept into sections. Use unordered lists when lists are appropriate; numbered lists typically indicate a task. Tables are common elements in reference topics and generally are not appropriate in concepts. Exceptions include tables that indicate when to use specific components or features.

Concepts are likely to be unfamiliar to users, so begin with a definition. Then, expand that definition into an explanation of the things that users must know about the subject. If you are describing a component, feature, or tool, explain its benefits and note any limitations or corequisites for using it. If you are describing a high-level concept, introduce the related lower-level concepts.

Graphics are often helpful in simplifying the explanation of processes or in showing the relationships among components of a product. However, make sure that they serve a useful purpose and are done well. A poor diagram might confuse rather than clarify and can detract from the quality of the information. When you include graphics in topics, ensure that they conform to accessibility and translation requirements.

**Length of concept topics**

A concept topic must address only one complete idea.

In many cases, it makes sense to divide a large subject (for example, database objects) into an overview topic that links to topics about subsidiary concepts, such as tables, table spaces, and buffer pools. However, do not divide information about a single concept unnecessarily. Users often print concept topics to read them, so ensure that a topic includes all the essential information about the subject that you are covering. In general, keep concept topics to fewer than seven printed pages.

## Example of an effective concept topic

This example shows a well-written concept topic. This concept topic is effective for the following reasons:

- The heading is a noun or phrase.
- The introduction (short description) explains why the concept is important to understand.
- The structure consists of paragraphs and unordered lists.
- A definition is used to introduce a new concept or related concept.
- The topic is relatively short but conveys the necessary information.
- Related links are provided; no inline links are used.

### Example

#### Buffer pools

Buffer pools are an important memory component. When used correctly, buffer pools can improve the performance of your database.

A *buffer pool* is memory that is used to cache table and index data pages as they are read from disk or modified. Data can then be accessed from memory instead of from disk. Because memory access is much faster than disk access, the less often the database manager needs to read from or write to a disk, the better the performance. Because most data manipulation occurs in buffer pools, configuring buffer pools is the single most important method of tuning. Only large objects and long field data are not manipulated in a buffer pool.

When an application first accesses a row of a table, the database manager places the page that contains that row in the buffer pool. The next time an application requests data, the database manager searches for the data in the buffer pool. If the requested data is in the buffer pool, that data can be retrieved without disk access. This method of accessing data results in faster performance.

Pages remain in the buffer pool until you shut down the database or until the space that is occupied by a page is required for another page. The following criteria determine which page is removed to bring in another page:

- How recently the page was referenced
- The probability that the page will be referenced again by the last agent that accessed it
- The type of data on the page
- Whether the page was changed in memory but not written out to disk

**Related tasks**

[Creating a buffer pool](#)

**Related reference**

[Buffer pool commands](#)

For more information, see *DITA Best Practices: A Roadmap for Writing, Editing, and Architecting in DITA*, Chapter 3, “Concept topics.”

## Reference topics

Reference topics provide quick access to information that users need to complete tasks.

Reference topics typically provide users with information about the following types of elements:

- APIs
- Classes
- Commands
- INI settings
- Keyboard shortcuts
- Language elements
- Parameters
- Protocols
- Schemas
- Statements
- Symbols
- Templates

Document the purpose of each reference element. Include restrictions (such as case sensitivity), necessary authorities, and anything else that might limit the use of that element.

Assume that users who use reference topics already understand the basic technology. Provide brief statements of fact rather than lengthy explanations. Make reference topics easy to scan because users typically look for reference material only when they need it, rather than studying and learning it as they do with concepts.

## Headings of reference topics

The headings for reference topics are typically nouns or noun strings.

Follow these guidelines when you write reference topic headings:

- Do not begin a heading with an article (*a*, *an*, or *the*).
- Use the plural forms of nouns unless the subject makes sense only in the singular.

**Examples (incorrect)**

Configuration parameter  
Sample output reports

**Examples (correct)**

Configuration parameters  
Sample output report

- Title the topics for a particular category of reference information consistently. For example, if you have multiple topics about parameters, title all of those topics consistently.
- Use the name of the reference element in the title, and provide descriptive text to clarify the meaning of cryptic element names. In addition to clarifying the subject of the topic for English-speaking users, the descriptive text can be translated so that non-English-speaking users understand the subject of the topic as well.

**Example**

chgwtr: Change writer command

## Structure of reference topics

For a particular category of reference information, use a consistent format so that users can find information quickly.

Reference topics often include subsections to help users locate particular information. For example, you can organize command reference topics by using “Purpose,” “Syntax,” “Parameters,” and “Usage” subsections.

When the topic heading requires explanation, provide introductory information to help users quickly determine whether they want to read more.

**Example**

**org.eclipse.core.resources package**

The org.eclipse.core.resources package provides basic support for managing a workspace and its resources.



You can also use tables and bulleted or definition lists to help users scan for information quickly. Provide links to closely related reference topics, and, in some cases, to related concept and task topics.

## Length of reference topics

Keep reference information brief and formulaic, but include all necessary information. Make reference information easy to scan to help readers find information quickly. Do not write long explanations; assume that readers understand the basic technology.

## Example of an effective reference topic

This example shows a well-written reference topic. This reference topic is effective for the following reasons:

- The information states only the facts about the command and does not include task or concept information.
- The heading and introduction are clear and in a form that users can identify easily.
- All links are referenced correctly in the related links section at the bottom of the topic.
- Information is easy to scan and locate because of subheading links.

### Example

#### UPDATE TRACETABLE command

The **UPDATE TRACETABLE** command changes the trace level setting for the requested trace tables.

#### Syntax

```
>>--+-UPDATE-+---+-TRACETABLE-+----->
      '-UPD----' '-TRTAB-----'
      .-,-----
      v          |
>--NAME(---+-trace_table_name---+-)---+-----<
      '-trace_table_name*-' '-OWNER(---+-BPE---+-)-'
                                +-SMDC-+
                                '-SMUI-'
```

#### Parameters

##### UPDATE | UPD

A required parameter that specifies that the action against the trace table is to update its attributes.

## **TRACETABLE | TRTAB**

A required parameter that specifies that the resource type being acted upon is a BPE-managed trace table.

### **NAME**(*trace\_table\_name*)

A required parameter that specifies the name of the trace table type or types to update. You can specify a single trace table name or a list of trace table names separated by commas. Trace table names can contain wildcard characters. Trace table names can be BPE-managed trace tables or they can be trace tables that are managed by IMS™ Sysplex Manager.

The following trace table types are available:

#### **AWE**

Asynchronous work element (AWE) trace table

#### **CBS**

Control block services trace table

#### **CMD**

Command trace table

#### **DISP**

Dispatcher trace table

#### **LATC**

Latch trace table

#### **SSRV**

System services trace table

#### **STG**

Storage service trace table

You can update trace tables only for IMS Sysplex Manager address spaces.

### **OWNER**(**BPE**|**SMDC**|**SMUI**)

An optional parameter that specifies the owner of the trace table type or types that you want to update. You can specify one of the following values:

#### **BPE**

BPE-defined trace table types

#### **SMDC**

Data Collector-defined trace table types

#### **SMUI**

Server-defined trace table types

**Related tasks**

[Changing trace level settings](#)

**Related concepts**

[Trace tables](#)

**Related reference**

[UPDATE TRACETABLE command output](#)

For more information, see *DITA Best Practices: A Roadmap for Writing, Editing, and Architecting in DITA*, Chapter 4, “Reference topics.”

## Links in topic-based information

Links are an important navigational aid in topic-based information because they are immediately available and the user does not have to scan an index, search results, or table of contents.

One way to help users find what they want in online information is to provide links to other topics that are closely related. However, use restraint when providing links. Too few links can force the user to waste time searching for critical information. If too many links exist, users waste time following links that they do not need for their immediate purpose. Maintaining a large number of links can become a difficult task.

### General guidelines

Follow these general guidelines when you use links in topic-based information:

- In every topic, try to provide at least one link to another topic.
- In general, place links at the end of each topic. Exceptions to this rule are described in “Inline links” on page 130.
- Link only to closely related information, which includes the following types of information:
  - The parent topic, which is particularly useful to users who come to the current topic from a list of search results
  - The previous or next topic in a series of subtasks
  - A topic that explains a concept that users must understand before reading the current topic
  - A topic for a task that is mentioned in the body of the current topic
  - A sample that is related to the current topic
  - In the case of a supertask (high-level task), topics for steps in the supertask
- Do not include more than 10 links in any topic, and do not include more than five links to one information type (concept, task, or reference).

## Links to related topics

Place most links at the end of the topic under the appropriate subheading: “Related concepts,” “Related tasks,” “Related reference,” and “Related information.” For example, if you link to a concept topic, place the link in the “Related concepts” section. Use “Related information” for links to tutorials, scenarios, and web-based resources. Many topics do not need links to all categories, but most topics should provide at least one link from one of the four categories.

The text of the link should provide enough information for the user to decide whether to look at that topic. In most cases, the link text should match the topic heading that it refers to.

List the links in the following order:

### Related concepts

List links in order of relevance to the current topic, starting with the most relevant link, or follow the order in which the concepts are mentioned in the current topic.

### Related tasks

List links to task topics in the order in which the tasks are likely to be performed.

### Related reference

List links in alphabetical order unless there is a good reason for another sequence.

### Related information

List links in order of relevance to the current topic, starting with the most relevant link.

## Links to subheadings

In a long concept, reference, sample, or tutorial topic, you can provide links at the beginning of the topic to subheadings later in the topic. Do not use subheadings in task topics; task topics should be short and specific.

Linking to subheadings helps readers to quickly grasp the content in a topic and move directly to the part that interests them. If you include a list of subheadings in a topic, place the list after the introductory paragraph and provide an introductory sentence.

### Example

Detailed information about the parameter types are in the following sections:

- [Configuration parameters](#)
- [Performance parameters](#)
- [Security parameters](#)
- [Storage parameters](#)

## Inline links

Inline links are links within the running text of a topic. When you create inline links, follow these guidelines:

- Use inline links sparingly. Inline links can frustrate users by distracting them from the topic that they are currently reading. Use an inline link only if you expect the user to leave a topic at a particular point to read a required piece of related information. Instead of using inline links, use related links as much as possible.
- Try to limit the use of inline links in task topics to prerequisite tasks, to the next task in a sequence, and to subtasks that are cited as steps.

### Prerequisite tasks

If you identify a prerequisite for a task that is documented in its own topic, provide a link to that prerequisite topic before the list of steps. Do not repeat these links in the related links at the end of the topic.

### Subtasks

Consider putting all or many of the steps in a large task into separate task topics. For example, “Configure the server” might be step 2 in one task, but the five steps that are needed to configure a server are described in a separate topic called “Configuring servers.” In that case, make the whole text of step 2 a link to the more detailed task topic. Expert users do not have to follow the link to the detailed instructions, but less-experienced users can. Structuring information in this manner also makes it easier to reuse it in multiple places.

#### Example

1. Start the server.
2. [Configure the server](#).

### Next task in a sequence

If the current task belongs to a sequence of tasks, provide a link to the topic about the next task in that sequence. Do not repeat this link in the list of related tasks at the end of the topic.

#### Examples

##### What to do next

Complete the steps in [Deploying your project](#).

**Next topic:** [Deploying your project](#)

- Specify the title of the topic or section, and provide context for the link.

#### Examples

For a complete list of supported operating systems, see [Requirements](#).

If you cannot restart the server, see [Troubleshooting](#) for possible causes and solutions.

- Keep the structure of any sentence that contains an inline link short and simple. When sentences are translated into other languages, the order of the words is often rearranged.
- Never use *click here* as the link text.

#### **Example (incorrect)**

For more information about storage, click [here](#).

For more information, see *DITA Best Practices: A Roadmap for Writing, Editing, and Architecting in DITA*, Chapter 7, “Linking” and *Developing Quality Technical Information*, Chapter 9, in the section “Link appropriately.”

## **Books**

Books and publications that follow a book structure typically contain front matter, a body that is divided into sections, and back matter.

### **Sequence of book elements**

Place elements in the following order in books and publications that follow a book structure:

1. Front cover
2. Title page, the back of which includes the edition notice and copyright statement
3. Table of contents
4. List of figures (optional)
5. List of tables (optional; can be combined with the list of figures)
6. Safety and environmental notices, if required
7. Preface
8. Summary of changes (optional)
9. Definition of symbols (optional)
10. Body (text)
11. Appendixes, including an appendix titled *Accessibility* (unless you include the required accessibility information elsewhere)
12. Hardware warranty (if applicable)
13. Legal notices
14. Glossary (optional)
15. Bibliography (optional)
16. Index
17. Reader comment form (optional)
18. Back cover

If a publication is divided into separate volumes, each volume is treated as a separate book, and each book must contain all required elements.

## Book elements and other items that might be included in a book

### Chapter titles

A chapter title consists of the word *Chapter*, an Arabic numeral followed by a period, and descriptive wording. Like other headings, apply sentence-style capitalization to the chapter title. Chapter numbers simplify cross-references and make it easier for the reader to find headings.

#### Example

Chapter 1. Introduction to InfoBase

### Page numbering

Use consecutive pagination through an entire book, excluding only the front matter. Use lower-case Roman numerals for paginating front matter, excluding the title pages, notices page, and blank pages. Use Arabic numerals for body content.

**Exception:** Use folio-by-chapter numbering (chapter-based page numbering) in situations where one book is published with several languages in the same book. Because each language can take a different number of pages and the writer creates only one language version of the information, the writer cannot know how many pages are in each translated chapter.

### Form numbers

Form numbers are assigned to items, including publications, that can be ordered.

### Parts and part titles

Divide a book into parts if a logical grouping of related chapters makes the information in the book easier to understand and retrieve. For example, an application programming guide and reference has guidance information as Part 1 and reference information as Part 2.

A part title consists of the word *Part*, an Arabic numeral followed by a period, and descriptive wording. Like other headings, apply sentence-style capitalization to the part title.

#### Example

Part 2. System administration

Follow the practice in *The Chicago Manual of Style* of numbering chapters consecutively; do not begin with Chapter 1 in each part. If you divide a book into parts, you can present the appendixes and back matter in either of the following ways:

- Present the appendixes as a separate part (titled *Part n. Appendixes*) and the glossary, bibliography, and index in another part (titled *Part n+1. Glossary, bibliography, and index*).

- Present the appendixes and back matter in one part (titled *Part n. Appendixes, glossary, bibliography, index*). This method is preferable if there is only one appendix. If you divide a book into parts and there are no appendixes, do not place the back matter within a part.

Do not divide a book into parts if the main text is one part and the appendixes and back matter are the only other parts.

### **Running headers and footers**

Running headers and footers help readers easily locate their place in the book. As the names imply, running headers are displayed at the top of a page, and running footers are displayed at the bottom.

#### **Running headers**

The use of running headers is optional. Use running headers to help the reader find information quickly. If you use running headers, follow these guidelines:

- Do not duplicate the chapter title.
- Use header text that is helpful to the reader. When there is more than one heading level on a page, use the most meaningful text as the running header.
- Do not use running headers when the header changes on every page.
- Indicate the content that is described on the page. The wording of the running header must correspond to the text heading, but does not have to be identical.
- Use running headers throughout a book, not just in specific chapters. Use running headers throughout a library if appropriate.

If your authoring tool supports the process, omit running headers from these pages:

- Part title pages
- Chapter title pages
- Any page that displays the equivalent of a chapter title, such as the first page of the table of contents, preface, appendix, notices, glossary, and bibliography

However, you can use a running header on a page that contains only an illustration or a table. Ensure that the material in the illustration or table pertains to the topic of the running header.

#### **Running footers**

Running footers are required and are usually generated for the copyright notice, the book title, and the chapter title by your text processor. If they are not, use the following format:

- The footer for the copyright notice must be displayed on any page that includes the equivalent of a chapter title, such as the first page of the table of contents, preface, appendix, notices, glossary, and bibliography.
- The footer for the book title must be displayed on the left page following the equivalent of a chapter title.
- The footer for the chapter title must be displayed on the right page following the equivalent of a chapter title.



## Titles of publications

Create publication titles consistently within a product library. A title must give an idea of the tasks that users can accomplish by reading the publication or indicate other specific information that the publication contains. Include the following elements in each title:

- The product name, including the name of the operating system or systems, if any
- A term or terms that describe the supported tasks or other specific information that the publication contains (for example, *Administration*, *Planning and Installing*, or *User*)
- **Optional:** An additional term that indicates the type of information (for example, *Guide* or *Reference*)

### Examples

IBM TotalStorage Enterprise Tape System 3590 Introduction and Planning Guide  
Administration Reference for IBM DB2  
IBM Clientware for iSeries: Administration Reference I Part 2.

## Version and release

Include the version and release in the short title of an online book because they are used to identify the level of the book. Generally, do not use the version and release in the title of a printed book, but include the version and release on the cover and title page. When you provide a cross-reference to a book, include the version and release levels only if there is a good reason to do so, for example, if two versions of a product are available simultaneously. In this case, use the format *Product name, Version x.y book title*.

## Type size in printed documentation

Follow *ISO Standard ISO/IEC 18019*, clause 9.3.1 (Presentation of text) Typefaces and Sizes, which states to use a type size that corresponds to a minimum of 9 points and a maximum of 11 points. The same rule applies to the entire front and back matter of a publication.

## Books: Front matter

The front matter of a book consists of all items after the front cover and up to, but not including, the body.

### Sequence of front-matter elements

Place front-matter elements in the following order in books and in publications that follow a book structure:

1. Title page, the back of which includes the edition notice and copyright statement
2. Table of contents
3. List of figures (optional)
4. List of tables (optional; can be combined with the list of figures)
5. Safety and environmental notices, if required

6. Preface
7. Summary of changes (optional)
8. Definition of symbols (optional)

## Front-matter elements

### Edition notice and copyright statement

The edition notice and copyright statement are displayed on the back of the title page. The edition notice indicates the version of the product that the book applies to and which previous edition of the book is replaced by the current edition. The edition notice is followed by the copyright notice for the book.

#### Example

This edition applies to Version 2 Release 3 of IBM DB2 Bind Manager for z/OS® (product number 5655-E43) and to all subsequent releases and modifications until otherwise indicated in new editions.

This edition replaces SC27-1450-07.

© Copyright IBM Corporation 2000, 2011. US Government Users Restricted Rights – Use, duplication, or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Always use the legally approved boilerplate text for your edition notices.

### Table of contents

Use the heading *Contents* for the table of contents. Check the style sheet for your library to determine how many levels of headings to include in the table of contents for your book.

In a large book, you can include a partial table of contents for each part or even for each chapter if it helps the reader.

Use leader dots in the table of contents.

#### Example

##### Contents

About this information .....	v
Service updates and support information .....	v
Highlighting conventions .....	v
How to look up message explanation .....	vi
Searching an information center .....	vi
Using a web search .....	vi

<b>Chapter 1. DB2 Bind Manager overview</b> .....	1
DB2 Bind Manager components .....	2
DB2 Bind Manager features and benefits .....	2

## List of figures

A figure can be an illustration, a chart, a screen capture, or a photograph. Consider the following criteria to determine whether to include a figure list:

- Consistency. If other books in your library use a list of figures, include one in your book.
- Number of figures. If you have a large number of figures, include a list.
- Placement of figures. If you cannot always place the figures in your book at the point in the text where they are pertinent, include a list.

When you use a figure list, follow these guidelines:

- Use the heading *Figures* for the figure list.
- Do not repeat the word *Figure* in each entry in the figure list.
- If a figure has a long caption, use a shortened caption in the figure list.

### Example Figures

DB2 archive log offload processing .....	5
DB2 Archive Log Accelerator environment .....	7
DB2 Archive Log Accelerator main menu .....	16

## List of tables

Consider the following criteria to determine whether to include a table list:

- Consistency. If other books in your library use a list of tables, include one in your book.
- Number of tables. If you have a large number of tables, include a list.
- Placement of tables. If you cannot always place the tables in your book at the point in the text where they are pertinent, include a list.
- Table captions. If you caption the tables as figures, include them in a figure list rather than a table list.

When you use a table list, follow these guidelines:

- Use the heading *Tables* for the table list.
- Do not repeat the word *Table* in each entry in the table list.
- If a table has a long caption, use a shortened caption in the table list.

## Example

### Tables

Started task JCL modifications .....	5
Optional started task parameters .....	7
Message severity codes .....	16

## Safety and environmental notices

Safety and environmental notices are usually required for hardware products. Contact the Safety and Environmental personnel in your organization for assistance.

## Preface

A book should have either a preface or an introductory chapter that describes the purpose and audience for the book, as well as any other aspects of the book that readers might need to effectively use the information in the book.

Use *About this publication* or *About this information* as the heading of the preface. Start the preface with a brief description of the book (not the product). Explain the purpose and contents of the book. Include information such as supported tasks, level of detail, and what the reader will learn or be able to do as a result of reading the book. If readers might expect content that is not covered in your book, explain that the content is documented elsewhere, and, if possible, let readers know where they might find that content.

Include the following sections within the preface, or create your own; the goal is to use consistent sections throughout a product library. You can include other sections if they are about the book rather than about the product.

### Intended audience

Identify the intended audience for the content and any expected prerequisite knowledge.

### Conventions and terminology

Explain any special style conventions, terminology, notices, or presentation techniques that you use in the book, such as naming conventions that are particular to some programming languages or visual cues to help the reader recognize different kinds of information.

### Prerequisite and related information

Separate required reading and related information. Include the titles and document numbers of all publications.

## How to send your comments

Include a section that explains how to provide feedback, as shown in the following example. Alternatively, if your book includes a reader comment form in the back matter, include a cross-reference to that form.

### Example

Your feedback is important in helping to provide the most accurate and highest quality information. To submit any comments about this book or any other *product name* documentation:

- Go to the title home page at `http:// your feedback page URL`. There you will find the feedback page where you can enter and submit comments.
- Send your comments by email to `comments@your feedback page URL`. Be sure to include the name of the book, the part number of the book, the version of *product name*, and, if applicable, the specific location of the text that you are commenting on (for example, a page number, a table number, or a heading).
- Complete one of the forms at the back of this book and mail it, send it by fax, or give it to an IBM representative.

## Explanation of conventions

If you use nonstandard icons, fonts, colors, or other visual cues for different kinds of information, explain these conventions in the preface or in a separate section in the front matter.

Some books that describe commands or programming language syntax explain their conventions for syntax diagrams in the preface or introduction. For more information, see “Command syntax” on page 187.

Do not explain conventions in the preface if they are used in only one chapter. Explain the conventions in the introductory text of the chapter in which you use them.

### Example

#### Conventions

This book uses the following highlighting conventions:

- **Bold font** indicates commands or user interface controls.
- `Monospace font` indicates examples of text that you enter exactly as shown.
- *Italic font* indicates variables that you must replace with your own values. Italic font is also used to indicate book titles and to emphasize significant words.

## Summary of changes

The front matter can include a summary of the changes that were made between versions of the document. Organize the summary of changes in reverse order, starting with the most recent changes. Do not include revision bars in the summary of changes.

## Definition of symbols

Explain any symbols that you use to indicate special handling of product components. For example, a symbol is often used to indicate that batteries must be recycled or discarded according to applicable local and national regulations.

## Books: Back matter

The back matter of a book consists of all items after the body and before the back cover.

### Sequence of back-matter elements

Place back-matter elements in the following order in books and in publications that follow the structure of a book:

1. Appendixes, including an appendix titled *Accessibility* (unless you include the required accessibility information elsewhere)
2. Hardware warranty (if applicable)
3. Legal notices
4. Glossary (optional)
5. Bibliography (optional)
6. Index
7. Reader comment form (optional)

## Back-matter elements

### Appendixes

An appendix consists of material that supports the information in the book but meets one or more of these criteria:

- The information is not required for the user to accomplish tasks or to understand the material in the body of the book.
- The information is relevant to only specific situations or to a subset of users.
- The information is primarily reference information.

Place appendixes after the last chapter in the book, in the order in which they are referred to in the body. If the legal notices are included in an appendix instead of in a separate chapter or section, they must be the last appendix.

When a book has only one appendix, use *Appendix* as the title, followed by a period and descriptive wording. When a book has more than one appendix, start the title of each appendix with *Appendix*, followed by an uppercase letter (starting with A), a period, and descriptive wording.

## **Example**

Appendix A. Performance considerations

Appendix B. Conversion tables

If you divide a book into parts, you can present the appendixes and other back matter in either of the following ways:

- Include the appendixes in a separate part that is titled “Part *n*. Appendixes,” and include the glossary, bibliography, and index in another part that is titled “Part *n*+1. Glossary, bibliography, and index.”
- Include the appendixes and other back matter in one part that is titled “Part *n*. Appendixes, glossary, bibliography, index.” This method is preferable if a book contains only one appendix.

## **Legal notices**

Include any legal notices that apply to the product either as the last appendix or as a separate topic after the last appendix. Always consult your legal representative to determine the appropriate legal notices to include.

## **Glossary**

Include a glossary if you have a significant number of terms that you must define for your users. For more information, see “Glossaries” on page 245.

## **Bibliography**

A bibliography is not required, but it can be useful in a book that references many publications. A bibliography can include publications that are cited in the book and publications that deal with the same subject as the book.

## **Index**

Indexes are required elements in IBM books. For more information about indexes, see “Indexes” on page 255.

## **Reader comment form**

A reader comment form is a mechanism that readers can use to provide feedback about a book. One side of a typical reader comment form includes the following elements:

- The title and version of the book
- A series of questions that relate to different aspects of the book (for example, overall satisfaction with the book, accuracy of the information in the book, and satisfaction with the completeness of the information in the book)
- Space for the reader to write specific comments about the book

The other side includes information about where to send the form.

## White papers

A white paper is a detailed or authoritative report on a specific subject that is written by an expert and can be published for an internal or external audience.

### Structuring your paper

A white paper has the following components, in this sequence:

1. **Publication information:** The title, authors, publication date, and the copyright statement identify the publication. You might want to include author information such as a job title and contact address. When you write about a product, you might have to include the version number. In a short paper up to approximately 10 pages, the publication information can be on the first page; a longer paper requires a cover page.
2. **Table of contents:** If the paper has more than six subsections, include a table of contents with a list of all the headings, to make the topics easier to access in a PDF file. If the paper is viewed online, make sure that each heading in the table of contents links to its section.
3. **Introduction or abstract:** Briefly describe the topic, including the aspects that are discussed in the paper. Write this information after you write the paper. Call this section an *Introduction* or *Abstract*. In the first or second paragraph, describe your target audience, for example, system administrators, database administrators, or application programmers.
4. **Body of the paper:** Use headings to help readers follow the content organization of the paper. Use only the number of heading levels that are needed to make your organization easy to understand.
5. **End matter (as needed):** You might want to include a conclusion and a question-and-answer section. Add appendixes, a list of references, a glossary, and links to related information as needed.
6. **Notices:** Include standard, required legal notices as defined by your company. Special wording might be required for beta products, performance benchmarks, special projects, and products that include vendor material. Consult your company legal representative for specific wording, if necessary. Include a copyright statement.

If you intend to distribute your white paper outside of your company, follow appropriate trademark guidelines. Specifically, note these details:

- Use trademarked terms correctly.
- Mark trademarked terms correctly with registered trademark (®) and trademark (™) symbols. How terms are marked depends on where you intend to distribute the information.



## Writing your paper

Follow these guidelines for the body of your paper:

- Follow style guidelines for writing style, highlighting, and punctuation.
- If your white paper has listed authors and describes the actions or opinions of those authors, the use of first person might be acceptable. If you are unsure whether your white paper warrants the use of the first person, ask an editor.
- If you must refer to the paper itself, use the term *paper*, not *white paper* or *document*.
- Break the information into tables and lists where appropriate. Use bulleted lists unless the order of the information is important.
- Do not use symbols, especially in book titles or product names.
- Use diagrams to illustrate your points where appropriate.
- Include captions for tables and diagrams.
- To cite a publication in a product library, use cross-references.

### Example

For additional background information about datagram sockets, see *System p<sup>®</sup> and AIX Information Center* located under **Documentation** at [www.ibm.com/servers/aix/library](http://www.ibm.com/servers/aix/library).

## Getting your paper reviewed and edited

As you write your white paper, ensure that the appropriate people review it to verify that it is accurate, complete, and legally appropriate. After you are satisfied with the content, have your paper edited. Because more than one group is often involved in developing a white paper, clarify your roles from the outset. Be sure to get your white paper approved, using the approval process in your organization.

A typical approval process includes the following people:

- A technical contact or appropriate subject matter expert
- A product marketing representative
- Your manager
- A technical editor
- A company legal representative

# References

Use footnotes, cross-references, and links to point readers to useful, related information.

## Footnotes

Avoid using footnotes; often, you can use a short parenthetical phrase or sentence instead of a footnote. Use a footnote only when including information inline disrupts continuity.

## Footnotes in printed information

In printed information, use a superscript numeral to denote a footnote, and number footnotes sequentially throughout the information. If the information is divided into sections or chapters, restart the numbering in each section or chapter. If a superscript numeral might be mistaken for a mathematical symbol, use a dagger (†) if it is available, rather than a numeral or an asterisk.

Place a footnote number at the end of the sentence, clause, word, abbreviation, or other item to which the footnote applies. Place the footnote text at the bottom of the same page where the footnote number or dagger is displayed.

### Example

The DJXDSCF<sup>1</sup> member contains the server configuration parameters.

<sup>1</sup> The DJXDSCF member is often renamed to conform to site-specific standards. Consult your system programmer to determine the correct configuration member name.

## Footnotes in online information

In online information, use hover help or similar mechanisms for information that would be a footnote in printed information. If you do not have hover help or another suitable mechanism for including additional information inline, follow the footnote guidelines for printed information. Provide a link from the footnote back to the main text.

## Footnotes in tables

If your authoring tool supports footnotes in a table, include the footnote text in the last row of the table.

### Example

**Table 1** Device specifications

Model	Height	Depth	Width
Tower	440 mm (17.3 in.)	747 mm (29.4 in.)	218 mm (8.6 in.)
5U <sup>1</sup> rack	218 mm (8.6 in.)	696 mm (27.4 in.)	424 mm (16.7 in.)
<sup>1</sup> A unit (U) is 4.45 cm (1.75 in.).			

If your authoring tool does not support footnotes in tables, include a phrase such as *See note 1*, and use an ordered list with a heading of *Note* or *Notes* in the last row of the table.

### Example

**Table 2** Device specifications

Model	Height	Depth	Width
Tower	440 mm (17.3 in.)	747 mm (29.4 in.)	218 mm (8.6 in.)
5U rack (See note 1)	218 mm (8.6 in.)	696 mm (27.4 in.)	424 mm (16.7 in.)
<b>Note:</b> 1. A unit (U) is 4.45 cm (1.75 in.).			

## References to printed information

Apply the following guidelines to refer to printed information, such as articles, white papers, books, and chapters or sections within books.

## General guidelines

Follow these general guidelines for using cross-references:

- Provide a reason for the cross-reference. Unless the reason is clear based on the context, tell readers why you are referring to other information.

### Examples

For examples of diagnostic reports, see Chapter 12, “Reports,” on page 211.

For more information about these parameters, see the *DB2 Object Comparison Tool for z/OS User's Guide*, SC19-3037.

For detailed information about the financial benefits of using these tools, see the IBM white paper *IMS Database Tools Reduce the Total Cost of Ownership*.

- If the cross-referenced information is essential and short, such as a restriction or parameter description, consider reproducing it instead of referring to it. However, reproduced information can become obsolete if the original is updated. If you reproduce content in multiple places, establish a process for keeping all instances of that content at the same version over time.

## References within the same document

Follow these guidelines to create cross-references between different places in a book, article, or printed set of topics:

- Refer to a part, chapter, or appendix by its number or letter and include the page number. For a reference within the same chapter of the book, provide the heading and a page number.

### Examples

For detailed information about error codes, see Appendix B, “Messages and codes,” on page 246.

For more information about these topics, see Chapter 9, “Programming techniques,” on page 99.

For software requirements, see “Requirements” on page 5.

- Always use the cross-reference function of your authoring tool, even if it produces cross-references that do not conform to the guidelines in this topic. Most authoring tools track and automatically update the page numbers in cross-references if the location of the content in the document changes. Page numbers that you type can become incorrect if you add or remove content.
- Use initial uppercase letters on the words *Appendix*, *Bibliography*, *Chapter*, *Contents*, *Figure*, *Glossary*, *Part*, *Preface*, *Table*, and *Volume* when you use these words in a cross-reference. When you use these words generically, use lowercase.

### Examples

Hexadecimal conversion codes are in Appendix C, “Conversion utility,” on page 316.

For an illustration of these relationships, see Figure 6 on page 147.

Definitions for unique terms are included in the glossary.

- Do not abbreviate *Chapter*, *Figure*, *Part*, or *Volume* in cross-references or elsewhere.
- Do not use a cross-reference to a figure or table when the figure or table immediately follows or precedes the text that mentions the figure or table.

### Example (incorrect)

The required parameters are shown in Table 1.

**Table 1** Configuration parameters

Parameter name	Default value
ABCPARM	100

### Example (correct)

The required parameters are shown in the following table.

**Table 2** Configuration parameters

Parameter name	Default value
ABCPARM	100

- When you refer to figures or tables, do not include captions.

### Example (incorrect)

See Figure 6, “Data structures,” on page 26.

### Example (correct)

See Figure 6 on page 26.

## References outside the document

Follow these guidelines to create references from one printed publication to another printed publication:

- When printed publications are revised, chapter titles, section headings, and page numbers can change. When you must refer to information in another publication, use general references. Include the title of the publication but not its chapter titles, section headings,

or page numbers. Paraphrase the headings, or describe the information by using the same terminology that is used in the other publication.

**Example (incorrect)**

For more information, see “Identifying new terminology” in Chapter 6 of the *ID Workbench Getting Started and User’s Guide*, SH21-0783-16.

**Example (correct)**

See the information about identifying new terminology in the chapter that explains Easy English in the *ID Workbench Getting Started and User’s Guide*, SH21-0783-16.

- When you refer to a publication that is listed in the preface or bibliography, use a short title that distinctly identifies the publication, and italicize it. Do not include the document number.

**Examples**

For more information, see the *DQTI* book.

For syntax details, see the *Programming Reference*.

- If your publication does not have a preface or bibliography, use the full title of the publication, and italicize it. Provide the document number (without the suffix) in a regular font. Use commas to separate the document number from the title and from subsequent text.

**Example**

For information about 9370 configurations, see *Introducing the IBM 9370 System*, GA24-4031, and *Planning for your System*, GA24-4032.

- Include a definite article and an identifying noun when they are needed for clarity. For example, you can add the words *the* and *book* to a title.
- When you refer to multiple publications that share a common element in their titles, do not shorten those references by omitting the common element.

**Example (incorrect)**

See the *DB2 Administration Tool Installation and User’s Guides*.

**Example (correct)**

See the *DB2 Administration Tool Installation Guide* and the *DB2 Administration Tool User’s Guide*.

- When you refer to a white paper, use the full title of the document and italicize it. Do not include the document number.

#### **Example**

For more information, see the IBM white paper *Planning Considerations for HiperDispatch*.

- Do not include the International Standard Book Number (ISBN) in references. The ISBN changes with every publication of a book. If you include an ISBN in references, you limit the reference to a specific edition of the book.
- Italicize titles of diskettes and CDs. Do not italicize references to generic types of diskettes and CDs, such as *diagnostic diskette*, *option diskette*, *reference diskette*, *starter diskette*, and *system diskette*.

#### **Examples**

Insert *Installation Diskette 2* in the diskette drive.

The *Digital Library Publications* CD contains all the publications in PDF and HTML files.

## **References to online information**

Use cross-references and links to point your readers to other sources of useful, related information.

### **General guidelines**

Follow these general guidelines for using links:

- Unless the reason is clear based on the context, tell readers why you are referring to other information.

#### **Examples**

For examples of diagnostic reports, see [Reports](#).

For more information about these parameters, see [Configuring a Server](#).

- If the linked-to information is essential and short, such as a restriction or parameter description, consider reproducing it instead of referring to it. However, reproduced information can become obsolete if the original is updated. If you reproduce content in multiple places, establish a process for keeping all instances of that content at the same version over time.

## References to IBM information centers

Unless you are sure that the location of content in an information center topic will not change, use general references rather than referring to a specific topic in that information center. Show the formal name of the information center in plain font and, if possible, provide a link to the information center.

### Examples (incorrect)

For more information, see the “CICS Transaction Server for z/OS V3.2 information center.”

... see System requirements in the *CICS Transaction Server for z/OS V3.2 Information Center*.

### Examples (correct)

For more information, see the CICS Transaction Server for z/OS V3.2 Information Center.

... go to the CICS Transaction Server for z/OS V3.2 Information Center, and search for *system requirements*.

## References to web addresses, protocols, and IP addresses

In this section, the following terms are used:

### Web address

A web address is composed of the Internet Protocol (IP) name, a host name, and optional elements such as the port, directory, and file name. The typical protocols are HTTP, HTTPS, FTP, GOPHER, news, and Telnet.

### Protocol

If the protocol of a web address is HTTP, you can typically omit the protocol, colon, and forward slashes (`http://`); most browsers default to an HTTP connection. However, some tools convert addresses into live links and require the full address, including `http://`. If the protocol is not HTTP, include the protocol in the web address.

### Internet Protocol (IP) address

An IP address uses a numeric label to uniquely identify the location of a computer on the Internet.

Follow these guidelines to refer to web addresses, protocols, and IP addresses:

### Referring to web addresses

In online information, when you provide a link to a web page, use a meaningful descriptive label for the link, not the web address itself. In online information, the web address can be easily identified by hovering over the label. In the label, try to include text that mirrors the title of the linked site, so that users are confident that they are at the correct site after they click the



link. Also, try to include keywords in the label; the inclusion of keywords improves search results.

When you refer to a web address in printed information, show the complete web address in parentheses after the descriptive label; even a faulty web address can provide useful information that can help users locate the target content.

**Exception for marketing content:** Web addresses are formatted differently in marketing content. See “Exceptions for marketing content” on page 274.

Avoid using the abbreviations *URL* and *URI*. Use *web address*, *website*, or *web page*, as appropriate.

### Examples

#### Online information:

For more information, see the IBM Service-Oriented Architecture website.

#### PDF files and printed books:

For more information, see the IBM Service-Oriented Architecture website ([www.ibm.com/software/info/foundation/en/index.jsp?S\\_CMP=ibmus](http://www.ibm.com/software/info/foundation/en/index.jsp?S_CMP=ibmus)).

Use the following guidelines to determine which verb or preposition to use in a reference to an address:

- Use *at*, *on*, or *see* in a sentence that directs the reader to a web page for information only.

### Examples

Check the latest information about service-oriented architecture at the IBM Service-Oriented Architecture website.

You can find information about choosing a database management system on the DB2 Information Management Industry Solutions web page.

For more information about the compatibility of these components, see the WebSphere Software website.

- Use *go to* in a sentence that directs the reader to a website where the reader will interact with web pages, for example, to perform tasks.

### Example

To obtain the current license key for your product, go to the Support and downloads website and follow the instructions.

- Use *from* in a sentence that directs the reader where to download a file.

**Example**

You can download the file from the Lotus Symphony downloads website.

When you list the web address on a separate line, precede it with a complete sentence that ends in a colon. You can list multiple web addresses inline or on separate lines.

**Example (incorrect)**

More information is available at: IBM Software and IBM Systems.

**Examples (correct)**

More information is available at IBM Software and IBM Systems.

More information is available at the following websites:

- IBM Software
- IBM Systems

**Using addresses in examples**

Follow these guidelines to use web addresses and IP addresses in examples:

**Web addresses**

If you must present a web address as an example, do not create an address or use an address that links to (or might link to) an actual website. To avoid inadvertently using an address of an actual website, use only addresses that are reserved for use in examples. The Internet Assigned Numbers Authority (IANA) has reserved the following domain names for use in examples, in testing, and in documentation:

- www.example.com
- www.example.net
- www.example.org

A host name is the portion of the address up to the first dot. If the host name is used alone, it is an unqualified host name. A fully qualified host name is the host name plus its domain. In abc.rtp.raleigh.ibm.com, abc is the host name, and rtp.raleigh.ibm.com is the domain name. To convert a fully qualified host name into an example for documentation, replace either the full domain name or a portion of it with “example.com.” If you replace the full domain name, the example becomes abc.example.com. If you keep the first subdomain, the example becomes abc.rtp.example.com.

## IPv4 addresses

If you must present an IPv4 address as an example, use the IP loopback address, which is 127.0.0.1. This address is often used by host computers to send messages to themselves for testing. If your example already contains the loopback address and you need additional example IPv4 addresses, use addresses in the /8 IP address block that are reserved for Test-Net: 192.0.2.0 through 192.0.2.24. Never use an address that is assigned to a real entity. For the IPv4 address space registry, see the IANA IPv4 Address Space Registry website (<http://www.iana.org/assignments/ipv4-address-space>).

## IPv6 addresses

If you must present an IPv6 address as an example, use the nonroutable IPv6 address prefix that is reserved for documentation: 2001:DB8::/32 or its long form, 2001:DB8:0:0:0:0:0:0/32. The address range includes 2001:DB8:0:0:0:0:0:0 through 2001:DB8:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF. Never use an address that is assigned to a real entity. For a list of IPv6 global unicast address assignments, see the IPv6 Global Unicast Address Assignments website (<http://www.iana.org/assignments/ipv6-unicast-address-assignments>).

## Formatting and punctuating web addresses

Follow these guidelines to format and punctuate web addresses:

- Do not highlight the address. When the address is displayed on the web as a link, the label for the linked address is highlighted.
- When the address or link text is at the end of a sentence, follow it with a period.

### Example (correct)

Information about IBM WebSphere products is available at the [WebSphere Software website](#).

- Do not include a forward slash at the end of a web address.

### Example (incorrect)

[www.ibm.com/](#)

### Example (correct)

[www.ibm.com](#)

- If a web address does not fit on one line, end the first line after an existing forward slash (/) or double forward slash (//), and continue the address on the next line. Do not add a hyphen to indicate a break in a web address. Do not indent any part of a web address.

**Example (incorrect)**

[www.ibm.com/software/commerce/net.-commerce/action.html](http://www.ibm.com/software/commerce/net.-commerce/action.html)

**Example (correct)**

[www.ibm.com/software/commerce/net.commerce/action.html](http://www.ibm.com/software/commerce/net.commerce/action.html)

## References to webcasts, web conferences, and other online broadcasts

Use double quotation marks, not an italic font, for the title of a webcast, web conference, or other similar online broadcast. These broadcasts are comparable to short works such as a short story or a single episode of a television series or radio program.

**Examples**

To learn more about IMS and web services, attend the webcast “Generating web services from your existing IMS database.”

To learn more about IBM resiliency solutions, access the replay file for the webcast “Mitigating risk in an ever-changing world.”

## Linking strategies

**Important:** For legal reasons, do not provide deep links to websites of other organizations or individuals without the permission of the website owner. A deep link is a link to a specific page or image on a website instead of to the main or home page of a website. If you provide deep links, users can bypass the terms of use for a website.

Link to and cite only peer-reviewed, reliable, authoritative sites. Do not link to sites, such as blogs, that are not peer reviewed. Do not link to sites, such as wikis, where the information can be edited by unreliable or irresponsible contributors. You can link to blogs and wikis that are owned and maintained by IBM.

When you refer to information on a website, you assume responsibility for maintaining the links. When content is moved, links break. A possible solution is to provide a link to a parent site or topic that is comparatively stable and then advise the reader how to navigate to the target topic.

Consider the cost of maintaining such links and the risk of broken links as such sites change. The following list of common linking strategies is arranged from lowest to highest risk of breaking:

- Do not link, but explain how to find the information on the site or in the publication.

**Example**

See the information about packaging files for translation in the *DITA and Arbortext Editor Getting Started Guide*.

- Link to the site, and explain how to find the information.

**Examples****Online information:**

To learn more about finding the help that you need, go to the [WebSphere Application Server Information Center](#), and read the topic “Prerequisite software for the information center.”

**PDF files and printed books:**

To install a Microsoft service pack, go to the Microsoft website ([www.microsoft.com](http://www.microsoft.com)) and search for *service pack*.

You can then download the service pack that you want to install.

- Link to one or more levels down, and explain how to find the information.

**Examples****Online information:**

For more information, see the *DITA and Arbortext Editor Getting Started Guide*, and search for [terminology](#).

**PDF files and printed books:**

For more information, see the *ID Workbench Getting Started and User's Guide* ([w3.rchland.ibm.com/projects/IDWB/documents/idwbdocs.htm](http://w3.rchland.ibm.com/projects/IDWB/documents/idwbdocs.htm)), and search for *terminology*.

For more information, see *DITA Best Practices: A Roadmap for Writing, Editing, and Architecting in DITA*, Chapter 7, “Linking” and *Developing Quality Technical Information*, Chapter 9, in the section “Link appropriately.”

# Numbers and measurements

Present numerical information clearly and consistently so that the information is unambiguous and easy to assimilate. These guidelines will help you to express numerical information of all kinds, including measurements and their units, as well as currency, times, dates, and telephone numbers.

## Expressing numbers

Follow these guidelines when your writing includes numbers:

- Use a period on the line (.), not a raised dot ( $\cdot$ ), as a decimal separator unless the comma (,) is a legal requirement in the particular country for which you are writing.
- Put a 0 in front of the decimal separator when the decimal value is less than 1.

### Examples (incorrect)

The clearance is 4,6 cm (1,8 in.).

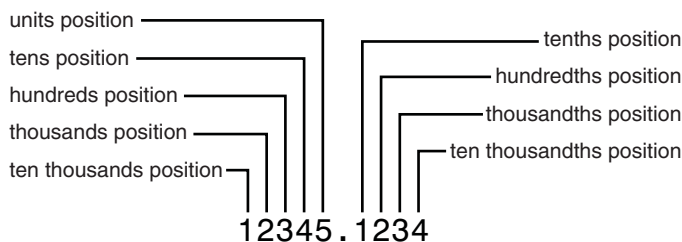
Be sure to maintain a 65 mm ( $\cdot$ 25 in.) distance.

### Examples (correct)

The clearance is 4.6 cm (1.8 in.).

Be sure to maintain a 65 mm (0.25 in.) distance.

- Refer to the whole-number positions of digits in decimal numerals as follows: the *units position*, *tens position*, *hundreds position*, *thousands position*, and so on. Refer to the fractional positions in decimal numerals as the *tenths position*, *hundredths position*, *thousandths position*, and so on.



- For both numerals and numbers that are expressed as words, form the plural by adding *s* alone.

### Examples

By default, the field is filled with zeros.

The award recipients walked into the auditorium in twos.

Binary code contains only 0s and 1s.

The most frequently returned values were 5s, 7s, and 12s.

Several financial analysts classify the 1980s and 1990s as a bull market.

Of the eight remaining units, six were 517s and two were 918s.

- Use a hyphen when you spell out numbers 21 through 99, regardless of the part of speech.

### Examples

twenty-four

three hundred eighty-seven

## Numerals versus words

In general, write in words numbers that are less than 10. Use numerals for larger numbers. However, there are many exceptions.

The following table lists the rules that determine when you use numerals and when you spell out numbers. In general, do not use both the numeric and spelled-out form of the same number, such as *five (5) screws*. However, in contexts where the values 0 and 1 can be misconstrued as letters, it is acceptable to write *0 (zero)* and *1 (one)*.

Item	Style to use	Examples
<b>In general:</b>		
Cardinal and ordinal numbers, zero through nine.	Spell out	The system has five tape drives. Use the second method.
Cardinal and ordinal numbers, 10 and greater, and all real numbers.	Numeral	The upgrade affected 12 servers. The 10th message is important. The number of files processed averages 5.4 per cycle.
<b>Exceptions:</b>		
A number at the beginning of a sentence. When you spell out a number, hyphenate compound numbers.	Spell out	Three alternatives are shown. Seventy-three files were processed. One hundred fifty-six errors were reported during the test.
Compound adjectival phrases, unless written at the start of a sentence.	Numeral	Enter the 4-digit value. Eight-cylinder engines are usually more powerful than 4-cylinder engines.
One of a pair of numbers that appear side by side. Spell out the first number, unless the sentence is easier to understand when the first number is a numeral. Always spell out the first number if it is at the beginning of a sentence.	Combination	Twenty-three 4-person teams participated. Add 80 three times.
Numbers that are combined with a unit of measurement, including <i>characters</i> .	Numeral	The throughput averages 5 MB per second. All 8 bits are processed. The cable is 4 m (13 ft) long. Leave a 6 mm gap. The maximum length of file names is 8 characters.
Bits, bytes, and words. Do not use, for example, <i>0-bit</i> and <i>1-bit</i> to mean <i>bit 0</i> and <i>bit 1</i> .	Numeral	In byte 2
Times.	Numeral	The database is updated at 5:45 p.m. daily. Replace the fan within 5 minutes.
Dates.	Numerals for day and year; spell out month	The meeting is scheduled for 15 May 2011.



Item	Style to use	Examples
Labels.	Numeral	Insert the adapter in slot 2.
Percentages. If the percentage is a cardinal number and is at the beginning of a sentence, spell out both the number and the word <i>percent</i> .	Numeral	The size of the database increases by 5%. 0.1% of the tested units had defects. Fifty-five percent of the modules have been debugged.
Ratios.	Numeral	Expect to process gadgets and widgets in a ratio of 3:2. 1:27 of errors were caused by faulty hardware. Reclaim space in your data center with 20:1 server consolidation.
Publications, volumes, and subdivisions.	Numeral	See Volume 2, Part 1, Chapter 3.
All numbers in a series if a numeral is appropriate for any of them. (If the series must appear at the beginning of the sentence, spell out the first number and use whichever form is appropriate for the remaining numbers.)	Numeral	The device can have 4, 8, or 16 cylinders. Ten managers, two writers, and 95 programmers attended the symposium.
Million. You can use the word <i>million</i> , provided that you do not use it with numbers that must be presented as numerals.	Spell out	The minimum is one million bytes. The maximum size is either 600,000 bytes or 1,000,000 bytes.
Billion and trillion. The words <i>billion</i> and <i>trillion</i> do not have the same meanings in all countries. To avoid confusion, always express these amounts as numerals.	Numeral	The minimum is 1,000,000 bytes, and the maximum is 1,000,000,000 bytes.
Values.	Numeral	Set the macro IC_MINOR_VERSION to 0. When the value is greater than 3, verify the data.

## Separators in numbers

Use a comma to separate groups of three numerals.

Omit the comma in a 4-digit number, except when it is required for consistency with other numbers.

Omit the commas when you are instructing the user to enter a value or specifying that the user must enter a value from a range, and including the commas would cause an error.

Do not use commas in numbers that do not represent amounts, such as part numbers or addresses.

For information about separators in binary, octal, and hexadecimal numbers, see “Different number bases” on page 164.

### Examples (incorrect)

The metric equivalent of 68 750 ft is 20 955 m.

The computer cost is USD 10999.99.

The program contains 1,115 lines of code.

Enter a value in the range 32,000 - 485,000.

Order replacement part number 2,924,563.

### Examples (correct)

The metric equivalent of 68,750 ft is 20,955 m.

The computer cost is USD 10,999.99.

The program contains 1115 lines of code.

Enter a value in the range 32000 - 485000.

Order replacement part number 2924563.

**Exception for marketing content:** It is permissible in marketing content to use commas as separators in numbers that have four digits. For details and examples, see “Exceptions for marketing content” on page 274.

## Ranges of numbers

Follow these guidelines for writing ranges of numbers:

- Use a hyphen with a space on each side of the hyphen ( - ) to indicate a range of numbers.
- If the range includes a unit of measurement, include the unit only after the second number, unless the unit is closed up to the number.
- Always use numerals in ranges, even when either or both of the numbers are less than 10.

**Examples (incorrect)**

50-100  
16 MB - 20 MB  
210 V - 240 V ac  
26 mm - 45mm (1.02 in. - 1.77 in.)  
10° - 35°C (50° - 95°F)  
8 - 80%  
two - four  
one - 20

**Examples (correct)**

50 - 100  
16 - 20 MB  
210 - 240 V ac  
26 - 45 mm (1.02 - 1.77 in.)  
10°C - 35°C (50°F - 95°F)  
8% - 80%  
2 - 4  
1 - 20

- Do not use words such as *between* and *and* to show a range; it is not clear whether the two numbers are the boundaries of the range or are included in the range. Also, do not use words such as *from* and *between* with a hyphenated range.
- Omit the comma used to separate groups of three numerals when you are instructing the user to enter a value or to enter a value from a range, and including the commas would cause an error.

**Examples (incorrect)**

You need between 16 and 20 MB of free space.  
Enter a value between 32,000 and 485,000.

**Examples (correct)**

You need 16 - 20 MB of free space.  
Enter a value in the range 32000 - 485000.

- If one or both values in a range include mathematical symbols, use *from* and *to* to express the range, and use parentheses to clarify which value is being modified. If the range includes a unit of measurement, to avoid ambiguity, include the unit after both expressions in the range.

**Examples (incorrect)**

$n - n + 1$

1 - 2 MB - 1 byte

**Examples (correct)**

from  $n$  to  $n + 1$

from 1 MB to (2 MB - 1 byte)

- If a number range is part of a compound adjective, hyphenate only the number-unit compounds in the range, not the entire compound. You can omit the unit from the first of the two compounds in the range.

**Examples (incorrect)**

a 1-character-through-8-character field

a 1-through-8-character field

**Examples (correct)**

a 1-character through 8-character field

a 1- through 8-character field

- Use the  $\geq$  symbol to express *greater than or equal to* a value. Use the  $\leq$  symbol to express *less than or equal to* a value. In many cases, you can omit the symbol by incorporating a phrase such as *minimum requirement* or *maximum requirement* into the heading or text that precedes the values.

**Examples (correct)**

$\geq 16$  GB RAM

$\leq 10$  KB

a minimum of 16 GB of RAM

a maximum of 10 KB

**Minimum requirements**

16 GB RAM

**Maximum requirements**

10 KB

## Alignment of numbers in columns

Align a column of numbers on the decimal separator. Right align integers. Align times (for example, in a timetable) on colons.

**Examples**

24.65

1.3

0.345

1000

100

10

1

8:40 a.m.

12:20 p.m.

## Fractions, percentages, and ratios

### Fractions

Follow these guidelines for writing fractions:

- Whenever possible, use decimal numbers instead of fractions to represent fractional parts of units.
- Use a hyphen between a whole number and a numeric fraction. In this case, do not include a hyphen between the number and a unit of measurement.
- When it is appropriate to spell out a fraction, use a hyphen.

**Examples**

0.6

5.167

3/5

5-1/6

three-fifths

five and one-sixth

### Percentages

Use numerals and the percent sign (%) rather than the word *percent*. Do not leave a space between the numeral and the percent sign. However, if the percentage is a cardinal number and is at the beginning of a sentence, spell out both the number and the word *percent*.

**Exception for marketing content:** Use the word *percent* and not the percent sign (%) in marketing content unless space is limited. For details and examples, see “Exceptions for marketing content” on page 274.

#### **Examples**

The size of the database increases by 5%.

0.1% of the tested units had defects.

Fifty percent of the modules have been debugged.

#### **Ratios**

Always use numerals and a colon (:) to express ratios. Do not insert a space before or after the colon.

#### **Examples**

Expect to process gadgets and widgets in a ratio of 3:2.

Reclaim space in your data center with 20:1 server consolidation.

#### **Rounding numbers**

When you round numbers, use the appropriate number of decimal places for the degree of precision that is required. Be consistent in your method of rounding and how you round numbers that are exactly midway. If the method you use is significant, make it clear to your readers.

When you combine numbers, show the result with an appropriate degree of precision.

#### **Example (incorrect)**

$4.67 \times 3.2 = 14.944$

#### **Example (correct)**

$4.67 \times 3.2 = 14.9$

When you convert to a different unit of measurement, express the result with a similar precision to the original measurement.

#### **Examples (incorrect)**

The computer weighs approximately 15 kg (33.069 lb).

The diameter is  $89 \pm 0.5$  mm ( $3.5 \pm 0.02$  inches).

#### **Examples (correct)**

The computer weighs approximately 15 kg (33 lb).

The diameter is  $89.0 \pm 0.5$  mm ( $3.50 \pm 0.02$  inches).

## Different number bases

Explicitly identify the base (radix) of a number that is nondecimal (that is, not in base 10):

- Binary
- Hexadecimal
- Octal

Your authoring tool might automatically handle the representation of number bases. If it does, let the authoring tool determine the representation. If it does not, or if you believe that the representation that is generated by the authoring tool is inappropriate, analyze your subject matter and audience to determine how best to indicate these bases.

In general, use programming symbols to show the base and value of a number only when the value must be shown exactly as it is coded. Although the punctuation marks that enclose the value are known as apostrophes in extended binary-coded decimal interchange code (EBCDIC), you can represent them with single straight quotation marks in text.

### Examples

For the **SIZE** parameter, code either X'CA' or X'140'.

Note the entry B'1010' in the program.

You can represent hexadecimal numbers in several ways. The following formats are those most commonly used:

- X'nnnn'. This format was originally used for System z® and System i® applications but you can also use it for other applications.
- 0xnnnn. This is the most common format for languages such as C++ and Java.
- hex nnnn. Consider using this format for less technical users.

Whichever format you use in your documentation, ensure that you use it consistently. Use the abbreviation *hex* only when representing a specific hexadecimal number. Do not use it in text (for example, in a phrase such as *The message contains a hex value*); use the term *hexadecimal* instead.

### Examples (correct)

The system returns the value 0x10AF.

The reason code is X'B0'.

The required code point is hex 56.

Do not use commas or spaces in octal or hexadecimal numbers. For binary values, leave a space between groups of four numbers.

**Example (incorrect)**

You see the binary number 10011011.

**Example (correct)**

You see the binary number 1001 1011.

If you use a decimal number and a number in a different base together, explicitly indicate the base of both numbers.

**Example (correct)**

You can view the data in decimal or hexadecimal format; for example, 33 (decimal) or X'21' (hexadecimal).

## Number complements

Form the name of a complement by adding an apostrophe and the letter *s* ('s) to the spelled-out number.

**Examples**

The two's complement of binary 0011 1001 is 1100 0111.

The ten's complement of 235481 is 764519.

## Mathematical equations and operational symbols

Follow these guidelines when writing mathematical equations and using operational symbols:

- Leave a space before and after operational symbols such as: +, -,  $\pm$ ,  $\times$ ,  $\div$ , and =. Do not insert a space if an operator is used to modify a number or another symbol. Do not insert spaces around the / symbol, nor between a parenthesis and an enclosed symbol or number.
- Operational symbols are substitutes for words and should be written as such, with appropriate punctuation. For example,  $A + B < C$  means *A plus B is less than C*.
- Consider putting equations on a separate line if they are difficult to read in the body of the text or if they are referenced, as is equation (1) in these examples:

**Examples**

$$a + b = c - d$$

(1)

$$x \div y = z$$

$$(a + b)/(c + d) = -5$$



- In running text, do not use variable names and mathematical symbols as a shorthand for words.

#### Examples (incorrect)

Set `stoppingtime` to `reactiontime + brakingtime`.

Select all the domains that have `>3` members.

#### Examples (correct)

Set the value of *stoppingtime* to the sum of the values of *reactiontime* and *brakingtime*.

Select all the domains that have more than three members.

## Multiplication

- To indicate multiplication, show the elements side by side. If you must show multiplication explicitly, use the multiplication sign ( $\times$ ). In a formula or equation, do not use a raised dot ( $\cdot$ ) to indicate multiplication. In some countries, the raised dot is used as a decimal point. Do not use an asterisk, except in examples from programming languages that use an asterisk as a multiplication sign.

#### Examples (incorrect)

`DIDOCS = (60 · R) + (36 · A)`

`DIDOCS = A * B`

#### Examples (correct)

`DIDOCS = 60R + 36A`

`DIDOCS = AB`

`DIDOCS = A  $\times$  B`

## Exponents

- To indicate an exponent, use a superscript. Do not insert spaces around operators in superscripts. If superscripts are not available to you, use two asterisks (`**`) followed by the exponent.

#### Examples

`220` (to mean 2 to the power of 20)

or

`2**20` (if superscripts are not available)

`2(a+b)`

or

`2** $(a + b)$`

## Units of measurement

State physical measurements by using both the International System of Units and the United States customary system.

- The International System of Units (SI, abbreviated from the French, *le Système International d'Unités*) is a modern version of the metric system and is the most widely used system of measurement. In the United States, see the National Institute of Standards and Technology (NIST) website [physics.nist.gov/cuu/Units](http://physics.nist.gov/cuu/Units) for details of the standard SI units, and their abbreviations and symbols.

Note that the SI spelling of the unit of length, and that used in most countries, is *metre*, but the variant *meter* is used in the United States and is used throughout this publication.

- The United States customary system (or the American system) is the commonly used system of measurement in the United States. It is similar, but not identical, to the British Imperial system. They differ primarily in units of volume.

In text, show measurements in SI units followed immediately in American system units within parentheses, and to a similar degree of precision.

### Examples

Form widths can range from 88 to 476 mm (3.5 to 18.7 in.) for 8-line-per-inch spacing, or from 76 to 609 mm (3.0 to 24.0 in.) for 6-line-per-inch spacing.

The dimensions of the control unit are as follows: width 520 mm (20.5 in.), depth 410 mm (17 in.), and height 200 mm (8 in.)

However, show unique design measurements in SI or American system units only, as appropriate.

### Examples

8-line-per-inch spacing

3.5-inch diskette

16 mm film

Use a space between a number and the abbreviation of a unit of measurement, regardless of whether the value is used as a noun or as an adjective.

### Examples

The unit weighs 48.2 kg (106.3 lb).

a 12 m (39 ft) cable

an 8 ft clearance

a 1 GB memory module

When you use a number with the spelled-out form of a unit of measurement as an adjective, use a hyphen instead of a space between the number and the unit name, unless the number is expressed as a fraction.

#### **Examples**

a 12-meter (39-foot) cable  
an 8-foot clearance  
a 5.25-inch clearance  
a 5-1/4 inch clearance

You can avoid or minimize using decimals for metric values by using smaller units of measurement. For example, you can show a value that is less than a kilogram by using grams or, if appropriate, milligrams. However, use consistent units of measure. For example, do not mix references to centimeters and millimeters or grams and kilograms; use one or the other throughout the topic or section.

#### **Example (incorrect)**

The unit is 442 mm (17.4 in.) wide and 61 cm (2 ft) deep.

#### **Example (correct)**

The unit is 442 mm (17.4 in.) wide and 610 mm (24.0 in.) deep.

## **Abbreviations**

The abbreviation for a unit of measurement is both singular and plural. For example, the abbreviation mm means both millimeter (1 mm) and millimeters (10 mm).

### **Units of time**

In running text, avoid abbreviating units of time, such as *seconds*, *minutes*, *hours*, *days*, *months*, or *years*. Abbreviate units of time only when space is limited, such as in tables or in detailed diagrams. When you must abbreviate units of time, use these abbreviations for both the singular and plural forms and insert a period after them: *sec.*, *min.*, *hr.*, *d.*, *mo.*, and *yr.* Where you must refer to the SI unit of time (the second), particularly with a multiplier, *s* is the correct abbreviation. See “Multiplier prefixes for units of measurement” on page 170.

#### **Examples (incorrect)**

The default timeout is 30 mins.  
There is a time delay of 23msecs. before the mechanism starts.

#### **Examples (correct)**

The default timeout is 30 minutes.  
There is a time delay of 23 ms before the mechanism starts.

### **Feet and inches**

Do not use a single quotation mark (') for feet or a double quotation mark (") for inches; instead, use *ft* for feet and *in.* for inches, or spell out *feet* and *inches*.

**Example (incorrect)**

The storage unit is 3'2" long.

**Example (correct)**

The storage unit is 3 ft 2 in. long.

**Multiple dimensions**

When you show two or three dimensions in a single expression, use the multiplication sign ( $\times$ ) with a space on each side of it. Repeat the unit of measure when you present physical dimensions.

**Examples**

26 mm  $\times$  45 mm (1.02 in.  $\times$  1.77 in.)

4 in.  $\times$  6 in.  $\times$  12 in.

**Tolerances**

When you show tolerances, place the plus or minus sign ( $\pm$ ) next to the tolerance, without spaces. Show all values to a similar degree of precision.

**Examples**

50 $\pm$ 5 V dc

76.0 $\pm$ 0.2 mm

**Dimension lines**

When you show a dimension line in artwork, show the measurement in SI units above the line and in the American system units within parentheses immediately below the line.

**Example**

76 mm  
←—————→  
(3.0 in.)

Where space is a problem, showing both measurements together is also acceptable.

**Example**

76 mm (3.0 in.)  
←—————→

**Temperatures**

In text, show temperatures in degrees Celsius followed by degrees Fahrenheit in parentheses. Do not put a space before or after the degree ( $^{\circ}$ ) symbol.

**Example**

100 $^{\circ}$ C (212 $^{\circ}$ F)

If the character set for printing or displaying the information does not include the degree symbol, use *degrees Celsius* or *degrees Fahrenheit*.

### Example

100 degrees Celsius (212 degrees Fahrenheit)

## Multiplier prefixes for units of measurement

There are 20 International System of Units (SI) unit of measurement prefixes, from yotta ( $10^{24}$ ) to yocto ( $10^{-24}$ ), used to represent multiplying factors. Be aware that using SI prefixes with bits and bytes can be ambiguous and must be handled carefully to avoid confusion.

The following table shows the SI prefixes and their associated multipliers:

Prefix	Abbreviation	Multiplier	
yocto	y	$10^{-24}$	0.000,000,000,000,000,000,000,001
zepto	z	$10^{-21}$	0.000,000,000,000,000,000,000,001
atto	a	$10^{-18}$	0.000,000,000,000,000,000,001
femto	f	$10^{-15}$	0.000,000,000,000,000,001
pico	p	$10^{-12}$	0.000,000,000,000,001
nano	n	$10^{-9}$	0.000,000,001
micro	μ	$10^{-6}$	0.000,001
milli	m	$10^{-3}$	0.001
centi	c	$10^{-2}$	0.01
deci	d	$10^{-1}$	0.1
		$10^0$	1
deca	da	$10^1$	10
hecto	h	$10^2$	100
kilo	k	$10^3$	1000
mega	M	$10^6$	1,000,000
giga	G	$10^9$	1,000,000,000
tera	T	$10^{12}$	1,000,000,000,000
peta	P	$10^{15}$	1,000,000,000,000,000
exa	E	$10^{18}$	1,000,000,000,000,000,000
zetta	Z	$10^{21}$	1,000,000,000,000,000,000,000
yotta	Y	$10^{24}$	1,000,000,000,000,000,000,000,000

- Prefixes are always used in combination with abbreviations of units of measurement, such as m, g, and Hz. Prefixes are never used alone or with units that you spell out.
- Leave a space between the number and the prefix, but not between the prefix and the unit of measurement.
- Do not use combinations of prefixes.
- Do not use a hyphen between the number and the abbreviation combination, even if the number and abbreviation combination form a compound adjective.
- Avoid using multiplier prefixes with temperatures measured in °C. If you need to express very large or small temperature units, express them in kelvin (K).

#### **Examples (incorrect)**

The population is about 6.7 G.

2 dhours

600MHz

64 μ g

7 dcm

a 32-KB cluster

The core temperature of the sun is about 13 M°C.

#### **Examples (correct)**

The population is about 6,700,000,000.

12 minutes

600 MHz

64 μg

7 mm

a 32 KB cluster

The core temperature of the sun is about 13 MK.

- Use the same unit of measurement consistently in a list of values, unless this results in a very small or very large number, or a user would expect to see a value specified in a particular measurement. In any case, be consistent within a set of information.

#### Example (incorrect)

Component	Memory needed
ABC	1 GB
RST	500 MB
XYZ	2 GB

#### Example (correct)

Component	Memory needed
ABC	1 GB
RST	0.5 GB
XYZ	2 GB

- For a unit expressed as an exponential, for example the square or cube of a unit, the multiplying prefix is understood to be part of the unit. For example, 1 km<sup>2</sup> is one square kilometer (1000 m x 1000 m), not 1000 square meters.

## Multiplier prefixes for bits and bytes

SI prefixes represent powers of 10 only. However, it is common and widespread practice in information-technology literature to use the same prefixes to represent both powers of 2 and powers of 10 when referring to bits and bytes. The following table shows the prefixes and their associated multipliers.

Prefix	Abbreviation	Power of 2		Power of 10	
kilo	K	$2^{10}$ (1024 <sup>1</sup> )	1024	Do not use <i>K</i> to mean 1000	
kilo	k	Do not use <i>k</i> to mean 1024		$10^3$ (1000 <sup>1</sup> )	1000
mega	M	$2^{20}$ (1024 <sup>2</sup> )	1,048,576	$10^6$ (1000 <sup>2</sup> )	1,000,000
giga	G	$2^{30}$ (1024 <sup>3</sup> )	1,073,741,824	$10^9$ (1000 <sup>3</sup> )	1,000,000,000
tera	T	$2^{40}$ (1024 <sup>4</sup> )	1,099,511,627,776	$10^{12}$ (1000 <sup>4</sup> )	1,000,000,000,000
peta	P	$2^{50}$ (1024 <sup>5</sup> )	1,125,899,906,842,624	$10^{15}$ (1000 <sup>5</sup> )	1,000,000,000,000,000
exa	E	$2^{60}$ (1024 <sup>6</sup> )	1,152,921,504,606,846,976	$10^{18}$ (1000 <sup>6</sup> )	1,000,000,000,000,000,000
zetta	Z	$2^{70}$ (1024 <sup>7</sup> )	1,180,591,620,717,411,303,424	$10^{21}$ (1000 <sup>7</sup> )	1,000,000,000,000,000,000,000
yotta	Y	$2^{80}$ (1024 <sup>8</sup> )	1,208,925,819,614,629,174,706,176	$10^{24}$ (1000 <sup>8</sup> )	1,000,000,000,000,000,000,000,000

**K or k:** In SI units, the abbreviation of the prefix *kilo* is lowercase k. However, you should distinguish between uppercase *K* (meaning 1024) and lowercase *k* (meaning 1000). Therefore, KB means 1024 bytes, and kB means 1000 bytes.

All other prefixes (M, G, T, P, E, Z, and Y) are uppercase, regardless of whether they express powers of 2 or powers of 10.



## IEC prefixes

To help avoid inaccuracy (especially with the larger prefixes) and potential ambiguity, the International Electrotechnical Commission (IEC) in 2000 adopted a set of prefixes specifically for binary multipliers. (See IEC 60027-2.) Their use is now supported by the United States National Institute of Standards and Technology (NIST) and incorporated into ISO 80000. They are also required by EU law and in certain contexts in the US.

However, most documentation and products in the industry continue to use SI prefixes when referring to binary multipliers. In product documentation, follow the same standard that is used in the product itself (for example, in the interface or firmware). Whether you choose to use IEC prefixes for powers of 2 and SI prefixes for powers of 10, or use SI prefixes for a dual purpose as in the preceding table, be consistent in your usage and explain to the user your adopted system.

The binary multiples standardized in IEC 60027-2 are based on the SI prefixes and symbols for positive powers of 10, as shown in the following table:

IEC prefix		Power of 2	SI prefix		Power of 10
kibi	Ki	2 <sup>10</sup>	kilo	K	10 <sup>3</sup>
mebi	Mi	2 <sup>20</sup>	mega	M	10 <sup>6</sup>
gibi	Gi	2 <sup>30</sup>	giga	G	10 <sup>9</sup>
tebi	Ti	2 <sup>40</sup>	tera	T	10 <sup>12</sup>
pebi	Pi	2 <sup>50</sup>	peta	P	10 <sup>15</sup>
exbi	Ei	2 <sup>60</sup>	exa	E	10 <sup>18</sup>
zebi	Zi	2 <sup>70</sup>	zetta	Z	10 <sup>21</sup>
yobi	Yi	2 <sup>80</sup>	yotta	Y	10 <sup>24</sup>

## Using multiplier prefixes

- In combination with a prefix, use *B* (uppercase) to mean bytes, and use *b* (lowercase) to mean bits.
- Prefixes are never used alone or with units that you spell out.

### Examples (incorrect)

16 K  
16 K bytes

### Example (correct)

16 KB

- Use the abbreviation KB or Kb, not the spelled-out form. If your audience needs to be told the spelled-out form of other abbreviations, include the spelled-out form parenthetically on first use only, and use only the abbreviation in all other occurrences.

**Examples (incorrect)**

64 kilobytes

4 gigabits

**Examples (correct)**

64 KB

4 Gb (gigabits)

24 kbps (kilobits per second)

## Defining abbreviations

- Define each abbreviation that you use in an information product, and include each abbreviation in the index.
- You can provide a definition parenthetically or in a footnote at first occurrence. Avoid using numerical cross-references to footnotes; the number might be mistaken for an exponent.

**Examples**

A minimum of 64 KB (where KB equals 1024 bytes) is reserved for the nonpageable dynamic area.

The computer supports 4 GB<sup>†</sup> DIMMs.

<sup>†</sup> When referring to real and virtual storage, GB means 1,073,741,824 bytes.

The computer comes with a 1 GB<sup>†</sup> hard disk drive.

<sup>†</sup> When referring to hard disk drive capacity, GB means 1,000,000,000 bytes; total user-accessible capacity can vary depending on the operating environment.

- Alternatively, you can define number abbreviations in the glossary or in general notes.

### **Examples**

#### **MB**

When referring to processor storage, real and virtual storage, or channel volume, 1,048,576 bytes.

When referring to hard disk drive capacity or communications volume, 1,000,000 bytes.

#### **kbps**

1000 bits (1 kilobit) per second.

When referring to processor storage, real and virtual storage, or channel volume, KB means 1024 bytes, MB means 1,048,576 bytes, and GB means 1,073,741,824 bytes.

When referring to hard disk drive capacity or communications volume, MB means 1,000,000 bytes, and GB means 1,000,000,000 bytes. Total user-accessible capacity can vary depending on the operating environment.

- In general use and contexts where it is not necessary to be precise, you can define the abbreviations approximately.

### **Example**

KB equals approximately 1000 bytes, and MB equals approximately 1,000,000 bytes.

## **International currency designations**

Use the currency codes that are defined by ISO Standard 4217 when you indicate more than one currency unit and they are not written out in full.

A currency might be designated in one of three ways:

- The name of the currency in the local language (such as *dollars*)
- A currency symbol (such as \$)
- A three-letter code (such as USD) from the International Organization for Standardization (ISO) Standard 4217 - *Currency and funds name and code elements*

When you are dealing with monetary values, the associated currency must always be defined unambiguously. The three-letter ISO currency code is the best way to designate a currency amount in a way that is completely unambiguous. See the ISO website, [www.iso.ch](http://www.iso.ch), for details.

Symbols such as \$, £, and kr are used with multiple national currencies. The two-letter country code is sometimes used in an attempt to disambiguate, such as US\$, MX\$, Nkr, or Dkr, but this is not

standardized. Similarly, if a nation has revalued its currency, the symbol might be retained as before or reverted to after a brief migration period.

In general, therefore, and especially when writing for a global audience, always use the ISO 4217 currency code, which is completely independent of the end-user's language or locale. The maintenance agency for these codes also ensures uniqueness over time.

Place the currency unit before the numeric amount, without a space.

### Examples

LKR100 (100 Sri Lankan rupees)

USD100 (100 US dollars)

AUD100 (100 Australian dollars)

GBP100 (100 UK pounds sterling)

EUR100 (100 European Union euros)

## Local currency symbols

ISO currency codes might not always be appropriate, particularly for domestic use. If your information will not be used outside your country or includes scenarios in which the user is expected to work with local currency symbols, use the appropriate symbol or abbreviation that is commonly used in your country, such as \$ (dollar) in Canada and Liberia or £ (pound) in Gibraltar and the United Kingdom. But note that most information that is written in English is available worldwide and should therefore normally use ISO currency codes with a descriptive label.

Different cultures express monetary values in different ways. The following examples show variations in placement of the currency symbols, designation of negative amounts, the decimal and grouping separators, placement of the various symbols, and the presence or absence of spaces between symbols and numbers, in currency formatting.

### Examples

Positive format	Negative format	ISO 4217 code / Example territory
Bs 123.456,78	–Bs 123.456,78	BOB / Bolivia
\$1,234,567.89	–\$1,234,567.89	CAD / Canada English
1 234 567,89 \$	(1 234 567,89 \$)	CAD / Canada French
1 234 567,89 kr	–1 234 567,89 kr	EEK / Estonia
1 234 567,89 €	–1 234 567,89 €	EUR / Finland
€ 1.234.567,89	€ 1.234.567,69–	EUR / Greece

Positive format	Negative format	ISO 4217 code / Example territory
€1,234,567.89	–€1,234,567.89	EUR / Ireland
1.234.567,89 €	–1.234.567,89 €	EUR / Luxembourg
€1.234.567,89	€ –1.234.567,89	EUR / Netherlands
1.234.567\$89 €	–1.234.567\$89 €	EUR / Portugal
£1,234,567.89	–£1,234,567.89	GBP / United Kingdom
1 234 567,89 Ft	–1 234 567,89 Ft	HUF / Hungary
¥1,234,567	–¥1,234,567	JPY / Japan
\$U 1.234.567,89	\$U -1.234.567,89	UYU / Uruguay

The use of parentheses to indicate negative values is a conventional format used by some financial institutions and banking agencies. This usage does not always match regular currency formatting determined by user locale.

## Dates

Be consistent in the way that you write dates and express them in a way that is understandable internationally.

To avoid confusion about the meaning of a date, do not use an all-numeric representation in text. In the United States, *12/1/07* means *1 December 2007*; in many other countries, it means *12 January 2007*.

- Use one or two digits for the day first, then spell out the name of the month, followed by the year using all four digits. Use one space between the day and the month and between the month and the year. See also the “Leading zeros” section on page 180 about single-digit dates.
- Do not use a forward slash (/) or hyphen (-) in dates, nor the abbreviations *st*, *nd*, *rd*, and *th*.
- If you want to include the day of the week before a date, use a comma between the day of the week and the date.

### Examples (incorrect)

10/1/12

1-10-12

The 1st of August, 2010

August 1st, 2010

December 2  
December 2nd  
2nd December

Monday May 24th

**Examples (correct)**

1 October 2012  
1 August 2010  
2 December  
Monday, 24 May

When you refer to a month and year, do not use a comma between the month and the year.

**Examples (incorrect)**

June, 2015

**Examples (correct)**

June 2015

Always spell out the names of centuries.

**Examples (incorrect)**

21st century

**Examples (correct)**

twenty-first century

**Exception for marketing content:** You can use numerals to represent the names of centuries in marketing content. For details and examples, see “Exceptions for marketing content” on page 274.

## Abbreviated forms

If you have to use an abbreviated form (for example, in a table) use one of these forms: 1Dec2007 or 1DEC2007. For a date after the year 1999, use all four digits for the year; for a date before the year 2000, you can use two digits. Do not mix styles.

**Examples (incorrect)**

23 Jan 01

review dates: 31DEC99 and 16Jan00

**Examples (correct)**

23Jan99

23Jan1999

23Jan2001

review dates: 31Dec1999 and 16Jan2000

## Leading zeros

Do not use a leading zero with a single-digit date unless you have to include the zero to align dates in a list or table or unless you must include it to correctly show a date format (for example, in a date field) or an example of such.

**Examples (incorrect)**

computers that were manufactured before 01 January 2007

**Examples (correct)**

computers that were manufactured before 1 January 2007

In the Date field, type 01jan07.

## Date ranges

To express a range of dates, use one of the following methods:

- Use the words *from* and *through*. Do not use the words *to* and *between*.
- Use a hyphen with a space on each side of it ( - ). Use this method to write a date range in an abbreviated form (for example, in a table). Do not use an abbreviated form in text, and do not use both the text form and the abbreviated form together.

**Examples (incorrect)**

May 6-12 2007

June-September 2007

between June 2005 and January 2006

from 6 October - 12 October 2007

from 6Jun2005-12Jun2006

**Examples (correct)**

6 - 12 May 2007

June - September 2007 *or* from June through September 2007

from June 2005 through January 2006 *or* June - January 2006

from 6 October through 12 October 2007 *or* from 6 through 12 October 2007

6Jun2005 - 12Jun2006

**Times of the day**

Use the 12-hour or 24-hour system as appropriate, but do not mix the two systems in the same document. If you want to include seconds in times, use the 24-hour system.

**Using the 12-hour system**

When you represent times of the day using the 12-hour system, use colons to separate hours and minutes. Do not insert a space before or after the colon. Use lowercase letters and periods for the abbreviations *a.m.* and *p.m.*, and leave a space after the numbers.

Do not use *o'clock* to refer to a whole hour.

Use *to* when you are referring to a range of times, not *through*. Consider using a hyphen, with spaces, in a list of ranges. Include *a.m.* and *p.m.* in both parts of the range.

Do not use zeros to indicate a time that is exactly on the hour unless, in a list or range of times, one time reference includes minutes.

**Examples (incorrect)**

Lunch will begin at 11.30am.

The meeting will start at 2 o'clock in the afternoon.

The coffee break will be from 2 to 2:30 p.m.

Lectures will be at the following times:

11a.m.-12:15p.m.

1-2:15p.m.

2:30-3:45p.m.

**Examples (correct)**

Lunch will begin at 11:30 a.m.

The meeting will start at 2 p.m.

The coffee break will be from 2:00 p.m. to 2:30 p.m.



Lectures will be at the following times:

11:00 a.m. - 12:15 p.m.

1:00 p.m. - 2:15 p.m.

2:30 p.m. - 3:45 p.m.

Use *midnight* and *noon* (instead of *a.m.* and *p.m.*) to indicate those hours.

### Examples

The program will change at 12 midnight (or, at midnight).

There will be a break from 12 noon to 1 p.m.

If you include the time zone, use both its spelled-out and abbreviated name; do not capitalize the spelled-out version. (Coordinated Universal Time is an exception, and is written with initial capitals.)

### Example

Telephone assistance is available from 8 a.m. to 8 p.m. eastern standard time (EST).

## Using the 24-hour system

When you represent times of the day using the 24-hour system, use colons to separate hours, minutes, and seconds. Do not insert a space before or after the colon.

Do not show seconds with whole hours, unless other times shown include the seconds or the seconds are significant.

Write hours, minutes, and seconds each with two digits. You can also add fractions of a second after a decimal separator to an appropriate level of precision.

### Examples

Customary maintenance time is from 02:00 to 05:00.

The job started at 13:15:22.

Telephone assistance is available from 13:00 to 01:00 Coordinated Universal Time (UTC), November through March, and 12:00 to 24:00 UTC, April through October.

The job was completed at 15:37:42.354.

## Telephone numbers

Use national or international formats as appropriate. Always use designated fictitious numbers in examples.

## National telephone numbers

If you expect your documentation to be used only in the same country from which the telephone number originates, use the national form of the number. Group the numerals according to the format that is normally used in the area or country.

- When referring to numbers in the US, Canada, and other countries in the North American Numbering Plan (NANP), use hyphens, not parentheses, to separate the groups of numerals.
- Use parentheses for UK area codes to indicate that these digits are omitted when making a local call. Use spaces to separate groups of numerals.

### Examples

National UK numbers

London: (020) 7946 0123

Sheffield: (0114) 496 0123

For a telephone number that includes letters, show the corresponding numerals in parentheses after the alphanumeric telephone number.

### Example

1-800-IBM-4YOU (1-800-426-4968)

## International telephone numbers

For an international audience, use the international form of the number, following the guidelines issued by the International Telecommunications Union (ITU).

Use the format +cc (where cc is the country code) followed by the area code and the telephone line number. The plus sign (+) indicates that the country code is preceded by additional numbers that vary from country to country.

Note that the 0 in an area code is often omitted when the number is dialed from outside that country. Do not include the 0, enclosed in parentheses, to try to indicate this changing usage. If you must include both national and international forms of a telephone number, show them separately.

Insert spaces between the country code and the area code, and between the area code and the line number. Also, if the line number comprises more than five digits, insert a space in the number to divide the digits into two groups; grouping the digits enhances memorization, oral presentation, and printing of the telephone number. If possible, make the spaces between the country code and the area code, and the area code and the line number, larger than any space within the line number. However, note that in HTML double spaces are displayed in exactly the same way as single spaces, unless you use the special character `&nbsp;` (`&#160;`).

### **Examples**

International US number: +1 958 555 0123

International UK number: +44 114 496 0123

## **Fictitious telephone numbers**

In examples, be sure not to use telephone numbers that might be someone's actual number.

The 555 prefix is used in the US and other countries in the NANP only for operator-assisted information. You can use this in examples. Also, area codes 958 and 959 are not allocated and can be used in examples.

In areas in the UK with 3-digit area codes, line numbers 496 0xxx (where xxx are any three digits) can be used. In other areas, the unused area code 01632 can be used; there are no specially allocated line numbers to use with this area code. For London numbers, you can use 020 7946 0xxx. (Note that the sequence of digits 946 is not the same as the sequence 496 used elsewhere). For fictitious cell (mobile) phone numbers, use 07700 900xxx. Fictitious toll-free (freephone) numbers are 0808 157 0xxx, and premium rate numbers are 0909 879 0xxx.

### **Examples**

(The preceding examples, except 1-800-IBM-4YOU, also all use fictitious numbers.)

US: 555-4385

UK: 07700 900461

# Computer interfaces

Document computer interfaces in an accurate, clear, and consistent way to make it easier for users to meet their goals.

## Commands

Apply the correct capitalization and fonts to commands, their parameters, and their options (the values of parameters). Show the syntax of commands, and explain the meanings of the parameters and options.

## Capitalization

If the command language is case sensitive, show the commands, parameters, and options as they must be entered from the console, terminal, or keyboard. If the command language is not case sensitive, show the commands, parameters, and options in lowercase. If you write information for multiple operating systems and the command language is case sensitive on one operating system but not on the others, show the commands, parameters, and options in the case-sensitive form.

## Commands, parameters, and options in running text

In running text, use a bold monospaced font for a command. If a parameter or option is a variable value, use an italic monospaced font; otherwise, use a bold monospaced font for the parameter and a monospaced font for the option.

### Examples

Use the **BROWSE** command.

Use the **Copy** command.

Use the **lssrc** command, and specify the **-ls** and **xntpd** parameters.

When the **debug** parameter is set to `true`...

To copy the file, specify the **copy** command with the *filename* parameter.

When you refer to a command, parameter, or option in running text, specify the word *command*, *parameter*, or *option* after the name. Command, parameter, and option names are not translated, so without the identifying noun, users might be confused about what the name represents. Alternatively, refer to a command, parameter, or option by using a lowercase descriptive phrase, such as one that includes an adjective and a noun.

### Example (incorrect)

You can use **db2trc** to record information about operations.

### Examples (correct)

You can use the **db2trc** command to record information about operations.

You can use the trace facility to record information about operations.

Do not use a command name as a verb. Using command names as verbs can cause problems for translation.

### Examples (incorrect)

**REORG** the database.

**IMPORT** the data.

### Examples (correct)

To reorganize the database, use the **REORG** command.

To import the data, use the **IMPORT** command.

## Commands, parameters, and options in instructions

To instruct users to enter commands, use *type*, *enter*, or *issue*. Use one term consistently throughout your information. To refer to the area where you enter commands, in documentation for only Windows operating systems, use *command prompt*. In documentation for other operating systems or for both Windows and other operating systems, use *command line*. Do not use *run* to refer to specifying a command on a command line or at a command prompt. However, you can use *run* to refer to the general use of a command.

When you tell users to type, enter, or issue a command on a command line or at a command prompt, use a monospaced font for the command name. If a parameter or option is a variable value, use an italic monospaced font; otherwise, use a monospaced font.

### Examples

At a command prompt, type the following command:

```
net use exmpdb
```

On the command line, enter the following command:

```
net use exmpdb
```

At a command prompt, issue the following command:

```
net use exmpdb
```

If you run the **abc** command ...

On the command line, type `load -f filename`.

Do not use the word *command* after the name of the command.

### Example (incorrect)

On the command line, type the `restart` command.

### Example (correct)

On the command line, type `restart`.

If users must enter a command, its parameters, and its options on one line but you cannot show that in the documentation because of a lack of space, explain the requirement in the introductory text.

### Example

Enter the following command on one line:

```
very long command that has lots and lots of parameters and must be  
entered without any carriage returns or continuation characters
```

For information about creating reference topics for commands, see *DITA Best Practices: A Roadmap for Writing, Editing, and Architecting in DITA*, Chapter 4, "Reference topics."

## Command syntax

To specify simple command syntax, such as in task topics, use text. To specify complex syntax, such as in reference topics, use syntax diagrams (also referred to as *railroad diagrams*) if your authoring tool supports them; otherwise, use text.

## Using text to specify command syntax

Follow these guidelines to specify syntax by using text:

- If necessary, explain the syntax conventions in your documentation. For example, in a book, include the explanation of syntax conventions in the preface or in an introductory chapter.
- Use a monospaced font for a command name. If a parameter or option is a variable value, use an italic monospaced font; otherwise, use a monospaced font. If you must use a multiple-word variable name, remove the spaces between the words, or connect the words with underscores.

### Examples

To ensure that the daemon is synchronized, enter `lssrc -ls xntpd`.

Type the following command:

```
db2dc1gn -d sample -t emp_resume -l cobol -a replace
```

To export a table, enter `db2move database_name export`.

- Use vertical bars to separate alternative values.

### Example

Use the **set monitor** command to turn the monitor on or off:

```
set monitor on|off
```

- Enclose optional items in square brackets.

### Example

Enter the following command:

```
copy filename[filetype]
```

- Underline default parameter values.

### Example

Use the **set monitor** command to turn the monitor on or off. If you do not specify **on** or **off**, **off** is selected automatically.

```
set monitor on|off
```

Explain the meanings of items in the syntax immediately after showing the syntax:

- Be consistent in explaining both the parameters and options or explaining just the options.

#### **Example of explaining both the parameters and options**

Enter the following command:

```
connect -u username -p password
```

**-u** *username* is the user name and **-p** *password* is the password.

#### **Example of explaining only the options**

Enter the following command:

```
connect -u username -p password
```

*username* is the user name and *password* is the password.

- Optionally, use the word *where*, with a lowercase *w*, to introduce the explanations.

#### **Example**

Enter the following command:

```
connect -u username -p password
```

where *username* is the user name and *password* is the password.

- To explain multiple items, consider creating a vertical list for better readability by using the following guidelines:
  - Unless you are limited by your authoring tool, use a simple list or definition list for a main list, and use an unordered list or definition list for a nested list, as shown in the examples. If your authoring tool prevents you from using these types of lists, use a different but clear and consistent format.
  - If you introduce a list with the word *where*, use a colon after *where*.
  - Use a consistent style for descriptions:
    - If you use a definition list, start all descriptions with a full sentence, or start all descriptions with a sentence fragment. If you use sentence fragments, start each one with the third-person form of a verb, or start each one with a noun phrase. Start each description with an uppercase letter.
    - If you use a simple list or unordered list, start all descriptions with a sentence fragment that starts with the third-person form of a verb and a lowercase letter.



**Example of a definition list that is prefaced by *where* and uses sentence fragments that start with the third-person form of a verb**

To test the performance of your queries, enter the following command:

```
db2batch -d dbname -f input_filename -r output_filename
```

where:

**-d** *dbname*

Specifies the database against which to run the queries.

**-f** *input\_filename*

Specifies the input file containing your queries.

**-r** *output\_filename*

Specifies the file to which the results of the command are written.

**Example of a definition list that uses sentence fragments that contain noun phrases**

To test the performance of your queries, enter the following command:

```
db2batch -d dbname -f input_filename -r output_filename
```

**-d** *dbname*

The database against which to run the queries.

**-f** *input\_filename*

The input file containing your queries.

**-r** *output\_filename*

The file to which the results of the command are written.

**Example of a definition list that contains a nested definition list**

To test your program, enter the following command:

```
run -p program_name -t trc_level
```

**-p** *program\_name*

Indicates the name of the program.

**-t** *trc\_level*

Indicates the degree to which code execution is traced.

1

Indicates ...

2

Indicates ...

3

Indicates ...

### Example of a simple list

To test the performance of your queries, enter the following command:

```
db2batch -d dbname -f input_filename -r output_filename
```

**-d** *dbname* specifies the database against which to run the queries.

**-f** *input\_filename* specifies the input file containing your queries.

**-r** *output\_filename* specifies the file to which the results of the command are written.

### Example of a simple list, prefaced by *where*, that contains a nested unordered list

To test your program, enter the following command:

```
run -p program_name -t trc_level
```

where:

**-p** *program\_name* indicates the name of the program.

**-t** *trc\_level* indicates the degree to which code execution is traced.

- 1 indicates ...
- 2 indicates ...
- 3 indicates ...

- Unless your authoring tool imposes a different standard, use a bold monospaced font for parameters and a monospaced font for options, except for variable values. Use an italic monospaced font for variables.
- Optionally, use text to indicate whether an item is required, optional, or the default. Use consistent wording.

### Examples

```
copy filename[filetype]
```

*filename*

The name of the file. This value is required.

*filetype*

The file type. This value is optional.

```
set monitor on|off
```

**on**

Turns on the monitor.

**off**

Turns off the monitor. This value is the default.

## Using diagrams to specify command syntax

Syntax diagrams visually represent command syntax. An example of a syntax diagram follows.

```

      .-,------.
      v           |
>>-LOAD-----FROM-----filename-----OF--filetype-----><
      '-CLIENT-'           +-pipename---+
                           '-devicename-'

```

**Important:** Because syntax diagrams are inaccessible to users of screen readers, you must also provide an alternative accessible format. Both the dotted decimal format and Backus-Naur Form (BNF) are accessible by screen readers.

Follow these guidelines to specify syntax by using a syntax diagram:

- Explain the syntax conventions in your documentation. For example, in a book, include the explanation of syntax conventions in the preface or in an introductory chapter. In topic-based information, provide a topic about command-syntax conventions.
- Use the following basic components in the syntax diagram. If your authoring tool supports syntax diagrams, see the tool documentation for detailed information about how to create these components.
  - Use two right-facing arrowheads and a dash (>>-) to indicate the beginning of a syntax diagram. Use a dash, a right-facing arrowhead, and a left-facing arrowhead (-><) to indicate the end of a syntax diagram. If you cannot show all the syntax on a single line, use a dash and a right-facing arrowhead (->) to indicate that the syntax is continued on the next line. Use a right-facing arrowhead and a dash (>-) to indicate that the syntax is continued from the previous line.
  - Put required items on the main path. The following diagram shows that the **db2idrop** command name is required.

```

>>-db2idrop-----><

```

- Put optional items below the main path. The following diagram shows that the **SHOW DETAILS** parameter is optional.

```
>>-LIST INSTANCE--+-----+-----><
                        '-SHOW DETAILS-'
```

- Put choices in a stack. If users must choose at least one of the items, put the first item in the stack on the main path. The following diagram shows that users must choose between the **on** and **off** parameters.

```
>>-db2iauto--+on--+-----><
                        '-off-'
```

If users do not have to choose any of the items in a stack, put the entire stack below the main path. The following diagram shows that users can specify the **BACKUP** parameter, the **ROLLFORWARD** parameter, or neither parameter.

```
>>-LIST HISTORY--+-----+-----><
                        +-BACKUP-----+
                        '-ROLLFORWARD-'
```

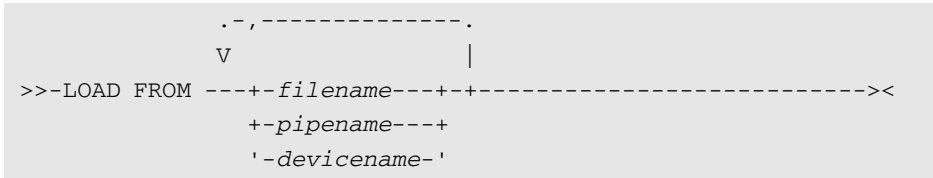
If one of the items in a stack is the default, put it above the main path. The following diagram shows that **verbose** is the default parameter.

```
        .-verbose-.
>>-db2sampl--+-----+-----><
                        '-quiet---'
```

- Use a monospaced font for a command name and for parameters and options that are not variable values. For variable values, use an italic monospaced font. If you must use a multiple-word variable name, remove the spaces between the words, or connect the words with underscores. The following diagram shows that users must provide a database name and can optionally specify an alias name.

```
>>-CATALOG--+--DATABASE--+--dbname--+-----+-----><
                        '-DB-----'          '-AS--alias-'
```

- Indicate that users can specify an item more than once or can specify more than one item by using an arrow above the main path that returns to the left. The following diagram shows that users can specify a file name, pipe name, or device name multiple times. The separator for multiple or repeated values, if required, is shown on the arrow. In the example, each name must be separated by a comma.



Explain the parameters and their options after the syntax diagram, as follows:

- In general, describe the parameters and their options in the same order in which you display the parameters and their options in the syntax diagram. However, if the order of parameters is not significant for the command and the parameters are numerous, alphabetize the descriptions to improve retrievability.
- Use a definition list to specify the parameters and options and their descriptions, unless there are multiple options for a parameter. If a user can specify multiple options for a parameter, specify those options and their descriptions in a nested definition list or nested unordered list.
- Unless your authoring tool imposes a different standard, use a bold monospaced font for parameters and a monospaced font for options, except for variable values. Use an italic monospaced font for variables.
- Use a consistent style for descriptions in a particular list:
  - If you use a definition list, start all descriptions with a full sentence or with a sentence fragment. If you use sentence fragments, start each one with the third-person form of a verb or with a noun phrase. Start each description with an uppercase letter.
  - If you use an unordered list, start all descriptions with a sentence fragment that starts with the third-person form of a verb and a lowercase letter.
- Use an underscore and, optionally, text to indicate default values.
- Optionally, use text to indicate whether an item is required or optional, using consistent wording.

**Example of a definition list that uses sentence fragments that start with the third-person form of a verb and that contains a nested definition list**

**F** *filename*

Specifies the name of a file.

**DATABASE** *database\_alias*

Specifies the alias of the database to recover.

**MSGVL** *n*

Specifies the type of messages to display.

0

No messages (the default value).

1

Information messages.

2

Warning messages.

3

Error messages.

4

All messages.

**Example of a definition list that uses noun phrases and that contains a nested definition list**

**F** *filename*

The name of a file.

**DATABASE** *database\_alias*

The alias of the database to recover.

**MSGVL** *n*

The type of messages to display.

0

No messages (the default value).

1

Information messages.

2

Warning messages.

3

Error messages.

4

All messages.

**Example of a definition list that uses sentence fragments that start with the third-person form of a verb and that contains a nested unordered list**

**F** *filename*

Specifies the name of a file.

**DATABASE** *database\_alias*

Specifies the alias of the database to recover.

**MSGLVL** *n*

Specifies the type of messages to display.

- 0 displays no messages (the default value).
- 1 displays information messages.
- 2 displays warning messages.
- 3 displays error messages.
- 4 displays all messages.

For more information about documenting command syntax, see *DITA Best Practices: A Roadmap for Writing, Editing, and Architecting in DITA*, Chapter 4, “Creating syntax diagrams: <refsyn> and <syntaxdiagram>.”

## Programming elements

For programming keywords (sometimes referred to as *reserved words*), such as SQL statements, APIs, and Java methods, use the correct capitalization, identify the type of keyword, and use the correct part of speech. For programming variables, use appropriate names.

For information about commands, see “Commands” on page 185 and “Command syntax” on page 187.

## Keywords

Follow these guidelines when you refer to keywords:

- For programming languages that are case sensitive, spell keywords as required by the programming language syntax. Otherwise, use uppercase for keywords.

### Examples

The sqlecrea API

The JOB statement

The DD statement

The COPY routine

The CREATE TABLE statement

- Specify the keyword type after the keyword. Keywords are not translated, so without the keyword type, users might be confused about what the keyword represents. Alternatively,

refer to the keyword by using a lowercase descriptive phrase, such as one that includes an adjective and a noun.

Some keywords incorporate a keyword type as part of the name. Even if a keyword type is included as part of the keyword, specify the keyword type after the keyword, or refer to the keyword by using a lowercase descriptive phrase.

#### **Examples (incorrect)**

To specify the number of seconds that an application waits to obtain a lock, use **locktimeout**.

The system raises a NameNotFoundException in those conditions.

You can use sqledrpd to drop a database.

Create a MessageProducer by calling messageProducer.

#### **Examples (correct)**

To specify the number of seconds that an application waits to obtain a lock, use the **locktimeout** database configuration parameter.

The system raises a NameNotFoundException exception in those conditions.

You can use the sqledrpd API to drop a database.

You can use the drop database API.

Create a MessageProducer object by calling the messageProducer method.

Create a message producer by calling the messageProducer method.

- Do not use a keyword as a verb, and do not add a verb ending to a keyword other than a Boolean operator such as AND or OR. Using keywords as verbs can cause problems for translation.

#### **Examples (incorrect)**

DROP the object.

This module is LOADED.

Control is then XCTLed to the subprogram.

#### **Examples (correct)**

To delete an object, issue the DROP statement.

This module is loaded.

The XCTL macro then transfers control to the subprogram.

ANDing

Is exclusively ORed



## Variables

If the programming language interface has specific names for variables, such as *DataInfoLength*, use those names. Otherwise, for a non-numeric variable, use a short, descriptive word in an italic font, such as *filename*. For a numeric variable, use a short, descriptive word in an italic font, such as *max*, or a single letter, such as *n*. If there are variations on the same type of variable, you can follow the word or letter with a number, such as *max1*, *max2*, and so on or *n1*, *n2*, and so on.

For information about creating reference topics for programming elements, see *DITA Best Practices: A Roadmap for Writing, Editing, and Architecting in DITA*, Chapter 4, "Reference topics."

## Code and command examples

Where necessary for clarity, use examples to help show how to write code and use commands. Present code and command examples clearly and consistently.

Follow these guidelines for code and command examples:

- Use examples to support text, not replace it. Do not expect users to extrapolate instructions from examples.
- Use a monospaced font to show examples. To emphasize a new or changed line, you can use a bold monospaced font. To make it easier for users to follow the flow of an example, consider using indentation.

### Example

The following code example demonstrates how to begin a nested work area. In this example, the name of the creating class is used to identify the nested work area.

```
public class SimpleSampleBeanImpl implements SessionBean {  
  
    public String [] test() {  
        ...  
        String invoker = userWorkArea.getName();  
        try {  
            userWorkArea.set("key", "value");  
        }  
        catch (NotOriginator e) {  
        }  
    }  
}
```

```

        // Begin a nested work area. By using the
        // name of the creating class as the name
        // of the work area, you can avoid explicitly
        // setting the name of the creating class
        // in the work area.
        userWorkArea.begin("SimpleSampleBean");

        ...
    }
}

```

- Use a complete sentence to introduce an example or the results of running an example. Do not start a sentence before an example and continue the sentence after the example. End the sentence with a colon unless other sentences intervene between the introductory sentence and the example; in that case, end each sentence with a period.

#### **Example (incorrect)**

The following example:

```

SELECT FLOOR(3.5) ,
       FLOOR(3.1) ,
       FLOOR(-3.1) ,
       FLOOR(-3.5)
FROM SYSIBM.SYSDUMMY1

```

results in:

```

03.    03.   -04.   -04.

```

#### **Example (correct)**

The following example uses the FLOOR function, which returns the largest integer value that is less than or equal to the argument:

```

SELECT FLOOR(3.5) ,
       FLOOR(3.1) ,
       FLOOR(-3.1) ,
       FLOOR(-3.5)
FROM SYSIBM.SYSDUMMY1

```

The results of this query are as follows:

```

03.    03.   -04.   -04.

```

**Example (correct)**

The following example uses the FLOOR function. The FLOOR function returns the largest integer value that is less than or equal to the argument.

```
SELECT FLOOR(3.5) ,  
       FLOOR(3.1) ,  
       FLOOR(-3.1) ,  
       FLOOR(-3.5)  
FROM SYSIBM.SYSDUMMY1
```

The results of this query are as follows:

```
03.    03.   -04.   -04.
```

- Use a consistent approach for captioning examples. You might choose to show large examples as figures, with appropriate captions, and embed small examples within the text, without captions. If you use captions, use informative ones that help the reader to identify the examples in the table of contents.
- If you indent examples, use a consistent approach.
- If a user must enter code or a command on one line but the example does not fit on one line in your output, explain that in introductory text. If the example is from software that uses continuation characters, show the example exactly as it is displayed in the program.

**Example**

Enter the following command on one line:

```
start very long command that has lots and lots of parameters  
and must be entered without any carriage returns or  
continuation characters
```

For more information about including examples in documentation, see the following topics:

- *DITA Best Practices: A Roadmap for Writing, Editing, and Architecting in DITA*, Chapter 2:
  - “Providing an example of a step: <stepxmp>”
  - “Describing an example that helps users complete the task: <example>”
- *Developing Quality Technical Information*, Chapter 6:
  - “Choose examples that are appropriate for the audience and subject”
  - “Use focused, realistic, accurate, up-to-date examples”
  - “Make examples easy to find”
  - “Make code examples easy to adapt”
  - “Set the context for examples and scenarios”

## Data entry on the command line

Use specific terminology when you tell users to provide data. Highlight that data in a monospaced font, and explain clearly how to provide that data.

Follow these guidelines:

- In documentation for only Windows operating systems, use *command prompt*. In documentation for other operating systems or for both Windows and other operating systems, use *command line*.
- To instruct users to provide data **on the command line or at the command prompt**, use *type* or *enter*. If users can provide data in several ways or can use a method other than a keyboard to provide data, such as voice-activated software, consider using *specify*.

### Examples

On the command line, enter the name of the file.

At the command prompt, enter the name of the file.

On the command line, type your password.

At the command prompt, enter your password.

When prompted, specify your user ID.

- Use a monospaced font for the data that users provide.
- Spell and capitalize data the same way that the user must provide it.

### Examples

Type `/REPLY 02,0/`.

Enter the following text:

`/Y,N/`

- If the data includes a variable, show the variable in an italic monospaced font. Explain immediately afterward what the variable represents. Unless you are limited by your authoring tool, use an italic monospaced font for the variable in the explanation. Optionally, use the word *where*, with a lowercase *w*, to introduce the explanations.

### Examples

Type the following text:

*filename* `REPLACE`

*filename* specifies the name of the replacement file.

Type the following text:

`filename REPLACE`

where *filename* specifies the name of the replacement file.

- To explain multiple items, consider creating a vertical list for better readability by using the following guidelines:
  - Unless you are limited by your authoring tool, use a simple list or definition list, as shown in the examples. If your authoring tool prevents you from using these types of lists, use a different but clear and consistent format.
  - If you introduce a list with the word *where*, use a colon after *where*.
  - Use a consistent style for descriptions:
    - If you use a definition list, start all descriptions with a full sentence, or start all descriptions with a sentence fragment. **If you use sentence fragments, start each one with the third-person form of a verb, or start each one with a noun phrase.** Start each description with an uppercase letter.
    - If you use a simple list, start all descriptions with a sentence fragment that starts with the third-person form of a verb and a lowercase letter.

**Example of a definition list that is prefaced by *where* and uses sentence fragments that start with the third-person form of a verb**

Type the following file names:

`input_filename, output_filename, error_filename`

where:

`input_filename`

Specifies the name of the input file.

`output_filename`

Specifies the name of the output file.

`error_filename`

Specifies the name of the file to which any errors are written.

**Example of a definition list that uses sentence fragments that contain noun phrases**

Type the following file names:

`input_filename, output_filename, error_filename`

`input_filename`

The name of the input file.

`output_filename`

The name of the output file.

*error\_filename*

The name of the file to which any errors are written.

### Example of a simple list

Type the following file names:

*input\_filename*, *output\_filename*, *error\_filename*

*input\_filename* is the name of the input file.

*output\_filename* is the name of the output file.

*error\_filename* is the name of the file to which any errors are written.

- If users might mistake the punctuation for part of the data to enter, rewrite the sentence.

### Example (incorrect)

Type the following characters: /\*%\$.

### Example (correct)

Type the following characters:

/\*%\$

## File names, file types, and directory names

Use correct capitalization, highlighting, punctuation, and grammatical constructions when you refer to file names, file name extensions, file types, and directory names. A file type is a word or uppercase abbreviation that indicates the kind of file, such as PDF. A file name extension is the portion of a file name that follows the dot, such as *exe* in *install.exe*.

Follow these guidelines:

- Use lowercase for file names and directory names for operating systems and application programs that are not case sensitive. For a case-sensitive operating system or application program, use the capitalization that is used in the operating system or application program. Highlight file names, file name extensions, and directory names in a mono-spaced font.

### Examples

Copy the *install.exe* file from the *olddir* directory to the *newdir* directory.

Use the *CONFIG.sys* file.

- When you refer to a subdirectory by using a full path name, such as */usr/bin/samples*, use a forward slash (/) or backslash (\) according to the convention of the operating system. For information that applies to multiple operating systems, be consistent and describe the convention if necessary.

### Example

Windows operating systems use a backslash (\) to delimit directories in a directory path. AIX operating systems and web addresses use a forward slash (/) as a delimiter. This information uses forward slashes for all delimiters. Depending on your operating system, you might have to enter directory paths differently from what is shown in the examples.

- If a path does not fit on one line, end the first line after an existing forward slash or backslash, and continue the path on the next line. Do not add a hyphen to indicate a break in a path.

### Example (incorrect)

```
C:\Documents and Settings\Administrator\IBM\Lotus\Symp-  
hony\applications\eclipse\plugins
```

### Example (correct)

```
C:\Documents and Settings\Administrator\IBM\Lotus\Symphony\  
applications\eclipse\plugins
```

- To express part of a path name as a variable, use a short, descriptive word in an italic monospaced font.

### Example

Locate the `c:\data\filename.bat` file.

- Include the period in a file name extension. Assume that the period is pronounced as *dot*, and use the indefinite article *a*.

### Example (incorrect)

an .exe file

### Example (correct)

a .exe file

- Do not use a file name, file name extension, file type, or directory name as a noun. Instead, use the file name, file name extension, file type, or directory name as an adjective in one of the following ways:
  - Follow the file name, file name extension, or file type with the word *file*, and follow the directory name with the word *directory*, as shown in the first four correct examples.

- Use the file name, file name extension, file type, or directory name alone as shown in the last four correct examples.

**Examples (incorrect)**

To determine the version level, view `readme.txt`.

Convert the document to a `.pdf`.

The newsletter is available as a PDF.

Copy the files to `newdir`.

**Examples (correct)**

To determine the version level, view the `readme.txt` file.

Convert the document to a `.pdf` file.

The newsletter is available as a PDF file.

Copy the files to the `newdir` directory.

The file name is `readme.txt`.

The file name extension is `.txt`.

The file type is TXT.

The directory name is `newdir`.

- Avoid placing the noun *file* or *directory* before the name of the file or directory. Instead, use the name as an adjective, followed by the noun *file* or *directory*.

**Examples (incorrect)**

View the file `readme.txt` to determine the version level.

Copy the files to the directory `newdir`.

**Examples (correct)**

View the `readme.txt` file to determine the version level.

Copy the files to the `newdir` directory.

- Define the abbreviation for a file type on first use if the abbreviation is not commonly known to the target audience.

**Example**

Delete the incremental install backup (IIB) file after you upgrade the system.



## Graphical user interface elements

Use specific capitalization, spelling, and wording to refer to graphical user interface elements.

### Location of interface elements

When you refer to the location of an element in an interface, use the following terms:

- For nouns, use the terms *upper left*, *upper right*, *lower left*, and *lower right*. Do not use *left hand* or *right hand*.
- For adjectives, use the hyphenated terms *upper-left*, *upper-right*, *lower-left*, and *lower-right*. Do not use *left-hand* or *right-hand*.

To conform to accessibility best practices, do not rely solely on positional information about components in an interface. People with visual impairments might not be able to understand information if you convey it only by location; provide additional text.

#### Examples (incorrect)

The list of tables is displayed in the upper-right corner of the window.

The list of tables is displayed in the upper right-hand side of the window.

The list of tables is displayed in the upper right of the window.

#### Examples (correct)

The tables are displayed in the Table List pane, which is in the upper-right corner of the window.

The tables are displayed in the Table List pane, which is in the upper right of the window.

The list of tables is displayed under the Queries heading in the upper right of the window.

### Interface element labels

Follow these guidelines:

- When you write about an item that is displayed in a graphical user interface, match the capitalization and spelling of the item in your writing. For example, if a label is displayed with initial uppercase letters or all uppercase letters, write the label the same way in the documentation. However, if the text in the interface contains a spelling mistake, use the correct spelling in the documentation, and have the mistake corrected.
- In documentation, do not include punctuation in a label, such as an ellipsis that indicates that more information is required from the user, unless one of the following conditions applies:
  - The omission of the punctuation would result in confusion over the meaning of the interface element.

- You are using a tool that extracts the wording on the label, including the punctuation, for use in the documentation.

**Example (incorrect in most cases)**

Click **Save As...** and then type a file name.

**Example (correct in most cases)**

Click **Save As** and then type a file name.

- Use one of the following approaches when you refer to an interface element:
  - For some interface elements, as shown in the table in this topic, use the label, title, descriptive name, or name that is indicated by the tooltip, followed by the type of the interface element.

**Examples**

In the **Password** field, type your password.

From the **Resolution list**, select a resolution.

- For other interface elements, as shown in the table in this topic, use only the label, title, descriptive name, or name that is indicated by the tooltip. However, if an interface contains elements with the same label or very similar labels, include the element type to ensure clarity. If you refer to a button as a button, you must distinguish the type of button, such as a push button or radio button.

**Examples**

If the settings are correct, click **Configure**.

- For all elements, if users clearly know which element to use, use only the type of the element, or tell users to perform the action without using the label, title, descriptive name, name that is indicated by the tooltip, or type.

**Examples**

In the field, type your password.

From the list, select a resolution.

Type your password.

Specify a resolution.

If the settings are correct, configure the device.

- Do not use a label as a generic noun or verb.

#### Examples (incorrect)

Type your **Password**.

Specify a **Resolution**.

If the settings are correct, **Configure** the device.

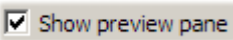
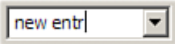
- For graphical items such as push buttons or icons, if users would benefit from seeing the graphic, include it after the label or tooltip name.

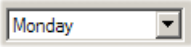
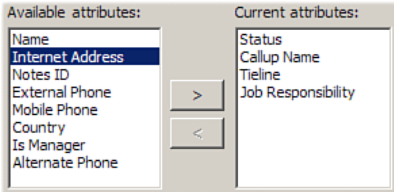
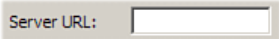
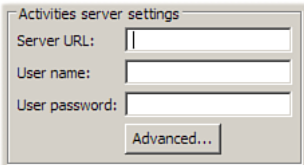
#### Example



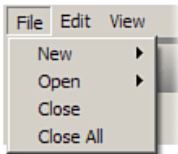
On the toolbar, click **Permanent Pen**  .

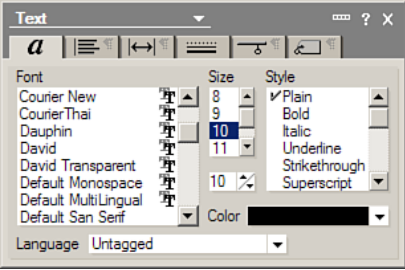
## Usage and highlighting for user interface elements

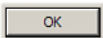
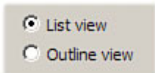
Use the guidelines in the following table to refer to specific types of user interface elements.

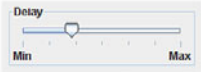

Element and definition	Usage	Highlighting	Examples
<b>Check box</b> A square box with associated text that represents a choice. 	<b>Verb:</b> Use <i>select</i> to refer to selecting the choice. Use <i>clear</i> to refer to deselecting the choice.  <b>Label:</b> Refer to the check box by its label followed by <i>check box</i> .	Bold	Select the <b>Password protected</b> check box.  Clear the <b>Password protected</b> check box.  If the <b>Password protected</b> check box is selected, ...
<b>Combination box</b> A combination of a drop-down list and a field, or a combination of a list box and a field. 	<b>Preposition:</b> In instructions, use <i>from</i> for a list or list box and <i>in</i> for a field. In descriptive text, use <i>in</i> for a list, list box, or field.  <b>Verb:</b> Use <i>select</i> to refer to selecting an item from a list. You can also use <i>type a value</i> or <i>enter a value</i> to refer to specifying an entry in the field.  <b>Label:</b> Refer to a combination box by its label, followed by <i>list</i> .	Bold	Select an item from the <b>Send to</b> list, or type an entry in the field.  All the supported file types are in the <b>File types</b> list.

Element and definition	Usage	Highlighting	Examples
<b>Drop-down list</b> A list of selectable items that is displayed when the user clicks an arrow button. 	<b>Preposition:</b> In instructions, use <i>from</i> . In descriptive text, use <i>in</i> . <b>Verb:</b> Use <i>select</i> to refer to selecting an item from a list. Use <i>click</i> when referring to the arrow. <b>Label:</b> Refer to a drop-down list by its label, followed by <i>list</i> .	Bold	From the <b>Item</b> list, select <b>Desktop</b> . On the Background page, select a background from the list. All the available fonts are in the <b>Font style</b> list. To display the choices, click the arrow.
<b>Dual list box</b> Two list boxes that are side by side with command buttons between. 	<b>Preposition:</b> In instructions, use <i>from</i> . In descriptive text, use <i>in</i> . <b>Verb:</b> Use <i>select</i> to refer to selecting an item from a list. <b>Label:</b> Refer to a dual list box by its label, followed by <i>list</i> .	Bold	From the <b>Available options</b> list, select the appropriate options. These options are displayed in the <b>Selected options</b> list.
<b>Field</b> A rectangular box in which users can type text. 	<b>Preposition:</b> Use <i>in</i> . <b>Verb:</b> In most cases, use <i>type</i> or <i>enter</i> . If users can enter text in several ways or can use a method other than a keyboard to enter information, such as voice-activated software, consider using <i>specify</i> . <b>Label:</b> Refer to the field by its label, followed by <i>field</i> .	Bold	In the <b>Containing text</b> field, type the search string. In the <b>Name</b> field, enter a name for the new column. In the <b>Format</b> field, specify a format type.
<b>Group box</b> A frame or box that contains related interface elements. 	<b>Preposition:</b> Use <i>in</i> . <b>Label:</b> Refer to a group box by its label, followed by <i>area</i> (not <i>group box</i> ).	Bold	In the <b>Screen Saver</b> area, click <b>Preview</b> .

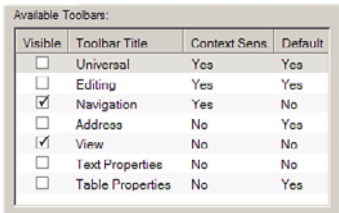

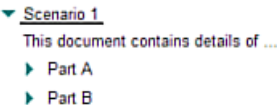
Element and definition	Usage	Highlighting	Examples
<p><b>Icon</b></p> <p>A graphical element that represents an object or shortcut to an object or labels an interface element, such as a button.</p> 	<p><b>Verb:</b> Use <i>click</i>, <i>double-click</i>, or <i>right-click</i>, depending on the icon.</p> <p><b>Label:</b> Refer to the icon by its label, followed by <i>icon</i>, or by the name that is indicated by the tooltip, followed by <i>icon</i>.</p>	<p>Bold on icon labels and tooltip names</p>	<p>On the desktop, double-click the <b>Lotus Sametime Connect</b> icon.</p>
<p><b>List box</b></p> <p>A box in which a set of related, selectable items are presented in a simple list.</p> 	<p><b>Preposition:</b> In instructions, use <i>from</i>. In descriptive text, use <i>in</i>.</p> <p><b>Verb:</b> Use <i>select</i> to refer to selecting an item from a list.</p> <p><b>Label:</b> Refer to a list by its label, followed by <i>list</i>.</p>	<p>Bold</p>	<p>From the <b>Item</b> list, select <b>Desktop</b>.</p> <p>On the Background page, select a background from the list.</p> <p>All the available fonts are in the <b>Font style</b> list.</p>
<p><b>Menu</b></p> <p>A list that is associated with an interface option, such as <b>File</b>, <b>Edit</b>, <b>View</b>, <b>Create</b>, <b>Text</b>, or <b>Help</b>.</p> <p>The area of an interface that contains the menu names is called a <i>menu bar</i>.</p> <p>A <i>pop-up menu</i> is displayed when users right-click an interface element or object. Use the term <i>pop-up menu</i> only if it is necessary to refer to the type of menu.</p> 	<p><b>Preposition:</b> In instructions, use <i>from</i>. In descriptive text, use <i>on</i>.</p> <p><b>Verb:</b> Use <i>click</i>.</p> <p><b>Label:</b> Refer to a menu or menu item by its label only, unless <i>menu</i> or <i>menu item</i> is required for clarity.</p>	<p>Bold</p>	<p>Click <b>File</b> &gt; <b>New</b> &gt; <b>New Memo</b>.</p> <p>If you click <b>New</b> on the <b>File</b> menu, ...</p> <p>All the design tools are available on the <b>Format</b> menu.</p> <p>From the <b>Format</b> menu, ...</p> <p>The data options are on the pop-up menu.</p>

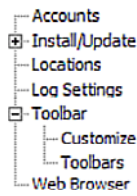
Element and definition	Usage	Highlighting	Examples
<p><b>Notebook</b></p> <p>An interface element that resembles a tabbed notebook, with multiple pages that can be accessed individually in any order.</p> 	<p><b>Preposition:</b> Use <i>in</i>.</p> <p><b>Label:</b> If a notebook has a title, refer to it by its title, followed by <i>notebook</i>. If a notebook does not have a title, refer to it by a descriptive name, followed by <i>notebook</i>.</p>	<p>If a notebook title has headline-style capitalization, no highlighting; if a notebook title has sentence-style capitalization, double quotation marks</p>	<p>In the Display notebook, click the <b>Screen Saver</b> tab.</p> <p>In the “Local properties” notebook, click the <b>Resolution</b> tab.</p>
<p><b>Page</b></p> <p>In a notebook or wizard, a set of interface elements that is organized to help users accomplish tasks; on the web, any document that can be accessed by a uniform resource locator (URL). You click a tab to display a page.</p>	<p><b>Preposition:</b> Use <i>on</i>.</p> <p><b>Label:</b> Refer to a page by its title, followed by <i>page</i>.</p>	<p>If a page title has headline-style capitalization, no highlighting; if a page title has sentence-style capitalization, double quotation marks</p>	<p>On the Server Details page, specify the IP address.</p> <p>You can find information about choosing a database management product on the DB2 Information Management Industry Solutions web page.</p> <p>On the “File details” page, specify information about the file.</p>
<p><b>Pane</b></p> <p>A framed section of a window or web page.</p>	<p><b>Preposition:</b> Use <i>in</i>.</p> <p><b>Label:</b> If a pane has a title, refer to it by its title, followed by <i>pane</i>. If a pane does not have a title, refer to it by a descriptive name and, if helpful, by its relative location in the window, followed by <i>pane</i>.</p>	<p>If a pane title has headline-style capitalization, no highlighting; if a pane title has sentence-style capitalization, double quotation marks</p>	<p>The Properties pane lists the properties of the subsystems.</p> <p>Authoring standards are displayed in the “Complying with standards” pane.</p> <p>The News pane in the upper right of the window shows the latest updates.</p>

Element and definition	Usage	Highlighting	Examples
<b>Portal</b> A website or a service that provides a single point of access to applications, document libraries, online directories, and other resources.	<b>Preposition:</b> Use <i>in</i> . <b>Label:</b> Refer to a portal by its title, followed by <i>portal</i> if that word is not included in the title.	If a portal title has headline-style capitalization, no highlighting; if a portal title has sentence-style capitalization, double quotation marks	You can tour the User Experience Workbench Portal. To access career advice, use the “Employee resources” portal. The information is stored in the Requirements portal.
<b>Portlet</b> A web component that provides specific services or information to users and is designed to be aggregated with other portlets in the context of a composite page, or portal.	<b>Preposition:</b> Use <i>in</i> . <b>Label:</b> If the portlet has a title, refer to it by its title, followed by <i>portlet</i> . If a portlet does not have a title, refer to it by a descriptive name.	If a portlet title has headline-style capitalization, no highlighting; if a portlet title has sentence-style capitalization, double quotation marks	In the Roles portlet, you can view, create, edit, and delete roles and specify access to pages and components. Use the “Expense reimbursement” portlet to track the status of requests for expense reimbursement.
<b>Push button</b> A graphical mechanism that, when clicked, results in an action. 	<b>Verb:</b> Use <i>click</i> . <b>Label:</b> Refer to a button by its label only or tooltip name only; do not use <i>button</i> or <i>push button</i> .	Bold	Click <b>OK</b> .
<b>Radio button</b> A circle with text beside it that indicates a set of choices from which only one can be selected. 	<b>Verb:</b> Use <i>click</i> to refer to selecting and deselecting a radio button; when you refer to a radio button that is selected, use <i>selected</i> . <b>Label:</b> Refer to a radio button by its label only; do not use <i>button</i> or <i>radio button</i> .	Bold	In the <b>Active Desktop</b> area, click <b>Enable web content on my desktop</b> . If <b>Enable web content on my desktop</b> is selected, ...

Element and definition	Usage	Highlighting	Examples
<p><b>Slider</b></p> <p>A graphical representation of a quantity and its relationship to the range of possible values for that quantity. A user can change the value by using the slider.</p> 	<p><b>Verb:</b> Use <i>move</i> and the direction, but avoid using <i>left</i> and <i>right</i> because if the interface is translated into a bidirectional language, the directions are reversed.</p>	<p>Bold</p>	<p>If you are an inexperienced mouse user, move the <b>Double-click speed</b> slider toward <b>Slow</b>. To sharpen or blur the image, use the <b>Percentage</b> slider.</p>
<p><b>Spin button</b></p> <p>A type of entry field that shows a scrollable list of choices from which a user can select a choice. After the last choice is displayed, the first choice is displayed again. A user can also type a choice from the scrollable list into the entry field without interacting with the spin button.</p> 	<p><b>Preposition:</b> Use <i>in</i>.</p> <p><b>Verb:</b> Use <i>click</i>.</p> <p><b>Label:</b> Refer to a spin button by its label, followed by <i>field</i>.</p>	<p>Bold</p>	<p>In the <b>Size</b> field, click the arrows to select a value.</p>
<p><b>System tray</b></p> <p>The area of the taskbar that contains the clock and icons that indicate the status of various functions, such as speaker volume.</p>	<p><b>Preposition:</b> Use <i>in</i>.</p> <p><b>Verb:</b> Use <i>click</i>.</p> <p><b>Label:</b> Refer to an icon by the icon label or name that is indicated by the tooltip, followed by <i>icon</i>.</p>	<p>Bold on icon labels and tooltip names</p>	<p>In the system tray, click the <b>Volume</b> icon.</p>
<p><b>Tab</b></p> <p>An interface element that is used to organize distinct sets of information and to provide an easy way to navigate between these sets. Tabs are used on websites, in applications, and in notebooks. You click a tab to display a page.</p>	<p><b>Verb:</b> Use <i>click</i>.</p> <p><b>Label:</b> Refer to a tab by its label, followed by <i>tab</i>.</p>	<p>Bold</p>	<p>In the Display notebook, click the <b>Screen Saver</b> tab. To view a list of supported capabilities and functions, click the <b>Features</b> tab. The <b>Network</b> tab is in the Properties notebook.</p>



Element and definition	Usage	Highlighting	Examples
<p><b>Table</b></p> <p>A presentation of data in multiple rows and columns.</p> 	<p><b>Preposition:</b> Use <i>in</i>.</p> <p><b>Verb:</b> Use <i>select</i> to refer to selecting an item in a table.</p> <p><b>Label:</b> Refer to a table by its label, followed by <i>table</i>.</p>	Bold	In the <b>Managed hosts</b> table, select the appropriate host name.
<p><b>Taskbar</b></p> <p>In Windows operating systems, the row of interface elements that, by default, is displayed at the bottom of the desktop. Some other operating systems also use a taskbar, but it might be known by a different name such as <i>dock</i> or <i>panel</i> and might be in a different position by default.</p>	<p><b>Preposition:</b> Use <i>on</i>.</p> <p><b>Verb:</b> Use <i>click</i> to refer to selecting an item from the taskbar.</p> <p><b>Label:</b> Refer to the advice for the applicable interface element.</p>	Highlighting that is specified in this table for the applicable interface element	Click <b>Start</b> . On the taskbar, double-click the battery icon to show the remaining time. On the taskbar, click ...
<p><b>Toolbar</b></p> <p>An area that contains interface elements that are used to perform tasks, such as printing, saving, or searching.</p> 	<p><b>Preposition:</b> Use <i>on</i>.</p> <p><b>Verb:</b> Use <i>click</i>.</p> <p><b>Label:</b> Refer to the advice for the applicable interface element.</p>	Highlighting that is specified in this table for the applicable interface element	Click <b>Back</b> . The <b>Save</b> button is on the Standard toolbar. On the toolbar, click ...
<p><b>Twistie</b></p> <p>An interface element in the shape of a triangle that a user clicks to collapse or expand sections or categories.</p> 	<p><b>Verb:</b> Use <i>expand</i> to refer to clicking a twistie to display the content. Use <i>collapse</i> to refer to clicking a twistie to hide the content.</p> <p><b>Label:</b> In general, refer to a twistie by its label only. Use <i>twistie</i> only if you must refer to the interface element itself, for example, in documentation about programming a graphical user interface.</p>	Bold	Expand <b>Scenario 1</b> , and then select ...

Element and definition	Usage	Highlighting	Examples
<b>Window</b> A part of the user interface with visible boundaries in which an application program or information is displayed.	<b>Preposition:</b> Use <i>in</i> . <b>Verb:</b> Use <i>open</i> and <i>close</i> ; do not use <i>appear</i> or <i>display</i> . <b>Label:</b> Refer to a window by its title, followed by <i>window</i> (not <i>dialog</i> , <i>dialog box</i> , or <i>pop-up</i> ).	If the window title has headline-style capitalization, no highlighting; if a window title has sentence-style capitalization, double quotation marks	In the Print window, click <b>All</b> . The Print window opens. In the “Select a type” window, click <b>Multiple</b> .
<b>Wizard</b> An interactive program that guides users through a series of steps to achieve a specific goal, for example, installing a product.	<b>Preposition:</b> Use <i>in</i> . <b>Label:</b> If a wizard has a title, refer to it by its title, followed by <i>wizard</i> if the word is not part of the title. If a wizard does not have a title, refer to it by a descriptive name, followed by <i>wizard</i> .	If a wizard title has headline-style capitalization, no highlighting; if a wizard title has sentence-style capitalization, double quotation marks	In the Installation wizard, click the <b>Servers</b> tab. In the “Printer setup” wizard, specify details about the printer that you want to use. You can use the configuration wizard or command line to set preferences for the product.
+ (plus sign) and - (minus sign) Interface elements that, when clicked, expand or collapse folders or other elements in a navigation tree. 	<b>Verb:</b> Use <i>expand</i> to refer to clicking a plus sign (+). Use <i>collapse</i> to refer to clicking a minus sign (-).	Bold on the name of an item that users expand or collapse	In the navigation pane, expand <b>Performance</b> .

## Menu instructions and navigation

Use specific wording and formatting to instruct users to navigate through menus, navigation trees, or directories. The wording in the instructions can differ for experienced and novice users.

### Menu instructions

Use the following guidelines when you instruct users to use a menu:

- Refer to the choices on a menu as *menu items*.
- When you specify which item to select from a menu, use the format that is appropriate for your audience. For experienced users, use the format in the following example:

Click **File > Tools > User preferences**.

For novice users, use the format in the following example:

From the **File** menu, click **Tools**, and then click **User preferences**.

- To separate menu choices, use the symbol that your authoring tool provides. If a symbol is not provided, use the greater than symbol (>), and insert a space on each side of the symbol.
- Use bold for menus, menu items, and separator symbols. If a menu contains variable menu items, use lowercase bold italic.

#### Example

Click **File > Tools > User preferences > *required preference***.

- Do not document punctuation such as an ellipsis that is part of a menu item unless one of the following conditions applies:
  - The omission of the punctuation would result in confusion over the meaning of the menu item.
  - You are using a tool that extracts the wording of the menu item, including the punctuation, for use in the documentation.

#### Example (incorrect in most cases)

Click **Attach ...** and then attach a file.

#### Example (correct in most cases)

Click **Attach** and then attach a file.

- Consider whether you must explain that a pop-up menu is displayed when users right-click an object or a window. This behavior is widely understood.

#### Examples

Right-click **Programs** and then click **Open**. (For experienced users)

Right-click **Programs**, and then on the pop-up menu, click **Open**. (For novice users)

- Assume that users know where the Windows **Start** button is located; do not specify the location of the button.

#### Example

Click **Start** > ...

## Navigation trees

In general, use the format in the following example to guide users through a navigation tree. Use bold for the items in the navigation tree and the greater than symbol. Insert a space on each side of the symbol.

#### Example

Expand **Performance** > **Advisor types** > **Diagnostics**.

If the navigation tree contains variable elements, use lowercase bold italic.

#### Example

Expand **Performance** > **Advisor types** > ***usertype*** > **Diagnostics**.

## Directories

Use the standard format for menu instructions to instruct users to navigate to directories and files. Use bold for the directory and file names and the greater than symbol. Insert a space on each side of the symbol.

#### Example

From the root directory, click **pub** > **docs** > **formal** > **99-07.59.pdf**.

## Mouse buttons

Unless stated otherwise, instructions for a mouse apply to right-handed users and the left mouse button. If you must distinguish between the buttons on a mouse, use *left mouse button*, *middle mouse button*, and *right mouse button*.

Use the verbs *click*, *double-click*, and *right-click* to refer to mouse actions. Do not use the preposition *on* with mouse actions.

### Examples (incorrect)

Click on **Save As**.

Click the **Lotus Sametime Connect** icon twice.

Using the right mouse button, click anywhere in the window, and select **Properties**.

Select the **Shortcut** tab.

### Examples (correct)

Click **Save As**.

Double-click the **Lotus Sametime Connect** icon.

Right-click anywhere in the window, and click **Properties**.

Click the **Shortcut** tab.

To refer to a double-click action with the right mouse button, use the term *double right-click*.

### Example

Double right-click the histogram bar.

## Keyboard keys

Use the correct verbs and terminology to refer to keyboard keys.

### Verbs to use with keyboard keys

Follow these guidelines when you use verbs with keyboard keys:

- For keys that are printed with letters, words, numbers, and symbols and result in output on a screen, use *type* or *enter*.
- For keys that perform functions other than producing output on a screen, such as Enter, Esc, Shift, and Tab, use *press*.
- Do not use the verb *depress*, *hit*, *punch*, or *strike*.

## Key names

Use the following guidelines to refer to key names:

- Use uppercase letters to describe letter keys.

### Examples

Type N.

Enter J.

- Do not highlight the names of keys.

### Examples

Press Enter.

Press Backspace.

- If a key has a symbol printed on it, at first reference, use the descriptive name of the key followed by the symbol in parentheses. For later references, you can use only the symbol if no ambiguity or confusion would result.

### Example

To move to the next page, press the Backslash key (\). Press \ again.

- If a key is a Function key ( $F_n$  or  $PF_n$ ) or a Program Access key ( $PA_n$ ), use the descriptive name of the key at first reference only if needed for clarity. If you use the descriptive name of the key at first reference, follow the name with the text that is printed on the key, in parentheses. For later references, you can use only the text that is printed on the key if no ambiguity or confusion would result.

### Example (incorrect: repetitive)

To update the file, press the Update key (F4).

### Examples (correct)

To update the file, press F4.

Press the Update key (F4). Press F4 again.

- If a key has an abbreviated name printed on it, use the abbreviated name instead of the spelled-out name when the meaning of the abbreviated name is clear.

### Examples

Press Caps Lock.

Press Ctrl+Alt+Del.

- Use an article with a descriptive key name but not with an abbreviated name, symbol, number, or letter that is printed on a key.

### Examples

Press the Escape key.

Press Esc.

The following table provides the descriptive names of common keys. Your keyboard might have different keys.

Descriptive name	Label or symbol	Descriptive name	Label or symbol
Alternate key	Alt	Left Arrow key	←
Backslash key	\	Less Than key	<
Backspace key	Backspace	Number Lock key	Num Lock
Capitals Lock key	Caps Lock	Page Down key	PgDn or Page Down
Control key	Ctrl	Page Up key	PgUp or Page Up
Delete key	Delete or Del	Program Access <i>n</i> key (for example, Program Access 1 key)	PA <i>n</i> (for example, PA1)
Down Arrow key	↓	Program Function <i>n</i> key (for example, Program Function 1 key)	PF <i>n</i> (for example, PF1)
End key	End	Right Arrow key	→
Enter key	Enter	Scroll Lock key	Scroll Lock
Escape key	Esc	Shift key	Shift
Forward Slash key	/	Spacebar key	
Function <i>n</i> key (for example, Function 1 key)	F <i>n</i> (for example, F1)	Tab key	Tab
Greater Than key	>	Up Arrow key	↑
Home key	Home	Vertical Bar key	
Insert key	Insert or Ins		

## Key combinations

When you write about two or more keys that are used in combination to perform a function, use the plus sign (+) to separate the key names. Do not insert a space before or after the plus sign. If the key that you press is a symbol key, avoid ambiguity by spelling out the name of the key, and

follow the key name with the keyboard symbol in parentheses. If you press the same key twice, write the second action in a separate sentence.

### Examples

Press Shift+F1.

Press Ctrl+Alt+Del.

Press Ctrl+C.

Press Alt+minus sign key (-).

Press Alt+Shift+Q. Press Q again.

In instructions to press a key while clicking the mouse, write “press *keyname* and click ...”

### Example

Press Shift and click the last item in the list.

## Messages

Messages must be accurate, complete, and helpful. They must be clearly written, be free from grammar and punctuation problems, and follow style and terminology guidelines. In addition, messages must not blame the user.

### Message types

The most common types of messages are as follows:

#### Error

Use error messages to inform users that a problem in the system or application occurred. Users or systems cannot continue their tasks until the problem is resolved. An example of an error message is `The file could not be found.`

#### Warning

Use warning messages to alert users about a condition that might cause problems in the future. Users can generally continue with their tasks, but those tasks might not be completed in a way that is expected. An example of a warning message is `The parser could not parse all documents. Some documents were skipped.`

#### Information

Use information messages to provide information about normal conditions and operations. An example of an information message is `Updates are being processed.`

#### Confirmation

Use confirmation prompts to ask users to verify an action that the users or sometimes the system initiated. Also, use confirmation prompts to ask users for additional information to



complete a step or to ask whether to save information for future use. An example of a confirmation prompt is `Are you sure that you want to close your document without saving your changes?`

## Components of error, warning, and information messages

Most error, warning, and information messages require the following information:

- A message identifier
- Message text
- An explanation
- A user response

The following error message provides a brief description of the problem followed by a complete description of the cause (explanation) and user action (user response).

```
SRERT0164E: The properties file could not be loaded.
```

```
Explanation: The properties file might not exist because it was  
removed during an upgrade, or the file might not have read permission.
```

```
User response: Verify that the properties file exists in the  
MC_HOME/applications directory. If the file is missing, check the  
file that you created as a backup image before you upgraded the  
system. Also, ensure that the file has read permission.
```

## Message identifiers

A message identifier is a unique alphanumeric identifier that provides a quick way to distinguish messages. Message identifiers help users search for messages in logs, information centers, or message catalogs. All error and warning messages require identifiers. Information messages might require identifiers depending on how and where the messages are displayed in the interface. Confirmation prompts do not typically require identifiers.

A message identifier typically includes three parts: a multiple-character product identifier, a unique number, and a single-character message type identifier. The most common message type identifiers are `I` for information, `E` for error, and `W` for warning.

### Examples

```
ODRNB0306I  
QLOMM9556E  
DB21055W
```

## Message text

The message text briefly describes the problem. Follow these guidelines when you write message text:

- Describe the problem in one or two full sentences. Include only essential, relevant information.

### Example (incorrect)

```
CCFAB8977E: Empty data record for event.
```

### Example (correct)

```
CCFAB8977E: An event cannot be created for the IDoc because it contains an empty data record.
```

- Focus on the problem. Wording such as “An error occurred” or “An error was encountered” is typically not useful. Provide more specific information.

### Example (incorrect)

```
CATZZ2268E: An error occurred while the content of the business object was being retrieved.
```

### Example (correct)

```
CATZZ2268E: The Retrieve operation could not be completed because the adapter cannot obtain the content of the business object.
```

- Do not use wording that directly blames the user, even if the user caused the problem. If necessary, use passive voice to avoid placing blame.

### Example (incorrect)

```
COWZZ2268E: You did not provide a valid filter value.
```

### Example (correct)

```
COWZZ2268E: A valid filter value was not provided.
```

## Message explanations

The message explanation expands on the message text. A message explanation is required for error and warning messages. Some information messages might also require explanations. For

error and warning messages, one of the goals of the explanation is to help the user avoid the problem in the future.

Follow these guidelines when you write message explanations:

- Write a clear explanation of the circumstances that resulted in the message. For example, in the case of a warning or error message, provide details about why the problem occurred and the consequences of the error. If an information message does not require an explanation, use the sentence “This message is for informational purposes only.”

**Example (incorrect)**

BNHTT284E: The request was ignored.

Explanation: The request cannot be processed.

**Example (correct)**

BNHTT284E: The request was ignored.

Explanation: The request cannot be processed because the support function is not installed.

- Write a complete explanation but include only necessary and relevant details.

**Example (incorrect) (The definition of *tokenization* does not help the user understand or resolve the problem)**

PUPLL2344E: The tokenizer cannot tokenize some of the entries in the unrestricted dictionary.

Explanation: If the unrestricted dictionary contains terms that are used in more than two grammatical senses, those terms cannot be tokenized. Tokenization is defined as the process of mapping sentences from character strings into strings of words.

**Example (correct)**

PUPLL2344E: The tokenizer cannot tokenize some of the entries in the unrestricted dictionary.

Explanation: If the unrestricted dictionary contains terms that are used in more than two grammatical senses, those terms cannot be tokenized.

- Do not repeat the message text in the message explanation. Repeating the information is not helpful, especially if unaccompanied by other details.

**Example (incorrect)**

CCRTU4367E: Index processing cannot continue.

Explanation: Index processing cannot continue.

**Example (correct)**

CCRTU4367E: Index processing cannot continue.

Explanation: The index server might not be running, or documents were not correctly parsed.

- Do not blame the user even if the user caused the problem.

**Example (incorrect)**

Explanation: You cannot use any of the following characters:  
/ # : -

**Example (correct)**

Explanation: A user ID cannot contain any of the following characters:  
/ # : -

## Message user responses

The user response describes what the user must do to proceed, for example, to recover from a problem. You must include a user response for all error and warning messages even if the user does not have to do anything. If the user does not have to take any action, use the sentence “No action is required.”

Follow these guidelines when you write user responses that require user action:

- Use active voice and imperative statements.

**Example (incorrect)**

User response: The endpoints must not be associated with the gateway. Valid endpoints can be migrated by using the `wep -migrate` command, and incorrect endpoints can be deleted by using the `wdelep` command.

**Example (correct)**

User response: Ensure that the endpoints are not associated with the gateway. To migrate valid endpoints, use the `wep -migrate` command. To delete incorrect endpoints, use the `wdelep` command.

- Provide specific instructions for correcting or preventing the problem. For example, follow these guidelines:
  - Be precise when you refer to files and directories. For example, instead of telling users only to “See the log file,” also specify the name and location of the file and what to look for in that file.
  - Tell users the names of the reference elements to use, such as the names of commands and APIs, and consider providing examples.

**Example (incorrect)**

User response: Verify the trace information.

**Example (correct)**

User response: Verify that the trace information was logged in the `react_agent_launcher.trc` and `react_agent.trc` files in the `cdw/temp/tools` subdirectory of the Tivoli® common logging directory on the remote agent system.

**Example (incorrect)**

User response: Enter the `wcollect` command.

**Example (correct)**

User response: Enter the `wcollect` command and specify either the `graceful` or `immediate` parameter with the `-h` option. For example, enter the following command:

```
wcollect -h graceful \ @Gateway:drodriguez-gateway
```

**Example (incorrect)**

User response: Increase the storage limits and restart the data listener.

### Example (correct)

User response:

To correct the problem:

1. Increase the storage limits:
  - a. Open the enterprise search administration console.
  - b. From the list, select System.
  - c. Click Configure.
  - d. Increase the value that is specified for the maximum amount of data in temporary storage, and click OK.
2. Change to monitoring mode.
3. Restart the data listener by clicking Restart.

- Be concise. Provide only necessary technical information.
- If possible, provide all the information that users need rather than referring them to another source of information. However, if the information is too extensive to provide in the response, refer to or provide links to another source of information.
- If there are several possible explanations for an error, list recovery actions, beginning with the one that is most likely to correct the error.
- Do not tell users to contact support unless there is no other option. Also, if you must ask users to contact a system administrator, describe what the administrator must do to resolve the problem.

### Message variables

A message variable is a placeholder for the name of a specific file, server, database, or other object. When the message is displayed in the interface, the variable is replaced with a value. Message variables help users resolve a problem by telling them exactly what file, server, database, or other object is causing the problem.

#### Example

```
JJYUV4894E: The {0} server address is not valid. (message in the source code)
JJYUV4894E: The stl.ibm.com server address is not valid. (message that is
displayed in the interface)
```

To make it easier to translate messages that contain variables, follow these guidelines when you create message source code:

- In the source file, add comments to describe what the variables represent, or provide examples of the types of values.

- Put variables at the end of the sentence if possible.

**Example (incorrect)**

CWXFT13543E: The application-specific information for the {0} business object was not retrieved.

**Example (correct)**

CWXFT13543E: The application-specific information was not retrieved for the following business object: {0}.

- Use variables to replace only proper nouns. Use these proper nouns as adjectives by following the nouns with words such as *file* or *server*.

**Example (incorrect)**

BBCTR80997E: The {0} was deleted.

**Example (correct)**

BBCTR80997E: The {0} file was deleted.

- Do not use variables to replace verbs or phrases.

**Example (incorrect)**

WWXFT13543E: The file was {0}.

**Example (correct)**

WWXFT13543E: The file was deleted.

- Do not use more than three variables in a sentence unless you put the variables into a list.

In addition, follow these guidelines:

- If you show messages in documentation, use meaningful variable names in an italic font. For multiword variable names, join the words with underscores.

**Example (incorrect)**

JJYUV4894E: The %n1 server address is not valid.

**Example (correct)**

JJYUV4894E: The *server\_address* server address is not valid.

- In source code, use double quotation marks around a variable only if the value of the variable might be long or indistinguishable from surrounding text when displayed in the user interface or in documentation.

#### Example (incorrect)

WABFT13543E: The "{0}" file cannot be found. (message in the source code)

WABFT13543E: The "server.bak" file cannot be found. (message that is displayed in the interface)

WABFT13543E: The "file\_name" file cannot be found. (message in the documentation)

#### Example (correct)

WABFT13543E: The {0} file cannot be found. (message in the source code)

WABFT13543E: The server.bak file cannot be found. (message that is displayed in the interface)

WABFT13543E: The file\_name file cannot be found. (message in the documentation)

## Reason or return codes

A reason or return code is a value that is returned by a program to indicate the result of its processing. Avoid using reason or return codes to build messages and resolve problems in error handling. If you do use codes, explain them in the “Explanation” section, and describe how to respond to them in the “User response” section. If there are too many codes to include in the message, include a cross-reference or link to a separate topic that describes and explains all the codes.

#### Example

SDB22202W: The administration server cannot be quiesced. Reason code *reason\_code*.

Explanation: The administration server quiesce operation failed for one of the following reasons:

1. The administration server is already quiesced.
2. The administration server is currently processing requests on behalf of clients.



User response: The responses corresponding to the reason codes are as follows:

1. No action is required.
2. Wait until the administration server is not processing any requests, or resubmit the quiesce request, specifying the force option. Forcing a quiesce terminates any requests that are being processed.

## Confirmation prompts

Use confirmation prompts to ask users to verify an action that the users or sometimes the system initiated. Also, use confirmation prompts to ask users for additional information to complete a step or to ask whether to save information for future use. More specifically, use confirmation prompts in cases such as the following ones:

- To confirm that users want to delete files or other data, especially if the users cannot retrieve the deleted items
- To confirm that users want to save changes to settings, properties, files, or other data
- To confirm that users want to shut down applications or the operating system
- To warn users before starting an activity that might be disruptive to the user's progress, such as a process that takes a long time to run
- To prompt users to restart applications or the operating system so that changes to settings take effect
- To ask whether users want to store information such as passwords for future use
- To remind users of steps that the users might have forgotten

### Examples

Do you want to save your changes before you exit?

Are you sure that you want to delete the file?

## References to messages in documentation

Avoid copying the text for an individual message into a topic. For example, in a procedure, there is often no value in documenting the text of a message that is displayed in the interface. However, it might be appropriate to show message text in troubleshooting and similar topics. If you include the text for a message in a topic, follow these guidelines:

- Use the capitalization and the exact words that are shown in the interface.
- Use a plain monospace font for the message text. For variables, use an italic font.
- If you put the message on a separate line, use a blank line above and below it to further distinguish the message from surrounding text.

### Example

```
IJJYUV4894E: The following server address is not valid:  
server_address.
```

*This page intentionally left blank*

# Writing for diverse audiences

Apply the following guidelines to make information clear and accessible to everyone.

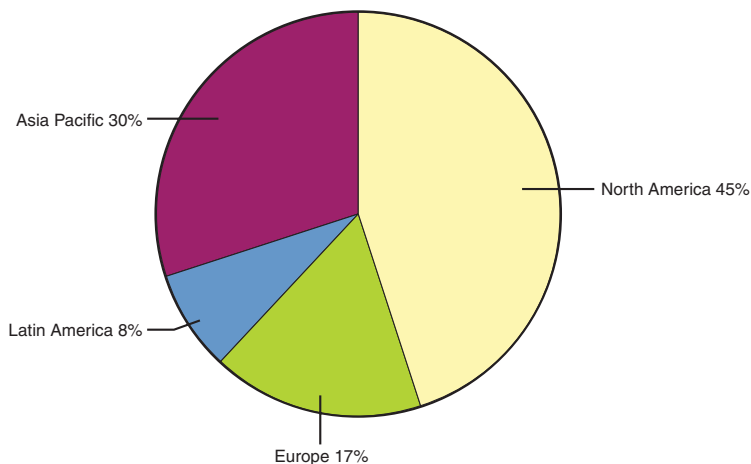
## Accessibility

Accessibility is the successful access to information technology and its supporting documentation by people who have disabilities, such as people with visual impairments and people who cannot use a traditional keyboard. When you design or modify information to allow access by the greatest number of people, you make it accessible.

The following accessibility guidelines are based on the US Standards for Electronic and Information Technology, developed by the Access Board for Section 508 of the US Rehabilitation Act, Worldwide Web Consortium (W3C) recommendations, and IBM research:

- To ensure that all users can access documentation, provide documentation in an accessible format. If you provide documentation in multiple formats, at least one of the formats must be accessible. For example, hardcopy information is not accessible because some visually impaired users cannot read it. Because screen reader support for HTML is more robust than it is for other formats, HTML is the preferred format for accessibility.
- Provide a topic or section that describes all the accessibility features that are available in the documentation and in the product:
  - Indicate which documentation format is accessible and indicate how and where users can access that format.
  - Describe accessibility features of the documentation, including ways to navigate the documentation, any unique keyboard commands that are needed to access documentation, and information about accessible syntax diagrams, if they are provided.

- Document unique keyboard accessibility features in the product. You do not have to document standard operating system keyboard shortcuts.
- If you provide instructions for completing tasks by using the mouse, also include the instructions for doing those tasks by using the keyboard if the keyboard instructions involve nonstandard operating system keyboard shortcuts.
- Document preferences that the user can enable in the product to enhance accessibility.
- If your information includes an index, create index entries for keyboard shortcuts, preferences, and any other accessibility features under both the feature name and under a main (i1) entry of *accessibility*.
- Provide a short text alternative for all graphic images by using the <alt> element. If a graphic is adequately described in the surrounding text or is used for formatting purposes only, include an empty <alt> element. An empty <alt> element causes most screen readers to ignore the image, whereas a missing <alt> element causes the screen reader to read details of the image (file name and size, for example). Alternative text for icons should indicate the function that the icon performs, not describe its appearance. If the short text alternative is not sufficient, provide a long description in addition to a short text alternative. The following example shows a graphic image that requires short alternative text and an additional long description:



### Alternative text

Pie chart that depicts percentage of sales across geographic regions

### Long description

Sales across geographic regions are as follows: North America, 45%; Asia Pacific, 30%, Europe, 17%, Latin America, 8%.

- Provide accessible syntax diagrams, where applicable. Standard graphic *railroad* syntax diagrams are not accessible to someone who is using a screen reader. In addition to providing railroad syntax diagrams, provide syntax diagrams in dotted decimal format or BNF (Backus-Naur) format. The following example shows a railroad syntax diagram:

```

XYZ command
>>-XYZ--+-----+-----><
    '- -PARM-----value-'

```

The following example shows the same syntax diagram in dotted decimal format, which can be read by a screen reader:

```

XYZ command
1 XYZ
2? PARM = value

```

- Do not use color or contrast as the only way to convey meaning. For example, using red text as the only way to indicate an error condition is not accessible.
- Make tables more accessible by defining column headers and row headers and by including a caption. Row and column headers enable screen readers to provide information about the relationship of data cells in a table. Table captions provide an overview of the contents of the table. Refer to the documentation for your authoring tool to determine how to apply these accessibility aids to your tables.

For more information, see *Developing Quality Technical Information*, Chapter 10, “Ensure that all users can access the information.”

## International audiences

The audience for IBM information includes native English-speaking users, users whose primary language is not English, and users who do not speak or read English but, instead, rely on information that was translated from English into another language.

Follow the guidelines in this topic to ensure that your information is clear for all types of audiences.

## Style

Apply the following style guidelines when you write for an international audience:

- Keep sentences as short and simple as possible. Try to keep sentences to 25 or fewer words.
- Avoid slang, jargon, humor, sarcasm, colloquialisms, idioms, emoticons (also called *smilies*), and metaphors.
- Be succinct. Avoid redundant and unnecessary text.
- In general, use a complete sentence to introduce a list. You can introduce procedures with a sentence, an infinitive phrase, or a heading.

### Examples (incorrect)

The setup utility contains:

After you install the product:

### Examples (correct)

The setup utility contains the following components:

After you install the product, complete the following steps:

- Make list items grammatically parallel. For example, do not use a mix of phrases and sentences or a mix of passive and active voice in the same list.

### Example (incorrect)

Use the setup utility to:

- Manage devices
- For defining space requirements
- You can also use this utility to register jobs

### Example (correct)

Use the setup utility to complete the following tasks:

- Manage devices
- Define space requirements
- Register jobs

- Do not use contractions. For example, use *do not* instead of *don't*.
- Do not overuse abbreviations and special characters.
- Do not use symbols instead of words in running text. For example, do not use an ampersand (&) or a plus sign (+) to mean *and*.
- Avoid negative constructions.

**Examples (incorrect)**

The current request is not unlike the previous request.

You cannot reconnect without logging on again.

**Examples (correct)**

The current request is like the previous request.

To reconnect, log on again.

- Avoid using *please* and *thank you*. Technical information requires an authoritative tone; terms of politeness convey the wrong tone for technical information and are not regarded the same way in all cultures.
- Do not write dates only in numerical form. In most countries, a date written as 9/12/99 means 9 December 1999, not 12 September 1999.

## Grammar

Apply the following grammar guidelines when you write for an international audience:

- Write in active voice and the present tense as much as possible.
- Avoid using a phrasal verb (verb and a preposition) if the verb alone provides the same meaning.

**Examples (incorrect)**

call up

click on

print out

start up

**Examples (correct)**

call

click

print

start

- When you use a verb phrase that begins with a present participle, such as *creating*, or past participle, such as *created*, at the beginning of a sentence, make sure that the verb phrase modifies the correct word. Failure to do so can result in a dangling modifier.



**Examples (incorrect)**

Having configured your environment, the program is ready to be used.

Cleared of the corrupted data, you can now repopulate the repository.

**Examples (correct)**

After you configure your environment, you can use the program.

You can use the program after you configure your environment.

You must configure your environment before you can use the program.

After you clear the corrupted data, you can repopulate the repository.

You can repopulate the repository after you clear the corrupted data.

You must clear the corrupted data before you can repopulate the repository.

- Make the subject of a sentence clear. For example, avoid ambiguous pronoun references in which a pronoun can refer to more than one antecedent.

**Examples (incorrect)**

If the completed field has text, it does not change.

This can prevent you from completing the process successfully.

Ensure that you apply the fix packs to the servers and applications. These are critical to ensuring that your system does not fail.

**Examples (correct)**

If the completed field has text, that text does not change.

This restriction can prevent you from completing the process successfully.

Ensure that you apply the fix packs to the servers and applications. These fix packs are critical to ensuring that your system does not fail.

Similarly, avoid using expletive constructions such as *it is*, *there are*, and *there is*, which hide the subject of the sentence.

**Examples (incorrect)**

There are two databases in the table space.

It is important to verify the serial number before you register the product.

**Examples (correct)**

Two databases are in the table space.

You must verify the serial number before you register the product.

**Important:** Verify the serial number before you register the product.

- Avoid using long noun phrases. Limit a noun phrase to no more than three words. When you use a noun phrase, make sure that it has only one meaning and that you use it consistently.
- Do not omit the word *that* from clauses. The use of the conjunction *that*, although technically optional in some sentences, is never wrong and makes the sentence easier to translate and clearer for readers whose primary language is not English. For example, write “Verify that your directory service is working” instead of “Verify your directory service is working.”
- Avoid using too many prepositions in a sentence. For example, you can rewrite “The report is a list of the current status of all of the event monitors for this process” as “The report lists the current status of all event monitors for this process.”
- Do not omit articles and prepositions that can increase the clarity of a sentence. For example, rewrite “Unload the file using the ULOAD utility” as “Unload the file by using the ULOAD utility.”
- Avoid using the same word for different parts of speech. In particular, avoid using words that primarily function as verbs as nouns or adjectives. For example, in English, the word *install* is a verb. Therefore, instead of writing “during the install,” write “during the installation,” and instead of writing “the install job,” write “the installation job.” Other verbs that are commonly misused as nouns or adjectives include *configure*, *compile*, *debug*, and *fix*. Note that the same form of some words can legitimately function as different parts of speech. If you are in doubt about which part of speech a word can be used as, consult a dictionary.
- Use simple and clear coordination so that the reader can tell what the relationships are between the elements of a sentence. For example, “the file or result field definition” can have any of the following meanings:
  - The result-field definition or the file
  - The file definition or the result-field definition
  - The file-field definition or the result-field definition
  - The definition of the file or of the result field
  - The field definition of the file or of the result
- Make sure that the elements of a sentence are parallel. Words, phrases, and clauses should be grammatically equal.

**Example (incorrect)**

network management, databases, and writing application programs

**Example (correct)**

network management, databases, and application programs

- Avoid ambiguity when you have more than one infinitive within a sentence. For example, the following sentence is ambiguous: “Use the utility to run maintenance activities and save your maintenance settings.” This sentence can be interpreted in two ways:
  - Use the utility to run maintenance activities and to save your maintenance settings. (The utility does both steps.)
  - Use the utility to run maintenance activities, and then when you are done, save your settings. (The process consists of two separate steps, only one of which is done by the utility.)

Rewrite the sentence to clarify which of the two interpretations you intend. For example, if the utility does both steps, include the preposition *to* before each of the infinitives: “Use the utility to run maintenance activities and to save your maintenance settings.”

- When you write a sentence that includes two coordinate clauses, do not omit the verb from the second clause.

#### **Example (incorrect)**

The file names are displayed in uppercase characters and the other file attributes in lowercase characters.

#### **Example (correct)**

The file names are displayed in uppercase characters, and the other file attributes are displayed in lowercase characters.

## **Terminology**

Apply the following terminology guidelines when you write for an international audience:

- Use correct and consistent terminology.
- Minimize the creation of new terms.
- Use the simplest term possible to convey the intended meaning. For example use *large* instead of *voluminous*, and use *small* instead of *diminutive*.
- Define product-specific terms or terms used in a special way in a product glossary, or explain them in the text.
- Avoid culture-specific references that might not be widely understood, such as holidays and celebrations, monetary units, and phone number and address formats.
- If your product uses the # symbol, in most cases refer to it as the *number sign* (#), and explain clearly how it is used.

- Be selective when you use terms that have different meanings in different environments. For example, use *conversion* for systems or programs, but use *translation* for national languages.
- Avoid using the terms *billion* and *trillion* because they have different meanings in different countries. Use the number instead.
- Avoid using the terms *domestic* and *foreign*.
- Do not use Latin abbreviations, such as *e.g.*, *etc.*, and *i.e.*
- Vary the use of proper names in documentation. Use names that represent a variety of ethnic backgrounds, genders, and locations.
- Do not use made-up terms in examples, for example, *didget* and *gidget*. Use terms that can be translated and understood.
- Avoid terms that might be misinterpreted. For example, use *once* to mean *one time*, not to mean *after* or *when*. Use *since* in relation to the passing of a period of time, not as a synonym for *because*.

For definitions and usage advice for specific terms, see “Word usage” on page 300.

## Punctuation

Apply the following punctuation guidelines when you write for an international audience:

- In general, do not use forward slashes between words to mean “and/or”; a forward slash can be ambiguous. Rewrite the sentence to clarify the meaning. For example, use “Insert the CD or DVD” instead of “Insert the CD/DVD,” and use “You can select green, blue, or both” instead of “You can select green/blue.”
- Use commas between three or more items in a series, including before the conjunction that introduces the last item, to ensure that readers can clearly separate the items. For example, write “Such functions include storage management, program management, and security.”
- Do not form a plural by adding (*s*). Try to rewrite the sentence to use either the plural form or singular form, whichever is more appropriate. If you must indicate both forms, repeat the noun, or use *one or more*. For example, instead of writing “enter the registration number(s),” write either “enter the registration number or numbers” or “enter one or more registration numbers.”
- Do not use em dashes in technical information. More common punctuation marks, such as commas, parentheses, or a colon, provide the same result. Rewrite the text or use different punctuation.

**Exception for marketing content:** Em dashes are acceptable in marketing content. For details and examples, see “Exceptions for marketing content” on page 274.

## Graphics and images

Apply the following guidelines when you use graphics and images in information for an international audience:

- Be careful not to use colors, symbols, and text in a way that some cultures might find confusing or offensive:
  - Colors have different connotations in different cultures. For example, in some Eastern cultures, red is used to convey good luck; however, in many Western cultures, red is used to convey danger or alarm.
  - Similarly, many symbols, such as those of body parts and of animals, have culturally specific connotations. For example, hand gestures that convey a positive meaning in some cultures are offensive in other cultures.
  - Icons that are based on English words present translation challenges. For example, using the letter *B* to indicate bold text is difficult to translate because *B* does not have the same meaning in most languages.
- Consider the implications for images in information that will be translated into a bidirectional language such as Arabic or Hebrew:
  - Be careful about how you refer to left and right arrows or any other directional reference in text that is associated with a directional graphical image. When possible, use words such as *start*, *end*, *next*, or *previous* instead of *right* or *left*.
  - Images are often flipped so that the resulting image is a mirror image of the original. Flipping some images, such as geographical maps or corporate logos, is generally not appropriate and needs special handling. Additionally, image maps can be corrupted if individual images within the image map are flipped.
- Do not use national flags:
  - The Paris Convention for the Protection of Industrial Property explicitly prohibits the use of national flags as trademarks.
  - The use of a flag might be falsely interpreted as an expression of approval or sponsorship of that country or as an affiliation with that country.
  - Some countries are particularly sensitive about how and in what context their flags are displayed.
  - International misunderstandings that are based on border misrepresentations and other inaccuracies can have and have had major implications for companies that used maps.

- Be careful about using geographical maps:
  - International misunderstandings that are based on border misrepresentations and other inaccuracies can have and have had major implications for companies that used maps.
  - Geographical information, such as national or internal political boundaries, the names of countries, states, and cities, and the names of other geographic elements, continually changes. Maps that include explicit details might have to be updated regularly.
  - Translation of map content presents additional challenges. In some cases, substituting a similar foreign language map in place of an English language map might be sufficient. If you work with maps in your documentation, consult your geographic specialist to determine the most appropriate course of action.

For more information about writing for translation, see *Developing Quality Technical Information*, Chapter 11, “Applying quality characteristics to information for an international audience.”

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# Glossaries

Create clear, concise glossary entries to make it easier for users to understand concepts. A glossary defines terms that are used in a product, set of products, or technology area.

## Structure of glossary entries

A glossary entry consists of the following components:

- A glossary term
- One or more of each or both of the following items:
  - A definition of the term, optionally followed by one or two explanatory sentences and a *See also* reference that points to a related term or terms
  - A *See* reference that points to a preferred synonym for that term or to the spelled-out version of an abbreviated term

If there is more than one item, each item is numbered.

### Examples

#### **migrate**

To move data from one location to another.

#### **backout**

The process of undoing uncommitted changes that an application process made. A backout might be necessary if an application process fails or a deadlock occurs. See also roll back.



## PDS

See partitioned data set.

## path

1. In a network environment, the route between any two nodes.
2. The route through a file system to a specific file.

## Glossary terms

A glossary term can be a noun (including an abbreviation), a verb, an adjective, or an adverb. A term can consist of multiple words, such as *materialized query table*.

Include the following types of terms in your glossary:

- Terms for concepts that are specific to your product or technology area.
- Industry-standard computing terms that have a special meaning in your product or technology area. For example, *cursor* has a meaning in relational database products that is different from the meaning of a cursor on a computer screen.

Do not include the following types of terms in your glossary:

- Names of reference elements, such as commands, SQL statements, and error codes.
- Names of files and directories.
- Product names, in either spelled-out or abbreviated form.
- Generally, industry-standard computing terms with standard meanings. For example, do not define *mouse* in a glossary for computer-literate users. You might want to include standard terms with standard meanings if you are writing for novice users. You can also provide a link to a standard computing dictionary or terminology website at the beginning of your glossary.

In addition, do not include a term in the glossary unless you use it in at least a few places in your documentation, such as in different topics or chapters. If you use a term only once or twice, especially close together, consider explaining the term where you use it so that users do not have to look it up in a glossary.

In the glossary, specify your selected terms as follows:

- Use an initial lowercase letter unless the term normally starts with an uppercase letter.
- Use the singular form of a noun unless the noun is always plural.
- Use the infinitive form of a verb without *to*.

### Examples (incorrect)

sensitive cursors  
Cache  
java archive  
rebuilding

### Examples (correct)

sensitive cursor  
cache  
Java archive  
rebuild

## Glossary definitions

A glossary definition consists of a sentence fragment that uniquely identifies a concept. You can optionally follow the definition with one or two sentences of explanatory information.

Write the sentence fragment as follows:

- Optionally, start with a *use label*, which is an introductory phrase that identifies the context to which the definition applies.

### Example registration

In SQL replication, the process of registering a DB2 table, view, or nickname as a replication source.

Do not use a use label in the following cases:

- If the context is obvious. For example, in a single-product glossary, starting definitions with a use label that identifies the product creates unnecessary wordiness.
- If the use label incorrectly implies that a definition is specific to a product or technology. In addition to introducing a technical error, such use labels prevent sharing of definitions for common concepts across multiple products or technology areas.
- Define the term by using a part of speech that matches the part of speech of the term. The following table provides wording for terms that belong to different parts of speech.

Part of speech of the term	Wording	Examples
Noun	Optionally, an article ( <i>a</i> , <i>an</i> , or <i>the</i> ) followed by a noun that identifies the category to which the term belongs	<p><b>array</b></p> <p>A structure that contains an ordered collection of elements of the same data type in which each element can be referenced by its index value or ordinal position in the collection. (The category is <i>structure</i>.)</p> <p><b>cardinality</b></p> <p>The number of rows in a database table or the number of elements in an array. (The category is <i>number</i>.)</p>
Verb	<i>To ...</i> (an infinitive)	<p><b>migrate</b></p> <p>To move data from one location to another.</p> <p><b>materialize</b></p> <p>To put rows from a view or nested table expression into a work file for additional processing by a query.</p>
Modifier (adjective or adverb)	Usually, <i>Pertaining to ...</i> ; other wording is possible	<p><b>trusted</b></p> <p>Pertaining to a federated wrapper that is defined to run in the database manager process.</p> <p><b>deprecated</b></p> <p>Pertaining to an entity, such as a programming element or feature, that is supported but no longer recommended and that might become obsolete.</p> <p><b>programmatically</b></p> <p>Pertaining to a task that is performed by using a function call and not by using the user interface.</p>

Follow these additional guidelines for glossary definitions:

- Limit the definition to the information that is essential for defining the concept and distinguishing it from other concepts. If you provide one or two additional sentences, provide only information that is helpful for understanding the concept. Do not include task or reference information in a glossary entry.

#### Examples (incorrect)

##### **input argument**

A value that is passed to a function at run time. The argument must be no more than 10 characters long.

**table**

In a relational database, a database object that consists of a specific number of columns and is used to store an unordered set of rows. To create a table, you can use the CREATE TABLE statement or a GUI. Before creating a table, ensure that you have sufficient authority.

**Examples (correct)****input argument**

A value that is passed to a function at run time.

**table**

In a relational database, a database object that consists of a specific number of columns and is used to store an unordered set of rows.

- Do not use the word *you* or *your*; glossary entries must not be user oriented. Use passive voice or refer to *the user* instead.

**Examples (incorrect)****monitor switch**

A parameter that you can use to control the type and quantity of information that is returned in performance snapshots.

**function directory**

A directory that is used to store the executable files and libraries that are associated with your external routines (procedures, functions, and methods).

**Examples (correct)****monitor switch**

A parameter that can be used to control the type and quantity of information that is returned in performance snapshots.

**function directory**

A directory that is used to store the executable files and libraries that are associated with users' external routines (procedures, functions, and methods).

- Do not embed the definition of one term within the definition or additional explanation of a different term; instead, create separate definitions.

**Example (incorrect)****nickname**

In a federated system, an identifier that is used in a distributed request to refer to a data source object. A data source object is an object at a remote data source on which operations can be performed. Examples of data source objects are tables, views, synonyms, table-structured files, and spreadsheets.

**Examples (correct)****nickname**

In a federated system, an identifier that is used in a distributed request to refer to a data source object.

**data source object**

In a federated system, an object at a remote data source on which operations can be performed. Examples of data source objects are tables, views, synonyms, table-structured files, and spreadsheets.

- Do not combine multiple definitions for the same term in a single paragraph. Instead, start each definition on a new line, and number each definition.

**Example (incorrect)****path**

In a network environment, the route between any two nodes. The route through a file system to a specific file.

**Example (correct)****path**

1. In a network environment, the route between any two nodes.
2. The route through a file system to a specific file.

- Ensure that the definition is not essentially a repetition of the term.

**Example (incorrect)****subscription-set member**

In SQL replication, a member of a subscription set.

**Example (correct)****subscription-set member**

In SQL replication, a definition that maps a registered replication source to a replication target. Each member defines the structure of the target table and the rows and columns that are replicated from the source table.

- Do not create a definition that contains the term or a form of the term that you are defining, which is a type of circular definition.

**Example (incorrect)**

**parallelism**

The ability to perform multiple database operations at the same time in parallel.

## Relationships between terms in a glossary

To show the relationships between terms, use *See* references and *See also* references.

Use *See* references in the following cases:

- To link synonyms, such as a deprecated term and a currently used term. Choose one term as the preferred synonym. For the nonpreferred term, provide a *See* reference to the preferred term; do not provide a definition. For the preferred term, provide a definition; do not provide a *See* reference to the nonpreferred term.

**Example**

**public synonym**

See public alias.

**public alias**

An alias that is defined in the SYSPUBLIC schema that can always be referenced by its unqualified name.

Do not include the word *synonym* in the entry for the nonpreferred term.

**Example (incorrect)**

**public synonym**

Synonym for public alias.

Do not create a *See* reference that results in a circular definition. You cannot use a term that has a *See* reference in the definition of the preferred term.

**Example (incorrect)**

**bag**

See data bag.

**data bag**

In the MQAI, a bag that you can use to handle properties of objects.

- To point users from the abbreviation for a term to the spelled-out term. For the abbreviation, provide a *See* reference to the spelled-out term; do not provide a definition. For the spelled-out term, provide a definition; do not provide a *See* reference to the abbreviation. Put the abbreviated term in parentheses after the spelled-out term.

**Example**

**DBCS**

See double-byte character set.

**double-byte character set (DBCS)**

A set of characters in which each character is represented by 2 bytes. These character sets are commonly used by national languages such as Japanese and Chinese that have more symbols than can be represented by a single byte.

Use *See also* references to link terms that are related but not synonyms. Specify *See also* references as follows:

- Place the *See also* reference after the definition of the term and any explanatory sentences.
- Ensure that the *See also* references are reciprocal: if term A has a *See also* reference to term B, term B must have a *See also* reference to term A.
- If there is a list of *See also* references, separate each *See also* reference with a comma, and end the list with a period. Do not use a conjunction before the final *See also* reference.

Examples of situations in which to use *See also* references are as follows:

- To link opposite terms

**Example**

**noncomplete CCD table**

A CCD table that is initially empty and has rows appended to it as changes are made to the replication source. See also complete CCD table.

**complete CCD table**

A CCD table that initially contains all the rows from the replication source table or view and any predicates from the source table or view. See also noncomplete CCD table.

- To link broader and narrower terms

**Example****request**

A directive to perform a discrete action within a database system. A request is acted upon by a database agent. See also application request, remote request, subagent request.

**application request**

A request that is issued directly by an external application, such as an OPEN or EXECUTE request. See also request.

**remote request**

A request that is issued from an agent at one database partition to an agent at a different database partition. See also request.

**subagent request**

A request that is issued by a coordinator agent to a subagent at the same or a different database partition. See also request.

Do not use a *See also* and a *See* reference in the same glossary entry. Include a *See also* reference only in the entry for the preferred term.

**Example (incorrect)****forward-only cursor**

See nonscrollable cursor. See also scrollable cursor.

**nonscrollable cursor**

A cursor that can be moved only in a forward direction. See also scrollable cursor.

**Example (correct)****forward-only cursor**

See nonscrollable cursor.

**nonscrollable cursor**

A cursor that can be moved only in a forward direction. See also scrollable cursor.



## Relationships between the glossary and other information

Exercise caution when referring to the glossary from other information:

- Do not index glossary terms.
- Do not link to other information from the glossary, other than to a standard computing dictionary or terminology website at the beginning of the glossary.
- Do not use an italic font for a term in the body of a document only because the term is defined in the glossary. Use an italic font for a term in the body of a document only if you explain the term in that location.

## Sort order in a glossary

Arrange the glossary entries in alphabetic order. Unless your authoring tool imposes a different standard, use the letter-by-letter method, rather than the word-by-word method. The differences between the methods are illustrated in the following lists:

Letter-by-letter alphabetization	Word-by-word alphabetization
database	data class
database client	data value
data class	database
datalink	database client
data value	datalink

# Indexes

An index is an alphabetical list that provides multiple entry points to information. In addition to being a primary retrievability aid in online information, books, and PDF files, a good index can improve search results within an information center. Nevertheless, because an index reflects an analysis of the relationships among topics, it is more discriminating than search; an index can help users locate a specific piece of information faster than a long list of search results can.

## Levels of index entries

An index entry can have up to three levels. The following example shows the notation that is used to refer to the levels:

reports	<i1>, also referred to as a <i>main entry</i>
printed	<i2>, also referred to as a <i>secondary entry</i>
output class	<i3>, also referred to as a <i>tertiary entry</i>

Locators lead users from index entries to the location of information. In information centers and other online forms of information, locators are links. In hardcopy information, locators are page numbers. In PDF files, which can be viewed online or printed, locators are both links and page numbers.

## Integration and reuse

In information centers, the index entries in each plug-in are combined to create an index for all of the topics in the information center. You display this index, which is referred to as a *master index*, by clicking the index tab. Because the index entries of individual authors are consolidated with those of other authors, the master index must be evaluated and edited as a whole to make all the

entries work together consistently and to address redundant or overlapping entries. When writers add new entries to an individual index, they should look at the master index to make sure that their new entries are consistent with the existing entries.

The same index entries might be reused in different forms of output: a technical publication, a single PDF file, and an information center for one or more components or products. In some situations, you might need to tailor your entries for different uses (for example by adding a product or environment identifier) to help users of an integrated solution understand what they can find in the topic.

## Size and sorting

For information center topics, include at least two index entries per topic. For longer task and concept topics, include up to eight index entries per topic. Long reference topics might require more entries.

For PDF books or printed information, include approximately one entry for every 100 words of text, or six entries for each 8.5-inch x 11-inch page of text. This standard results in approximately one double-column page of index entries for every 20 pages of body text, or one three-column page of index entries for every 30 pages of body text.

Most authoring tools sort index entries automatically. If you must sort index entries manually, see “Index sorting” on page 270.

## Index content

Create index entries for all significant content. The following list describes the types of content that should be indexed and types of content that do not require index entries.

### Concept topics

Index the user goals that are related to the information in a concept topic. Index the subjects, not just the topic title, and any information that is important to users and not explained more fully elsewhere.

#### Example

```
<i1>security
  <i2>benefits
  <i2>implementing
  <i2>vendor products
```

### Task topics

Index the goal that users accomplish by doing the task, and the objects or artifacts that are affected by, created by, or used to do the task.

### Examples

<i1>installation

    <i2>clients

    <i2>servers

<i1>migration

    <i2>applications

    <i2>clients

    <i2>servers

### Reference topics

Index as main entries all syntactic elements that users might look up. Label each element to specify its type, for example *command* or *function*. Index the parent element, such as a *command*, instead of its child element, such as a *command option*. Index both the name of an element and its category, for example, *commands*, *configuration parameters*, *functions*, or *monitor elements*.

#### Example

<i1>BACKUP DATABASE command

<i1>commands

    <i2>BACKUP DATABASE

### API reference topics

For generated API documentation (such as Javadoc information), in the container topic, index only the base package, not the individual interfaces, methods, classes, or functions. Think of how users can find the package if they do not know the name, such as by looking up a goal or the object that an API extends.

For authored API topics in general, index only the API name and the goal; index specific interfaces, methods, classes, or functions only by exception.

### Container topics

Index the high-level task, concept, reference element type, or tutorial that a container topic is focused on. For container topics that contain a small amount of significant content, create a main entry for the subject of the container topic and a secondary entry of *overview*. Thoroughly index the child topics that are linked to from the container topic.

#### Example

<i1>installation (*example of a container topic*)

    <i2>overview

## Scenarios, samples, examples, and tutorials

Index examples, samples, and scenarios by action and concept. Under the subject, use the information type (example, sample, or scenario) as a subentry. For tutorials, put index entries in the main topic with a subentry of *tutorial*. If useful stand-alone information exists in specific lessons, index that information under the task, concept, tool, or component.

### Example

```
<i1>reports
  <i2>creating
    <i3>scenario
```

## Legal and accessibility information

Index all keyboard shortcuts and other accessibility features under both the feature name and *accessibility*.

## Legal information

Index the notices under a main entry of *legal notices* with a subentry for the product. Do not index trademark notices.

## Files

Index file names under the file types, not the file extensions. For main entries for specific file names, use the complete file name followed by the word *file*. Index archive files under what they are used for.

### Examples (incorrect)

```
<i1>ini files
  <i2>db2.ini
<i1>db2.ini
```

### Examples (correct)

```
<i1>INI files
  <i2>db2.ini
<i1>db2.ini file
```

## Graphics and tables

Index the main subject that is being presented in a graphic or table only if that subject is unique to the topic. For example, concept topics that describe the architecture of a product often include a graphic depiction of that architecture. A separate index entry typically is not needed for the graphic because index entries that describe the overall subject of the topic apply to the graphic as well.

## User interface elements

Index UI elements, such as fields, panes, check boxes, buttons, and views only if they are something that you know users must look up. If your team creates documentation for wizards, index them under the tasks that the wizards help users perform. Index context-sensitive help topics when they are the primary documentation for a product. Do not index context-sensitive help for UI elements.

## Product overviews

Index only substantial and unique introductory content that is not explained more fully elsewhere.

## Product and component names

Generally, do not create main entries for product names. In rare cases where you do need to create main entries for product names, such as when an optional, separately orderable product is mentioned, include only a few important subentries. Index a component under its name and also under the functionality it provides or the user goal that is associated with the component.

### Examples

<i1>Data Archive Expert (*product name*)

<i2>new features

<i2>overview

<i1>data (*functionality provided by the component*)

<i2>recovering

<i1>RECOV utility (*component name*)

## Glossary terms

Do not create index entries for the glossary. Index a term in a topic only when that topic provides substantial information about the term.

## Index structure

When structuring index entries, consider such things as the number of levels, position and number of locators, number of subentries, opportunities for cross-posting, and the use of *See* references.

## Levels

- Create up to three levels in an index by using main entries (i1s) and subentries (i2s and i3s). Use i2s to help readers distinguish between topics that share an i1, and use i3s to help readers distinguish between topics that share an i2.

**Example**

```
<i1>clients
  <i2>administering
  <i2>installing
    <i3>AIX
    <i3>UNIX
    <i3>Windows
```

- Do not use i4s or lower-level entries. Instead, add differentiating information in parentheses at the ends of the i3s, or restructure your entries.

**Example (incorrect)**

```
<i1>servers
  <i2>installing
    <i3>Linux
      <i4>32-bit
      <i4>64-bit
```

**Example (correct)**

```
<i1>servers
  <i2>installing
    <i3>Linux (32-bit)
    <i3>Linux (64-bit)
```

- Do not use commas unless they are part of a product name. Instead of using a comma to separate terms in an entry, create an entry and a lower-level entry, and consider cross-posting.

**Example (incorrect)**

```
<i1>databases, creating
```

**Example (correct)**

```
<i1>databases
  <i2>creating
```

## Locators

- In hardcopy books and periodicals, the locators that lead users from index entries to the information are page numbers. You can use page ranges (such as 22–25) if the text that is relevant to the indexed term covers more than one page. However, if text that is relevant to the term is scattered rather than continuous, index each reference separately.
- In online information, the locators that lead users from index entries to the information are links. If two or more topics share the same HTML or XML index entry, the title of each topic automatically acts as a subentry to help users decide which topic to look at first.
- Ensure that only the lowest level of an entry has a locator. If an entry has both an i1 and an i2, only the i2 can have a locator; if an entry has an i1, i2, and i3, only the i3 can have a locator. If you are writing documentation that will be combined with documentation from other writers, consider the entries that the other writers are using or might use. Unless you are sure that no one else has used or will use a particular i1, create an i2 for that i1. Similarly, unless you are sure that no one else has used or will use a particular i2, create an i3 for that i2.

In the following examples, the locators are page numbers.

### Example (incorrect)

```
<i1>clients 27, 66
  <i2>installing 55
    <i3>Windows 46
  <i2>troubleshooting 55
```

### Example (correct)

```
<i1>clients
  <i2>administering 66
  <i2>installing
    <i3>UNIX 45
    <i3>Windows 46
  <i2>overview 27
  <i2>troubleshooting 55
```

- Have no more than three locators at the lowest level for any entry. Instead of adding more locators, provide more specific entries.

### Example (incorrect)

```
<i1>troubleshooting
  <i2>installation 33, 45, 68, 89, 100
```



**Example (correct)**

```
<i1>troubleshooting
  <i2>installation
    <i3>clients 33, 45, 68
    <i3>servers 89, 100
```

**Number of subentries**

- Before placing more than one i2 from a topic under an i1, try to use a more generic i2. Similarly, before placing more than one i3 from a topic under an i2, try to use a more generic i3. Consider using more detailed entries as i1s.
- Instead of providing a long list of i2s from different topics under one i1, consider creating more general i2s and adding i3s under those i2s.

**Example (incorrect)**

```
<i1>application servers
  <i2>configuring
  <i2>connections
  <i2>installing
  <i2>LDAP
  <i2>plug-ins
  <i2>security
  <i2>system requirements
  <i2>UNIX
  <i2>Windows
```

**Example (correct)**

```
<i1>application servers
  <i2>configuring
  <i2>connections
    <i3>LDAP
    <i3>plug-ins
  <i2>installing
  <i2>security
  <i2>system requirements
    <i3>UNIX
    <i3>Windows
```

- Create an i1 for a noun phrase only if it is often used by your readers or is defined in the glossary (for example, *XML schemas* or *log streams*). Otherwise, break the noun phrase into a more general i1 with an i2. If you think users might look for the multiword term under the general i1, use a *See* reference under that i1.

#### **Examples (incorrect)**

```
<i1>monitor
  <i2>elements

<i1>database creation
```

#### **Examples (correct)**

```
<i1>monitor elements

<i1>databases
  <i2>creating
```

- In general, avoid having a single i3 under an i2 in the finished index. In this case, the i3 does not help the user to distinguish between topics; the i2 provides enough information, and the i3 forces the user to read an additional entry. However, optimizing your index entries for information centers can result in single i3 entries when you use the same index entries in a book, which is acceptable.
- Avoid having more than two subentries for the same topic under a particular higher-level entry.

## **Cross-posting**

- When appropriate, create multiple entries for a specific piece of information because users use different lookup strategies. Consider using the following approaches:
  - Invert the entries. Use the subject of an i1 as the subject of an i2, and use the subject of an i2 as the subject of an i1. Use a corresponding approach for i2s and i3s. For example, for a task topic, create an i1 for the action that is being performed and an i2 for the object that is affected by the action. In addition, create an i1 for the object and an i2 for the action.

#### **Examples**

```
<i1>servers
  <i2>installing

<i1>installation
  <i2>servers
```

- If an entry is a multiword term, consider creating additional entries in which nouns are i1s and adjectives are i2s (or i2s are nouns and i3s are adjectives) if doing so would not create an unnatural break.

#### Example

<i1>embedded SQL statements

<i1>SQL

<i2>statements

<i3>embedded

<i1>statements

<i2>embedded SQL

- Index common, standard synonyms that a reader might use to look up information. Consider using a *See* reference to point from nonpreferred term to a preferred synonym.
- Create multiple entries for a specific piece of information even when those entries are close together in the English index. Because of differences in word order and parts of speech, in other languages the terms might not be near each other.

## See and See *also* references

- Use a *See* reference to point from a nonpreferred term to a preferred synonym. Examples of nonpreferred terms are as follows:
  - Obsolete names or terms
  - Jargon
  - Terms used by competitors' products
  - Industry synonyms
  - Spelled-out forms of uncommon abbreviations

*See* references can help users learn the terminology of a product. They can also simplify the process of indexing by reducing the number of terms that you must index in detail. In an online index, clicking the *See* reference takes the user to the preferred synonym.

#### Examples

<i1>floppy disk (*example of an obsolete term*)

<i2>*See* CD-ROM

<i1>dynacache (*example of jargon*)

<i2>*See* dynamic cache

```

<i1>data dictionary (example of a competitor's term)
  <i2>See system catalog (example of the equivalent IBM term)

<i1>robots (example of an industry term)
  <i2>See crawlers (example of the equivalent IBM term)

<i1>External Call Interface (example of a spelled-out uncommon abbreviation)
  <i2>See ECI

```

- Provide subentries only under the entry for the preferred term of a *See* reference pair.

#### **Example (incorrect)**

```

<i1>data dictionary
  <i2>See system catalog
  <i2>troubleshooting

<i1>system catalog
  <i2>troubleshooting

```

#### **Example (correct)**

```

<i1>data dictionary
  <i2>See system catalog

<i1>system catalog
  <i2>troubleshooting

```

- Do not use *See also* references in product information that might be combined with other product information, such as information center content, because different writers might create them inconsistently. Instead, use related links within topics to direct users to content that otherwise might have been addressed by *See also* entries. *See also* entries are permitted in stand-alone information, such as books or technical articles.

## **Other considerations**

- Use *i1s* to refer to general categories of syntactic elements that users might look for, such as functions, commands, or configuration parameters. To reduce index bulk when

you have a large number of the same type of syntactic element, instead of creating an i2 for each syntactic element, consider creating an i2 of *list* in a container topic that has links to child topics about each element.

#### **Example**

```
<i1>configuration parameters
  <i2>agentpri
  <i2>alt_collate
  <i2>appl_memory
  <i2>...

<i1>registry variables
  <i2>list
```

- Do not repeat the wording of an i1 entry in an i2 entry or the wording of an i2 entry in an i3 entry.

#### **Example (incorrect)**

```
<i1>commands
  <i2>UNLOAD command
```

#### **Example (correct)**

```
<i1>commands
  <i2>UNLOAD
```

## **Index entries**

When you create index entries, consider capitalization and grammar rules, rules for indexing abbreviations, and rules that address terminology issues.

- For main entries (i1s), use nouns or noun phrases, even for processes or actions. For example, use *installation*, not *installing*; use *migration*, not *migrating*; and use *search function*, not *searching*. If no logical noun exists, use a specific and meaningful gerund, such as *troubleshooting*, *loading*, *coding*, or *revoking*. Do not use adjectives as main entries.
- Always use the plural form of a noun unless the subject is normally singular. For example, use *databases*, not *database*; use *security*, not *securities*; and use *Control Center*, not *Control Centers*.

- Make subentries (i2s and i3s) as specific and concise as possible. You can use nouns, gerunds, or adjectives. Use gerunds to indicate actions. Avoid overly common or non-specific gerunds, such as *using*, *working with*, *specifying*, and *learning about*.
- Because writers often use different gerunds to mean the same thing, consider maintaining two lists of recommended gerunds to increase consistency across your library: a list of gerunds that can be used as i1s, and a list of gerunds that can be used as i2s and i3s. For example, different writers who work on the same library might use the synonyms *creating*, *adding*, *developing*, and *building* interchangeably. By identifying which gerunds are preferred, you can avoid inconsistency in the index.

If you use multiple gerunds synonymously, consider picking only one as the primary gerund, and use *See* references to point from the synonyms to the primary gerund.

- Do not use an adjective as the only word in an i1 where a noun is an i2.

**Example (incorrect)**

```
<i1>remote
  <i2>connections
  <i2>desktop
```

**Example (correct)**

```
<i1>connections
  <i2>remote

<i1>desktop
  <i2>remote

<i1>remote connections
<i1>remote desktop
```

- Place key words first.

**Example (incorrect)**

```
<i1>enterprise beans
  <i2>options for migrating
```

**Example (correct)**

```
<i1>enterprise beans
  <i2>migration options
```

- Capitalize proper nouns only, such as product names, trademarks, operating system names, and some user interface element names. Match the capitalization of the names of syntactic elements, such as API elements or command names (for example *getCode method* or *runDatabase command*).
- Do not use prepositions at the beginning of any entry because of their effect on alphabetization. In rare instances, you can use a preposition after the beginning of a subentry to clarify it. Avoid articles altogether, and remove any other extraneous words. Create subentries that are only as long as needed for clarity.

#### Examples (incorrect)

```
<i1>code generation
  <i2>from database schema-based
  <i2>from UML model-based

<i1>rows
  <i2>displaying the contents of
  <i2>setting the format
```

#### Examples (correct)

```
<i1>code generation
  <i2>database schema-based
  <i2>UML model-based

<i1>rows
  <i2>displaying
  <i2>format
```

- Break entries that contain *and* in two so that both entries can be found alphabetically. For example, do not create an entry for *administering and configuring*. Create one entry for *administering* and another entry for *configuring*.
- For standard or common industry abbreviations that are significantly better known than the spelled-out forms and are unambiguous, index only the abbreviations. Examples are *AIX*, *CORBA*, *HTML*, *SQL*, *PDF*, *XML*, *TCP/IP*, and *UNIX*.  
For other abbreviations, index only the abbreviation as an *i1* and use a *See* reference to point from the spelled-out form to the abbreviation. This approach supports search and ease of maintenance.

**Example**

<i1>UNIX (*common abbreviation*)

<i1>ECI

<i2>security

<i1>External Call Interface

<i2>*See* ECI

- Use forward slashes only for well-established terms, such as *I/O* and *read/write*.
- When an index entry begins with a symbol, index it both with and without the symbol.

**Example**

<i1>\$RAHBUFNAME environment variable

<i1>RAHBUFNAME environment variable

- Do not use bold or italic font for index terms.

**Prohibited words**

Avoid using the following words in index entries. Note that this list is not definitive. When you create an index entry, always use the most precise term that is available.

- *about* (never index “About this book”)
- *appendix* (index the contents of the appendix)
- *caveats* (too general)
- *concepts* (avoid the word; instead, create index entries for concepts)
- *considerations* (too general)
- *definition* (use *details* or *overview*)
- *glossary* (but index terms that are in the glossary where they are defined or discussed in topics)
- *introduction* (use *overview* as a subentry only)
- *supertask* (use *overview*)
- *using* (too general)
- *working with* (too general)



## Index sorting

Most authoring tools sort index entries automatically according to a predefined setting. However, the use of certain documentation formats might require you to manually sort index entries.

If you must manually sort an index, follow these guidelines. Note that the alphabetization method for sorting index entries differs from the method for sorting glossary entries.

- Arrange entries in the following order:
  1. Punctuation marks and special characters, sorted in ASCII sequence:  
(space or null) ! 0 # \$ % & ' ( ) \* + , - . / : ; < = > ? @ [ \ ] ^ \_ ` } | { ~ ¢ > ≤ ÷ °
  2. Numeric entries, sorted in ascending order
  3. Alphabetic entries, sorted by word

### Example

\* wildcard character  
, separator character

4190 format  
5190 format

AIX systems  
binary records

- Alphabetize entries word by word; that is, treat words that are separated by spaces or commas as two words, and stop alphabetizing at the end of a word. If the first word of two or more entries is the same, the first letter of the second word determines the alphabetical order. If the first two words of two or more entries are the same, the first letter of the third word determines the alphabetical order, and so on.

### Example

FOR statement  
form of input  
format  
    disk records  
    tape records  
FORMAT statement  
forms control

Treat words that are joined by a hyphen or a forward slash as though they are two words that are separated by a space.

**Example**

read  
re-sort  
time-saver  
time-saver routine  
time sharing routine  
timecard  
timer

- Arrange abbreviations in alphabetical order as they are written, not as they are spelled out.

**Example**

task control block (TCB)  
tax routine  
TCB (task control block)  
terminal information block (TIB)  
test switches  
TIB (terminal information block)

- Arrange Roman numerals in numeric order, not alphabetical order.

**Example**

phase-switching routine  
Phase VIII  
Phase IX  
Phase X

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# Appendixes

- A. Exceptions for marketing content
- B. DITA tags for highlighting
- C. Word usage

# Appendix A. Exceptions for marketing content

As much as possible, all publications from a company should follow the same style guidelines. However, because the audience and expected tone can vary for different types of information, some style exceptions can be appropriate.

The following table lists how marketing writing at IBM can vary from more technical writing.

Style guideline	Exception for marketing content
<b>Anthropomorphism</b> <b>Enable</b> As much as possible, focus technical information on users and the actions that they perform, not on a product and the actions that it performs.	The term <i>enable</i> is permitted in marketing content that focuses on a solution or product, and that emphasizes what the solution or product does.  <b>Example</b> A robust S&OP model enables stakeholder groups to jointly address operational issues that affect corporate goals.
<b>Commas</b> <b>Commas between items in a series</b> Use commas to separate items in a series of three or more. Use a comma before the conjunction that precedes the final item.	Do not include a comma before a conjunction that precedes the final item unless the comma is needed for clarity.  <b>Example</b> Industry professionals met to discuss how IBM solutions help oil, gas and chemical companies turn vision into reality.  <b>Example (needed for clarity)</b> Consult the website for client briefing assistance, speaker support, deal strategy sessions, and demonstrations.
<b>Contractions</b> Do not use contractions in technical information. Contractions can cause difficulty for translation and for users whose primary language is not English. For example, <i>it's</i> can be interpreted as <i>it is</i> or <i>it has</i> . Contractions can also contribute to an overly informal tone.	Contractions are permitted in marketing content that targets English-language geographies and that will not be translated.  <b>Example</b> Many companies can't reduce their carbon footprint with their current infrastructure.
<b>Dashes</b> <b>Em dashes</b> Do not use em dashes in technical information. More common punctuation marks, such as commas, parentheses, or a colon, provide the same result. Rewrite the text or use different punctuation.	The em dash is permitted in the less formal style of marketing content.  <b>Example</b> Security, reliability, scalability, and availability—these are the highest priorities for an enterprise system.
<b>Dates</b> Always spell out the names of centuries.	Numerals are permitted for the names of centuries.  <b>Examples</b> Identity management in the 21st century: Balancing safety, security and liberty in a global environment 21st century students deserve a 21st century education.

Style guideline	Exception for marketing content
<p><b>Ellipses</b></p> <p>Avoid using ellipses in technical information because the omission can be unclear and because ellipses can contribute to an overly informal tone.</p>	<p>An ellipsis that indicates a pause is permitted in marketing content that targets English-language geographies and that will not be translated.</p> <p><b>Example</b></p> <p>Attend this IBM event at no cost ... and learn how to streamline your infrastructure.</p>
<p><b>Headings</b></p> <p>Use question-style headings, such as “How do I subscribe to updates?” only in troubleshooting topics and frequently asked questions (FAQs). Do not use question-style headings in concept, task, and reference topics.</p>	<p>Questions are allowed as headings in marketing documents where appropriate for the flow of the content.</p> <p><b>Examples</b></p> <p>How Secure is Your Data?</p> <p>Cloud Security: Who Do You Trust?</p> <p>Are You Ready for Cloud Computing?</p>
<p><b>Percentages</b></p> <p>Use numerals for numbers that represent percentages. With a numeral, use the percent sign (%), rather than the word <i>percent</i>. If the number is at the beginning of a sentence, spell out both the number and the word <i>percent</i>.</p>	<p>Use the word <i>percent</i> unless space is limited.</p> <p><b>Example</b></p> <p>Schools and colleges spend more than 40 percent of their technology budgets on personal computers.</p>
<p><b>That in clauses</b></p> <p>The use of the conjunction <i>that</i>, while technically optional in some sentences, is never wrong and makes a sentence easier to translate and clearer for users whose primary language is not English. Include <i>that</i> wherever appropriate, or rewrite the sentence.</p>	<p>Do not include the conjunction <i>that</i> unless it is needed for clarity. When in doubt, include the word <i>that</i>. Omit the word <i>that</i> when a dependent clause immediately follows a form of the verb <i>to say</i>.</p> <p><b>Examples</b></p> <p>Sixty percent of consumers are concerned about the safety of the food they purchase. Studies show that sales are increasing. The Vice President of Operations said the IBM System z mainframe helps the company maintain its position as an industry leader.</p>
<p><b>Web addresses, protocols, and IP addresses</b></p>	<p>When you refer to a web address on the ibm.com domain, it should read <b>ibm.com/xyz</b>, where <i>xyz</i> is a type of vanity directory.</p>

## Appendix B. DITA tags for highlighting

Use the following DITA tags to produce output that matches the highlighting guidelines.

Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM style highlighting (2)
<b>Acronyms and initialisms</b>		Do not tag.	IBM		
<b>API class or method name</b>	Name of an API such as a Java class or method name and their data structures.	<apiname> (5)	Use the setName method of the Widget class.  Free the memory allocated by the db2AutoConfig API.	Use the <apiname>setName</apiname> method of the <apiname>Widget</apiname> class.  Free the memory allocated by the <apiname>db2AutoConfig</apiname> API.	None
<b>API structure parameter</b>	The name and value of an API structure parameter. (8)	Same tagging as for <b>Environment variable</b>			
<b>Bold highlighting</b>	<b>Do not use</b> , unless no alternative. Use appropriate semantic tag instead.	<b> (3)			Bold (default browser setting)
<b>Boolean expression</b>	One of two opposite values.	<boolean>	She said "boolean: yes" when I asked her to marry me!	She said "<boolean state="yes"/>" when I asked her to marry me!	Green
<b>Character or letter</b>		<i> (7)	... must start with the letter <i>H</i> ...	... must start with the letter <i>H</i> ...	Italic

Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM style highlighting (2)
<b>Citation</b>	Bibliographic reference that refers to the title of a book, article, white paper, diskette, CD, or readme file. Note: the titles of information centers are not highlighted.	<cite>	The <i>Making Widgets</i> manual states that ...	The <cite>Making Widgets</cite> manual states that ...	Italic (default browser setting)
<b>Code phrase</b>	Snippet of code within the main flow of text. Use also for Java properties.	<codeph>	... use a while loop to ...	... use a <codeph>while</codeph> loop to ...	Monospace
<b>Code block</b>	Same context as for <codeph>, but for a block element, rather than inline. Use also for lists of Java properties.	<codeblock>	... catching exceptions: <pre>catch (Exception e) {     log("Failed!" + e); }</pre>	... catching exceptions: <pre>&lt;codeblock&gt; catch (Exception e) {     log("Failed!" + e); } &lt;/codeblock&gt;</pre>	Monospace with gray background line breaks are preserved
<b>Column headings</b>	References to column headings in standard text.	Do not tag.	The Compiler column lists ...		
<b>Command names</b>	Name of a command (or macro or utility that you can type as a command) when it is part of a discussion; not when part of user input.	<cmdname> (5)	Use the <b>ping</b> command to test ... The <b>db2trc</b> utility ... The <b>ATTACH</b> macro ...	Use the <cmdname>ping</cmdname> <cmdname>ping command to test ... The<cmdname>db2trc</cmdname> utility ... The <cmdname>ATTACH</cmdname> macro ...	Bold monospace




Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM style highlighting (2)
<b>Component or feature name</b>	Distinct components or units within a product.	Do not tag.	Configuration Manager Broker User Name Server Workbench		
<b>Configuration parameters and their options</b>		<parmname> (5) <option>	... set the <b>catalog_noauth</b> configuration parameter to 1 ...	... set the <parmname> catalog_noauth </parmname> to <option>1</option> ...	Bold monospace monospace
<b>Data type</b>		Do not tag.	... can have a CLOB or LONG VARCHAR data type.	... can have a CLOB or LONG VARCHAR data type.	
<b>Database table name</b>		Do not tag.			
<b>Definition in text</b>	A new word or phrase that you introduce with its definition.	<term> (the definition is not tagged) Tagged words are normally included in the glossary.	A line is called a <i>point-to-point</i> line if it ...	A line is called a <term> point-to-point</term> line if it ...	Italic
<b>Directory name</b>	See <b>File name</b> .				

Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM style highlighting (2)
<b>Draft comment</b>	Allows simple review and discussion of topic contents. Can include author, time, and disposition attributes. Note: Ensure draft comments are switched off before publishing.	<draft-comment> The <b>disposition</b> attribute can have values: issue open accepted rejected deferred duplicate reopened unassigned completed		<draft-comment author="PMH" disposition="unassigned " time="1st April">A comment ... </draft-comment>	Green background
<b>Email address</b>		You might want to make this an active link, but do not tag specifically for highlighting.	Send an email to: askibm@vnet.ibm.com	Send an email to: <xref href= "mailto: askibm@vnet.ibm.com" format="other" scope="external"> askibm@vnet.ibm.com </xref>	
<b>Emphasized text</b>	<b>Do not use</b> <i> except <i>rarely</i> for a word or phrase that you want to highlight only for emphasis. Do <i>not</i> use to force italic where you should use a semantic tag.	<i> (3)	This is a contrived example where using <i> <i>might</i> be acceptable ...  Use the word <i>that</i> to introduce a restrictive clause.	This is a contrived example where using &lt;i> <i>might</i> be acceptable ...  Use the word <i>that </i> to introduce a restrictive clause.	Italic
<b>Entered data</b>	See User input.				

Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM style highlighting (2)
<b>Environment variable</b>	The name and value of an environment variable. (8)	Name: <parmname> (5) Value: <option>	... set the <b>ProgramFiles</b> environment variable to true if ...	... set the <parmname>ProgramFiles</parmname> environment variable to <option>true</option> if ...	Parmname: bold monospace option: monospace
<b>Example text</b>	See <b>Code phrase</b> and <b>Code block</b> .				
<b>File name / File extension / File path / Directory name</b>	Name or location or full path of a referenced file. (But not for <b>Internet addresses</b> .)	<filepath> (5)	To view the trace output, open the <code>tracelog.txt</code> file.  Copy all .exe files to the bin directory.  The default installation directory is C:\Program Files\	To view the trace output, open the <filepath>tracelog.txt</filepath> file.  Copy all <filepath>.exe</filepath> files to the <filepath>bin</filepath> directory.  The default installation directory is <filepath>C:\Program Files\</filepath>	Monospace
<b>Footnote</b>	Use sparingly. In online information, alternative methods are preferred. See "Footnotes" on page 143.	<fn>	Use a widget <sup>1</sup> to ... --- <sup>1</sup> A widget is ...	Use a widget <fn>A widget is ... </fn> to ...	
<b>FTP address</b>	See <b>Internet address</b> .				
<b>Macro name</b>		Do not tag. (5)	The BUILD macro ...		

Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM Style highlighting (2)
Glossary term	See <b>List - definition</b> .	Note: a more complete set of descriptive tags for glossary terms is available in the DITA glossary specialization. However, using a definition list (<dl>) is an accepted way of creating a glossary.			If using a definition list, the <dt> element is rendered bold.
Graphic	See <b>Image</b> .				
GUI control	See <b>User interface control</b> .				
Hardware label or button name		Do not tag.	The serial connector is labeled COM1. Press the Power button.		

Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM Style highlighting (2)
Image	Artwork, screen shots, and so on.	<p>&lt;image&gt; &lt;alt&gt; The <b>placement</b> attribute can have the values:     inline   break If <b>placement</b>= "break", the <b>align</b> attribute can have the following values:     left   right   center</p> <p>Use &lt;image&gt; alone for inline graphics (such as icons). To include a title (and automatically generated Fig. number) wrap in &lt;fig&gt; tag. &lt;fig&gt;     &lt;title&gt; [note automatic addition of period]     &lt;desc&gt;     &lt;image&gt;     &lt;alt&gt;</p>	<p>Figure 1. Steam. This image shows a steam engine and train.</p> 	<pre>&lt;fig&gt; &lt;title&gt;Steam&lt;/title&gt; &lt;desc&gt;This image shows a steam engine and train.&lt;/desc&gt; &lt;image href="steam.gif" longdescref="steamdesc.dita" placement="break" align="center"&gt; &lt;alt&gt;Steam engine and train.&lt;/alt&gt; &lt;/image&gt; &lt;/fig&gt;</pre>	<p>.figcap,.figdesc: italic</p>

Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM Style highlighting (2)
<b>Image map</b>	Provides the basic functionality of HTML client-side image map markup. See DITA documentation for details of usage.	<code>&lt;imagemap&gt;</code> <code>&lt;image&gt;</code> <code>&lt;area&gt;</code> <code>&lt;shape&gt;</code> <code>&lt;coords&gt;</code> <code>&lt;xref&gt;</code>			
<b>Italic highlighting</b>	See <b>Emphasized text</b> .				
<b>Internet address (web, FTP, IP, and so on)</b>	Web address, FTP address, and so on. Do not refer to these as URLs. Refer to ‘four numbers separated by dots’ as an IP address.	You might want to make this an active link, but do not tag specifically for highlighting. Use case-sensitive capitalization. (5) If the protocol is HTTP, you can omit <i>http://</i> . Include other protocols. Be consistent if there is a mixture.	http://www.ibm.com/software  http://127.0.0.1:8080	<code>&lt;xref href="http://www.ibm.com/software" format="html" scope="external"&gt;</code> http://www.ibm.com/software <code>&lt;/xref&gt;</code>	
<b>Java properties</b>	See <b>Code phrase</b> and <b>Code block</b> .				
<b>Keyboard key</b>		Do not tag.			
<b>Key value pair</b>	See <b>Code phrase</b> and <b>Code block</b> .				



Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM Style highlighting (2)
<b>Keyword in text</b>	Names of keywords in text.	Same tagging as for <b>Parameter name</b> . <b>Do not use</b> the <keyword> tag for semantic tagging, only for <b>reusable text</b> . (4)	The <b>INSTALL_TYPE</b> keyword specifies the type of installation.	The <parmname>INSTALL_TYPE </parmname> keyword specifies the type of installation.	Bold monospace
<b>List - definition</b>	See <b>Glossary term</b> for one use of a definition list.	<dl> <dlhead> <dthd> <ddhd> <dlentry> <dt> <dd>	<b>Term header</b> <b>Definition header</b> <b>A term</b> A definition <b>Another term</b> Another definition	<dl> <dlhead> <dthd>Term header</dthd> <ddhd>Definition header</ddhd> </dlhead> <dlentry> <dt>A term</dt> <dd>A definition</dd> </dlentry> </dl>	dthd, ddhd, dt: bold
<b>List - ordered</b>	Use where sequence of items is important.	<ol> <li>	1. First item 2. Second item	<ol> <li>First item</li> <li>Second item</li> </ol>	
<b>List - parameter</b>	Similar to a <b>definition list</b> , but specifically for terms and definitions that describe the parameters for a command or an API.	<parml> <plentry> <pt> <pd>			pt: bold

Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM Style highlighting (2)
<b>List - simple</b>	Simple list of short, phrase-like content.	<sl> <sli>	One item Another item	<sl> <sli>One item</sli> <sli>Another item</sli> </sl>	No list style
<b>List - unordered</b>	Use where order of items is not significant.	<ul> <li>	<ul style="list-style-type: none"> <li>• One item</li> <li>• Another item</li> </ul>	<ul> <li>One item</li> <li>Another item</li> </ul>	
<b>Log name</b>		Do not tag. (5)	The history log ...		
<b>Long quotation</b>	Long quote: same context as for <q>, but for a block element, rather than inline. See also <b>Quotation</b> .	<lq>	The manual states: There are two ways to make widgets, either using thingumajigs, or using whatchamacallits ...	The manual states: <lq>There are two ways to make widgets, either using thingumajigs, or using whatchamacallits ... </lq>	Indented block line breaks are preserved



Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM style highlighting (2)
<b>Menu cascade</b>	Series of menu choices. Note: Do not include spaces in <uicontrol> tags, other than between words. See also <b>User interface control</b> .	<menucascade> <uicontrol> <shortcut> (use of <shortcut> varies by product)	<b>Start &gt; Programs Accessories</b>	<menucascade> <uicontrol>Start</uicontrol> <uicontrol><shortcut>P </shortcut>rograms </uicontrol> ... </menucascade>	Bold shortcut: underline
<b>Message block</b>	A multi-line message. Same context as for <msgph>, but for a block element, rather than inline. See also <b>Message phrase</b> .	<msgblock> Note: a more complete set of descriptive tags for a message is available in the DITA message specialization.	The message says: Deploys data to the <i>brokerName</i> broker. Syntax: mqsideploy [-b <i>brokerName</i> ...	The message says:<msgblock> Deploys data to the <varname> brokerName</varname> broker. Syntax: mqsideploy [<parmname>-b</parmname> <varname>brokerName </varname> ... </msgblock>	Monospace with gray background line breaks are preserved
<b>Message number</b>		<msgnum>	See message: bip1234	See message: <msgnum>bip1234 </msgnum>	Monospace
<b>Message phrase</b>	The text of a message produced by an application.	<msgph>	... you see the message User ID is not authorized ...	... you see the message <msgph>User ID is not authorized ... </msgph>	Monospace
<b>Monospace highlighting</b>	<b>Do not use</b> unless no alternative. Use appropriate semantic tag instead.	<tt> (3)			Monospace

Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM style highlighting (2)
<b>New term</b>	A new term in the sentence in which it is first defined. See <b>Definition in text</b> .				
<b>Note</b>	Information, differentiated from the main text. Use notes sparingly.	<code>&lt;note type="note"&gt;</code> (6) <b>type</b> attribute can have following values: note attention caution danger fastpath important other remember restriction tip See Notes and notices for more information, especially about the use of "caution" and "danger" notes.	<b>Note:</b> This is a note ...  <b>My title:</b> My little note ...	<code>&lt;note type="note"&gt;</code> This is a note ... <code>&lt;/note&gt;</code>  <code>&lt;note type="other" othertype="My title"&gt;</code> My little note ... <code>&lt;/note&gt;</code>	notitle: bold caution: bold danger: bold, border
<b>Object name</b>	Objects created or used in the product, including database tables, for example.	Do not tag. (5)	... to add a table object to your utility procedure ...	... to add a table object to your utility procedure ...	

Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM style highlighting (2)
<b>Option value</b>	Values for arguments or command options, including values of: API structure parameters Command parameters and arguments Configuration parameters Environment variables Keywords Registry variables	<code>&lt;option&gt;</code> (5) add <code>importance="default"</code> attribute to indicate a default value	When the <b>debug</b> parameter is set to <code>true</code> ...  Parameter values: <code>yes   no   maybe</code>	When the <code>&lt;parmname&gt;debug&lt;/parmname&gt;</code> parameter is set to <code>&lt;option&gt;true&lt;/option&gt;</code> ...  Parameter values: <code>&lt;option importance="default"&gt;yes&lt;/option&gt; &lt;option&gt;no&lt;/option&gt; &lt;option&gt;maybe&lt;/option&gt;</code>	Monospace default values: underlined
<b>Parameter name</b>	Name of a parameter referred to in text.	<code>&lt;parmname&gt;</code> (5)	Use the <b>date</b> parameter ...	Use the <code>&lt;parmname&gt;date&lt;/parmname&gt;</code> parameter	Bold monospace
<b>Platform icon</b>	Insert an icon at start of a platform-specific block.	<b>platform</b> attribute	 Enter the command ...  <ul style="list-style-type: none"> <li>  Enter the command ... </li> </ul>	<code>&lt;p platform="aix"&gt;Enter the command ... &lt;/p&gt;</code> <code>&lt;li platform="aix"&gt;Enter the command ... &lt;/li&gt;</code> [Set ditaval file to flag such occurrences and insert graphic]	
<b>Preserved line breaks</b>	<b>Do not use</b> unless no alternative. Normally, let text flow on a page.	<code>&lt;lines&gt;</code>			

Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM style highlighting (2)
<b>Preserved line breaks and spaces</b>	<b>Do not use</b> unless no alternative. Use appropriate semantic tag instead, such as <code>&lt;screen&gt;</code> or <code>&lt;codeblock&gt;</code> .	<code>&lt;pre&gt;</code> (3)			Monospace with gray background line breaks are preserved
<b>Program name</b>		Do not tag. (5)	Use the StartConfig program to ...		
<b>Quotation</b>	Inline quotation of information from another source. See also <b>Long quotation</b> .	<code>&lt;q&gt;</code> (quotation marks added by DITA transform)	The manual states: there are two ways to make widgets.	The manual states: <code>&lt;q&gt;</code> there are two ways to make widgets. <code>&lt;/q&gt;</code>	
<b>Registry variable</b>	The name and value of a registry variable. (8)	Same tagging as for <b>Environment variable</b>			



Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM style highlighting (2)
<b>Reusable text</b>	Use the <keyword> element only as a placeholder for reusable text as this tag can appear in nearly every other element. <b>Do not use</b> for semantic tagging. (4)	<keyword conref="...">			
	You can also use <keyword> within the prolog to identify key words or phrases that you want search engines to find.	<prolog> <metadata> <keywords> <keyword>	"SCA module","mediation" ...	<prolog> <metadata> <keywords> <keyword>SCA module </keyword> <keyword>mediation </keyword> </keywords> </metadata> </prolog>	
<b>Screen</b>	Same context as for System output but for a block element, rather than inline.	<screen>			Monospace with gray background and border line breaks are preserved
<b>Script name</b>		Same tagging as for <b>Command name</b>			
<b>SQL and ESQL statements, functions, views</b>		Do not tag. Usually all uppercase except in case-sensitive environments	... the SELECT statement The BIGINT function returns a 64-bit ... The KEY_CLIENTINFO view ...		

Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM style highlighting (2)
<b>State</b>	Name/value pair: a named state that has a variable value. Primarily intended for use in specializations to represent specific states (like logic circuit states, chemical reaction states, airplane instrumentation states, and so forth).	<state>	Verify the presence of an "on" or high condition at the input gate (that is, state: inflag=high)	Verify the presence of an "on" or high condition at the input gate (that is, <state name="inflag" value="high"/>)	Red
<b>Subscript</b>		<sub>			Subscript
<b>Superscript</b>		<sup>			Superscript
<b>Syntax fragment</b>	The <synph> element is used to contain syntax definition elements within the text flow.  See also <b>Code phrase</b> , <b>Option value</b> , and <b>Parameter name</b> .	<synph> Can contain: <codeph> <option> <parmname> <var> <kwd> <oper> <delim> <sep> Can be modified with importance= "optional"   "required"   "default"	<b>1+(two)=something</b>	<synph> <kwd>1</kwd> <oper>+</oper> <sep>(</sep> <var>two</var> <sep>)</sep> <delim>=</delim> <kwd importance="default"> something</kwd> </synph>	kwd: bold var: italic

Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM style highlighting (2)						
System output	General computer output or response to a command or situation; message text or prompts addressed to the user.  See also <b>Screen</b> , <b>Codeblock</b> , <b>Message phrase</b> , and so on.	<systemoutput> Use more specific markup where appropriate	If the operation fails, the system shows <code>Server busy</code> .	If the operation fails, the system shows <systemoutput>Server busy</systemoutput>.	Monospace						
Table	For tabular information.	<table> <simpletable>  For information centers, it is usually better not to number tables. To suppress numbering, omit <title> and <desc> tags.  For accessibility, keep tables simple; avoid spans - do not include footer notes as last 'spanned' row within the body of a table. (6)	Table 1. Table title. A description of the table. <table><tr><th>Header1</th><th>Header2</th></tr><tr><td>a1</td><td>a2</td></tr><tr><td>b1</td><td>b2</td></tr></table>	Header1	Header2	a1	a2	b1	b2	<table> <title>Table title</title> <desc>A description of the table.</desc> <tgroup cols="2"> <colspec colname="col1"/> <colspec colname="col2"/> <thead> <row valign="bottom"> <entry colname="col1"> Header1</entry> <entry colname="col2"> Header2</entry> </row></thead> <tbody><row> <entry colname="col1">a1</entry> <entry colname="col2">a2</entry> </row><row> <entry colname="col1">b1</entry> <entry colname="col2">b2</entry> </row></tbody> </tgroup> </table>	Table title, desc: italic header: bold, gray background
Header1	Header2										
a1	a2										
b1	b2										

Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM style highlighting (2)
<b>Table referenced in text</b>	Reference to a table or to a table column in the text.	Do not tag. Use uppercase if not referring to the table using an English descriptive name.	The task control table ... The EMP_ID table ...		Plain text
<b>Tag</b>	Tags in markup languages, used in text. See also <b>XML tags</b> .	Do not tag. Enclose in angle brackets.	Use the <syntax> element to ...	Use the &lt;syntax &gt; element to ...	
<b>Trademark</b>		<tm>	IBM®	<tm tmttype="reg" trademark="IBM">IBM</tm>	
<b>Underline highlighting</b>	<b>Do not use</b> unless no alternative. Use appropriate semantic tag instead.	<u> (3)			Underline
<b>Unusual phrase</b>	Words and terms that are used in a special sense. Do not overuse.	No DITA tag. Enclose in double quotation marks (use keyboard double quotation marks).	This "feature" can block access to all users in seconds.		
<b>URL</b>	See <b>Internet address</b> .				
<b>User input</b>	Text that the user must type in response to a program or system prompt.	<userinput>	Type <code>exit</code> and press Enter.	Type <userinput>exit </userinput> and press Enter.	Monospace



Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM style highlighting (2)
<b>User interface control</b>	Includes: Check box Container Entry field Folder Group box label Icon name Items inside list box Labels (such as <b>Tip</b> :) List box Menu choice Menu name Multicolumn list Property sheet Push button Radio button Spin button Tab name Toolbar button	<uicontrol> (5) Optionally, include the control's icon where appropriate.	Click <b>OK</b> to continue.  Click the <b>DB2</b> folder.  Click the <b>Permanent Pen</b>  toolbar button ...	Click <uicontrol>OK</uicontrol> to continue.  Click the <uicontrol>DB2</uicontrol> folder.  Click the <uicontrol>Permanent Pen</uicontrol>  toolbar button ... Permanent Pen </uicontrol> <image alt="Permanent Pen icon" href="pen.gif" placement="inline"></image> toolbar button ...	Bold
<b>Utility</b>	Name of a utility.	Use <cmdname> if utility can be typed as command, otherwise do not tag.	the <b>install</b> utility ...  The DB2 trace utility ...	the <cmdname>install</cmdname> utility ...  The DB2 trace utility ...	Bold monospace
<b>Variable</b>	Variable that must be supplied to a software application, possibly within a message or API description.	<varname>  Lowercase unless case sensitive. Typically, replace spaces with under-score character.	... where <i>myname</i> represents your user ID C:\install_dir\app.exe	... where <varname> myname</varname> represents your user ID <filepath>C:\ <varname>install_dir </varname> \app.exe</filepath>	Italic

Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM style highlighting (2)
<b>Web address</b>	See <b>Internet address</b> .				
<b>Window title, and so on</b>	Titles of windows, panes, dialog boxes, preference pages, notebook pages, names of views, wizard titles, and wizard page titles.	<p>&lt;wintitle&gt;</p> <p>- or -</p> <p>"&lt;wintitle&gt; ..."</p> <p>Use additional quotation marks when sentence-style capitalization is used in the interface.</p>	<p>When you click the icon, the Open the Remote Database window opens.</p> <p>- or -</p> <p>When you click the icon, the "Open the remote database" window opens.</p>	<p>When you click the icon, the &lt;wintitle&gt;Open the Remote Database &lt;/wintitle&gt; window opens.</p> <p>- or -</p> <p>When you click the icon, the "&lt;wintitle&gt;Open the remote database &lt;/wintitle&gt;" window opens.</p>	
<b>Word used in a special sense</b>	See <b>Unusual phrase</b> .				
<b>XML</b>	XML element names and attributes. See also <b>Tags in markup languages</b> .	<p>Do not tag.</p> <p>Enclose XML tag in angle brackets.</p>	<p>Use the &lt;syntax&gt; element to ...</p> <p>The highlight attribute of the syntax element ...</p>	<p>Use the &amp;lt;syntax &amp;gt; element to ...</p> <p>The highlight attribute of the syntax element ...</p>	
<b>Typical task elements:</b>					
<b>Abstract</b>	Contains the short description of the topic, and can also contain other information and other elements, including lists.	<abstract>	Build a widget ... Something else about widgets ...	<p>&lt;abstract&gt;</p> <p>&lt;shortdesc&gt;Build a widget ...&lt;/shortdesc&gt;</p> <p>&lt;p&gt;Something else about widgets ... &lt;/p&gt;</p> <p>&lt;/abstract&gt;</p>	

Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM style highlighting (2)
<b>Short description</b>	Initial paragraph-like content that represents the purpose of the topic; also intended to be used as a link preview and for searching.	<shortdesc>	Build a widget by applying ...  <i>A message definition</i> file contains the messages, elements ...	<shortdesc>Build a widget by applying ... </shortdesc>  <shortdesc outputclass="definition">A <term>message definition </term> file contains the messages, elements ... </shortdesc>	
<b>Prerequisites</b>	Things that the user needs to know or do before starting the task.	<prereq> "Before you begin" title added automatically, unless disabled.	<b>Before you begin</b> Before you can deploy a message flow application, you must have created and started a ...	<prereq><Before you can deploy a message flow application, you must have created and started a ... </prereq>	
<b>Context</b>	Background information.	<context> "About this task" title added automatically, unless disabled.	<b>About this task</b> Deploying a widget involves ...	<context>Deploying a widget involves ... </context>	

Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM style highlighting (2)
<b>Task steps</b>	Main content, describing the task as a series of steps which can include one level of substeps.	<code>&lt;steps&gt;</code> <code>&lt;stepsection&gt;</code> <code>&lt;step&gt;</code> <code>&lt;cmd&gt;</code> <code>&lt;substeps&gt;</code> <code>&lt;substep&gt;</code>  "Procedure" title added automatically, unless disabled.	<b>Procedure</b> Complete the following steps to ... 1. On the menu, click ... More information ... Step example ... Step result ...	<code>&lt;steps&gt;</code> <code>&lt;stepsection&gt;</code> Complete the following steps to ... <code>&lt;/stepsection&gt;</code> <code>&lt;step&gt;</code> <code>&lt;cmd&gt;</code> On the menu, click ... <code>&lt;/cmd&gt;</code> <code>&lt;info&gt;</code> More information ... <code>&lt;/info&gt;</code> <code>&lt;stepxmp&gt;</code> Step example ... <code>&lt;/stepxmp&gt;</code> <code>&lt;stepresult&gt;</code> Step result ... <code>&lt;/stepresult&gt;</code> <code>&lt;/step&gt;</code> <code>&lt;/steps&gt;</code>	
<b>Step section</b>	Introduction to steps. There can be several <code>&lt;stepsection&gt;</code> elements within a <code>&lt;steps&gt;</code> element; numbering is continuous.	<code>&lt;stepsection&gt;</code>		<i>Use as above:</i> <code>&lt;stepsection&gt;</code> Complete the following steps to ... <code>&lt;/stepsection&gt;</code>	
<b>Step command</b>	Single sentence instruction for completing the step.	<code>&lt;cmd&gt;</code>		<i>Use as above:</i> <code>&lt;cmd&gt;</code> On the menu, click ... <code>&lt;/cmd&gt;</code>	
<b>Step information</b>	More information about how to complete this step.	<code>&lt;info&gt;</code>		<i>Use as above:</i> <code>&lt;info&gt;</code> More information ... <code>&lt;/info&gt;</code>	
<b>Step example</b>	Illustrates a step of a task with an example.	<code>&lt;stepxmp&gt;</code>		<i>Use as above:</i> <code>&lt;stepxmp&gt;</code> Step example ... <code>&lt;/stepxmp&gt;</code>	

Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM style highlighting (2)						
Step choices	Allows the user to choose between actions in a step; formats in same way as <substeps>.	<choices> <choice>									
Step choice table	A series of optional choices in tabular form.	<choicetable>	<table><tr><th>Option</th><th>Description</th></tr><tr><td>Option 1</td><td>Description of option 1</td></tr><tr><td>Option 2</td><td>Description of option 2</td></tr></table>	Option	Description	Option 1	Description of option 1	Option 2	Description of option 2	<choicetable> <chhead> <choptionhd>Option </choptionhd> <chdeschd>Description </chdeschd> </chhead> <chrow> <choption>Option 1 </choption> <chdesc>Description of option 1 </chdesc> </chrow> ... </choicetable>	chhead & choption: bold
Option	Description										
Option 1	Description of option 1										
Option 2	Description of option 2										
Step result	Expected outcome of a step. (Only include if there is more to say than "The step is now completed.")	<stepresult>									
Task result	Expected outcome for the task. (Only include if there is more to say than "The task is now completed.")	<result>  "Results" title added automatically, unless disabled.	Result: You have now completed this task and have ...	<result>You have now completed this task and have ... </result>							

Element	Usage	DITA tag (1)	Example	DITA tagging for example	IBM style highlighting (2)
Task example	Examples that illustrate or support the task.	<code>&lt;example&gt;</code> "Example" title added automatically, unless disabled.	<b>Example</b> The following code is an example of ...	<code>&lt;example&gt;</code> The following code is an example of ... <code>&lt;/example&gt;</code>	
Post-requisites	Tasks to do after successful completion.	<code>&lt;postreq&gt;</code> "What to do next" title added automatically, unless disabled.	<b>What to do next</b> Continue by adding a broker to the domain ...	<code>&lt;postreq&gt;</code> Continue by adding a broker to the domain ... <code>&lt;/postreq&gt;</code>	

Notes

- (1) Only opening tags are shown in this column. Other tags that are included within an element are indented.
- (2) This column shows what highlighting you should expect to see for each element according to the style described in “Highlighting” on page 102. Generally, styles for margin, padding, and so on, are not indicated.
- (3) These tags do not convey any semantic meaning. Therefore, do not use them if you can use another tag. For example, use `<i>` only to put stress on a word in normal text.
- (4) Do not use `<keyword>` to tag tokens, such as a single value from an enumerated list, the name of a command or parameter, product name, or a lookup key for a message. There are usually other suitable tags such as `<option>`. Or you could consider using `<synph><kwd>`. Restrict use of `<keyword>` for marking reusable text ("text entities") that you might want to use anywhere in your documentation with a **conref** parameter. (`<ph>` might be considered a reasonable alternative, but there are some places where you might want to insert a text entity, where `<ph>` is not allowed, whereas `<keyword>` can appear almost anywhere.) This restriction avoids confusion between these two distinct usages.
- (5) If an element, such as a command name, uses a normal English word that might be inadvertently translated, add the `translate="no"` attribute to ensure that it is not translated. If the element would not normally be tagged, use `<ph translate="no">`.
- (6) There is no set way of creating notes for tables, but it is probably most appropriate to add a `<note>` element that contains an ordered list immediately following the table and use `<sup>` tags around corresponding numbers within the body of the table:

```
<note othertype="Notes" type="other">  
  <!-- setting type to "other" means that the title of the note is set to "Notes" -->  
  <ol>  
    <li> ... </li>  
    <li> ... </li>
```

- (7) There is currently no DITA element for a single letter. Use `<i>` because this highlighting is purely presentational and has no semantic meaning. (Do not use `<term>`, which should be reserved for definitions. See **Definition in text**.)
- (8) There is currently no explicit DITA element for an environment or registry variable. Use `<parname>` for the name of the variable, and `<option>` for its value.

## Appendix C. Word usage

This list of words and terms is not intended to take the place of a general dictionary but instead gives advice that is pertinent to technical writing where usage might be more specific or differ from that in the dictionary. Terms have also been included that are found to cause difficulties for technical writers and where consistency of expression needs clarification.

For general spellings, definitions, etymologies, and rules about parts of speech, see *Merriam-Webster's Collegiate Dictionary*.

The terms listed here are divided into three categories:

✓ = Preferred term

! = Use with caution

⊗ = Do not use

### Numbers

#### ✓ **10BASE2, 10BASE-T** *n*

Write as shown, uppercase “BASE.” Do not use a hyphen when a number follows “BASE” (for example, “10BASE2”), but do use a hyphen when a letter follows (for example, “10BASE-T”).

#### ! **24x7** *adj*

Use this abbreviation to indicate high availability, nonstop operation or support, such as for database and e-commerce applications or monitoring. Do not use this abbreviation to indicate the general availability of something, such as service. Do not use “24/7”.

Whenever possible, use descriptive wording: for example, “High-availability databases not only are universally available but also have high reliability and serviceability,” or “Operations are monitored 24 hours a day, every day of the week.” However, 24x7 is acceptable usage, provided that you are consistent within a document or library.

#### ⊗ **32-bit Windows operating system** *n*

Do not use. Use “Windows 32-bit operating system.”

## A

#### ✓ **Å** *n*

Use “Å” as the abbreviation of “angstrom.”

#### ✓ **A** *n*

Use “A” as the abbreviation of “ampere.”

#### ✓ **A-disk** *n*

Write as shown - uppercase “A” and hyphenated.

#### ⊗ **abend** *v*

Do not use as a verb. Use only as a noun or adjective.

✓ **abend** *adj*

Write as shown - lowercase (for example, “the abend code”). Do not use as a verb.

✓ **abend** *n*

Write as shown - lowercase (for example, “a program abend”). Do not use as a verb.

⊙ **abort** *v*

Do not use. Use “cancel,” “stop,” or “end.”

! **about** *adv*

Do not use to mean “approximately.”

! **above** *adj*

Do not use to indicate a relative location in a document, as in “the above restrictions.” Use “previous” or “preceding.”

Example: “The previous restrictions apply to...”

✓ **ac** *n*

Write as shown - lowercase - to refer to the abbreviation for “alternating current.”

! **AC** *n*

Do not use to refer to the abbreviation for “alternating current.” Write in lowercase - “ac”.

✓ **acknowledgment** *n*

Spell as shown - not “acknowledgement.”

! **across** *prep*

Do not use to mean “to” or “for.” For example, write “applications for multiple platforms” rather than “applications across multiple platforms.”

! **actionable** *adj*

Do not use to mean that action can be taken, for example, “Transform data into actionable business information.” Use only in the legal context of providing grounds for a lawsuit.

! **active** *adj*

Do not use to describe an interface control that is available. Use “available.”

✓ **ad hoc** *adj*

Write as shown - two words.

✓ **adapter** *n*

Spell as shown - not “adaptor.” Use “adapter,” not “card,” to refer to a circuit board that enables a computer to use a peripheral device, such as a CD-ROM drive or modem, for which it does not already have the necessary connections, ports, or circuit boards.

⊙ **adapter card** *n*

Do not use “adapter card.” Use “adapter” or “card,” whichever is appropriate.

⊙ **adaptor** *n*

Do not use. Use “adapter.”

✓ **add-on** *n*

Write as shown - hyphenated.



- ⊗ **administrate** *v*  
Do not use. Use “administer.”
- ✓ **afterward** *adv*  
Spell as shown - not “afterwards.”
- ✓ **agent** *n*  
Do not confuse the concept of a client/server model with that of an agent/manager model.  
A client and an agent are similar in that they are each dependent on something else: a client is dependent on a server, and an agent is dependent on a manager. However, they are opposites regarding requests, in that a client requests services from a server and a manager requests services from an agent. In summary, a client and an agent are alike in the direction of dependency but are opposites in the direction of requests.
- ⊗ **agile** *n*  
Do not use as a noun. Use only as an adjective. For example, write “The agile team advocates multiple two-week iterations,” not “Agile advocates multiple two-week iterations.”
- ✓ **agile** *adj*  
Write as shown - lowercase - and use only as an adjective. For example, write “The agile team advocates multiple two-week iterations.”
- ⊗ **all caps** *n*  
Do not use. Use “uppercase.”
- ! **allow** *v*  
Avoid stating that inanimate objects grant abilities to people, as in “the product allows you to...” Whenever possible, use a direct, user-focused alternative such as “you can use the product to...” or “with this product, users can...”
- ! **alpha** *adj*  
Do not use to mean “alphabetic.”
- ! **alphabetic** *adj*  
Use “alphabetic” to mean of, relating to, or employing an alphabet.  
Do not use to mean arranged in the order of the letters of the alphabet.  
Example: You must specify alphabetic characters.
- ! **alphabetical** *adj*  
Use “alphabetical” to mean arranged in the order of the letters of the alphabet. Do not use to mean of, relating to, or employing an alphabet.  
Example: The names are displayed in alphabetical order.
- ⊗ **alphameric** *adj*  
Do not use. Use “alphanumeric.”
- ✓ **alphanumeric** *adj*  
Use “alphanumeric,” not “alphameric” or “alphanumerical.”  
Example: The password must contain at least 8 alphanumeric characters.
- ⊗ **alphanumerical** *adj*  
Do not use. Use “alphanumeric.”  
Example: The password must contain at least 8 alphanumeric characters.

✓ **alternate** *adj*

Use “alternate” (or one of its forms, such as “alternating”) to mean “every other,” and use “alternative” when a choice is involved.

Examples: (1) “An alternating current reverses its direction at regularly recurring intervals.” (2) “If the main system console becomes unavailable, you can designate an alternative system console.”

✓ **alternative** *adj*

Use “alternative” when a choice is involved, and use “alternate” (or one of its forms, such as “alternating”) to mean “every other.”

Examples: (1) “If the main system console becomes unavailable, you can designate an alternative system console.” (2) “An alternating current reverses its direction at regularly recurring intervals.”

✓ **a.m.** *adj*

Write as shown - lowercase with a period after each letter. Do not use A.M.

✓ **ampere** *n*

Abbreviate as “A”.

✓ **analog** *adj*

Spell as shown - not “analogue.”

⊙ **analogue** *n*

Do not use. Use “analog.”

! **and so on** *n*

Use only when you list a clear sequence of elements, such as “1, 2, 3, and so on” or “Monday, Tuesday, Wednesday, and so on.” When you list items that do not form a clear sequence, use appropriate descriptive wording, such as “device drivers, firmware, and other code.”

⊙ **and/or** *conj*

Do not use. Depending on the context, use a construction such as “a or b” or “a, b, or both.”

This is not a valid construction in English; it also does not exist in other languages and therefore causes translation problems.

✓ **angstrom** *n*

Abbreviate as “Å”.

⊙ **ANS** *n*

Do not abbreviate “American National Standard.”

For example, to refer to the subject of an ANSI standard, write “American National Standard COBOL,” not “ANS COBOL.”

! **ANSI** *n*

Use to refer to the institute itself or as part of the identification number of a standard, such as “ANSI X3.23-1974.” Do not use to refer to the subject of a standard; for example, write “American National Standard COBOL,” not “ANSI COBOL.” Always use “ANSI,” not “USASI.”

✓ **any time** *n*

Write as shown - two words - when used as a noun. For example, write: “The message might arrive at any time.”

✓ **anytime** *adv*

Write as shown - one word - when used as an adverb. For example, write: “You can do this anytime you want.”

- ⊘ **anytime** *n*  
Do not use as a noun. Use “any time.”
- ✓ **API documentation** *n*  
Use “API documentation,” “Javadoc information,” “Javadoc HTML documentation,” or “Java API documentation” to refer to the output of the Javadoc tool.
- ! **appear** *v*  
Do not use unless there is no better alternative. Possible alternatives include “is displayed” and “opens.”  
“Appear” implies magic or illusion (for example, “it appears to be snowing, but it is the falling volcano ash”). When you are referring to a window in a graphical user interface, always use “open.” Examples: (1) “The message is displayed when you make a mistake.” (2) “The window opens...”
- ⊘ **appendices** *n*  
Do not use. Use “appendixes.”
- ✓ **appendixes** *n*  
Spell as shown - not “appendices.”
- ✓ **Applet Viewer** *n*  
Write as shown to refer to the Java tool from Oracle.
- ⊘ **application program interface** *n*  
Do not use. Use “application programming interface.”
- ⊘ **architect** *v*  
Do not use as a verb. Use only as a noun. When you need a verb, use “design,” “plan,” or “structure.”
- ! **architected** *adj*  
Do not use unless there is no better alternative. Consider using a simpler word, such as “designed.”
- ⊘ **artefact** *n*  
Do not use. Use “artifact.”
- ! **article** *n*  
Do not use to refer to a topic in an information center. Use “topic.”
- ⊘ **article-based information** *n*  
Do not use. Use “topic-based information.”
- ✓ **artifact** *n*  
Spell as shown - not “artefact.”
- ! **as** *adv*  
Do not use to mean “because” or “while.”  
Example: Write “Because you created the file, you can delete it,” not “As you created the file, you can delete it.”
- ! **as long as** *conj*  
Do not use to mean “on condition that.” Use “if” or “provided that.”  
Examples: (1) Write “Do not stop the process if the map is active,” not “Do not stop the process as long as the map is active.” (2) Write “You can leave the field blank, provided that there are no other users,” not “You can leave the field blank as long as there are no other users.”

⊖ **as per** *prep*

Do not use. Use a phrase such as “according to,” “as,” or “as in.”

! **as well as** *conj*

Do not use to mean “and.”

✓ **ASCII** *n*

Write as shown - uppercase. Do not use “USASCII.”

! **assembler** *n*

Do not use to refer to the language used for an assembler. Use either “assembly language” or “assembler language,” depending on the terminology used in your product. Use “assembler” only to refer to a computer program that converts assembly language instructions into object code.

! **assembler language** *n*

Use “assembler language” only to refer to the language used by products that include the term “Assembler” in their name (for example “High Level Assembler for z/OS”).

In most cases, use “assembly language” to refer to low-level programming languages used by assemblers.

✓ **assembly language** *n*

In most cases use “assembly language,” rather than “assembler language,” to refer to low-level programming languages used by assemblers.

! **attach** *v*

Do not use as an intransitive verb (for example, “the cable attaches to the monitor”) unless the subject actually performs the action without human intervention. Instead, use “attach” as a transitive verb (for example, “the cable is attached to the monitor”).

✓ **attention notice** *n*

Use “attention notice,” not “warning notice.”

✓ **auxiliary storage** *n*

Use “auxiliary storage,” not “offline storage” or “secondary storage.”

✓ **available** *adj*

Use “available,” not “active,” to describe an interface control that is displayed and enabled.

## B

✓ **b** *n*

Use this abbreviation (lowercase) in combination with a multiplier prefix such as K, M, G, or T to mean “bit” or “bits” (for example, Kb).

✓ **B** *n*

Use this abbreviation (uppercase) in combination with a multiplier prefix such as K, M, G, or T to mean “byte” or “bytes” (for example, KB).

! **back end** *n*

Write as shown - two words. If possible use a more specific term, such as “server,” “operating system,” or “network.”

✓ **back up** *v*

Write as shown - two words - when used as a verb.

! **back-end** *adj*

Write as shown - hyphenated. If possible use a more specific term, such as “server,” “operating system,” or “network.”

⊙ **back-level, backlevel** *adj*

Do not use. Use “earlier,” “previous,” or “not at the latest level.”

⊙ **back-up** *adj, n*

Do not use. Use “backup.”

⊙ **backside** *n*

Do not use. Use “back” or “rear.”

Examples: (1) The connector is on the back of the device. (2) The rear view shows the connectors.

✓ **backslash** *n*

Write as shown - one word - to refer to the \ character.

✓ **backup** *adj, n*

Write as shown - one word.

⊙ **backward compatible** *adj*

Do not use. Use “compatible with earlier versions.”

⊙ **BCT** *n*

Do not use as an abbreviation of “breadcrumb trail.” Spell out “breadcrumb trail.”

✓ **bean** *n*

Write as shown - lowercase.

JavaBeans is a platform-independent, software-component technology for building reusable Java components called “beans.” “Bean,” apart from its use in the term “JavaBeans,” is a generic term and should be lowercase.

✓ **because of** *prep*

Use “because of,” not “due to,” in adverbial clauses.

Although the use of “due to” as a synonym of “because of” has some acceptance in modern English usage, it is imprecise and, therefore, not suited to technical writing. Incorrect: “Due to the power failure, the update stopped.” Correct: “Because of the power failure, the update stopped.”

! **below** *adj*

Do not use to indicate a relative location in a document, as in “the information below.” Use “the information later in this section.”

Alternatively, you can use “following” to refer to a table, to art, or to a list. Example: “The following table shows ...”

⊙ **bench-mark** *n, v*

Do not use. Use “benchmark.”

✓ **benchmark** *n, v*

Write as shown - one word.

! **best practice** *n*

Although the term “best practice” is widely used in the business world, it is best avoided in technical documentation. It is better to tell readers what to do, rather than telling them that what they are doing is a “best practice.”

“Best practice” is a generic term to describe the best process, at the time of writing, for doing something. At any time, a new best practice can replace what was considered to be the best practice until then. Never use as an adjective; a term such as “best practices data” might be incorrectly interpreted as meaning “the best data relating to practices.”

✓ **beta** *adj*

Write as shown - lowercase.

Avoid using “beta” as a noun when a noun phrase is more accurate (for example, “beta program” or “beta code”).

! **between** *prep*

Do not use to show a range of numbers; it is not clear whether the two numbers are the boundaries of the range or are included in the range.

See “Ranges of numbers” on page 159 for a more detailed explanation.

✓ **bidi** *adj*

Write as shown, with a lowercase “b” to refer to the abbreviation for “bidirectional.”

⊙ **billion** *n*

Do not use. Use the number rather than the word because it has different meanings in different countries.

To United States readers, one billion means 1,000,000,000 (one thousand million), and in some other countries, one billion means 1,000,000,000,000 (one million million).

⊙ **binary** *n*

Do not use as a noun. Use only as an adjective, as in “binary file.”

✓ **bit field** *n*

Write as shown - two words - not “bit-field” or “bitfield.”

✓ **bitstream, bit stream** *adj, n*

Write as one word when used as an adjective - “bitstream.” Write as two words when used as a noun - “bit stream.”

✓ **bit string** *n*

Write as shown - two words.

✓ **bitmap** *adj, n*

Write as shown - one word.

! **black box** *n*

Use only in technical documentation, and provide a definition, because “black box” is jargon and might not be understood by all readers.

“Black box” refers to the hidden internal workings of a product or program, as in “black box testing.”

Although it is widely used in the computer industry, “black box” is jargon and might not be understood by all readers. Try to find an alternative, but if you must use it in technical documentation, provide a definition.

⊙ **blink** *v*

Do not use to refer to indicator lights. Use “flash.”

⊙ **blue screen of death** *n*

Do not use. Use “stop error,” and describe the type of message received. You can mention “blue screen,” but only as additional contextual information.

Example: “You might receive a stop error on a blue screen, with the message \*\*\* Fatal System Error: ...”

! **board** *n*

Do not use by itself. Use as part of the term “system board,” or use “adapter.”

! **boolean** *adj*

Write “boolean” with an initial lowercase “b” only in API programming information, when “boolean” refers to a primitive return type. In all other cases, use an uppercase “B” - “Boolean.”

✓ **Boolean** *adj*

Write as shown - with an initial uppercase “B”. In API programming information, use an initial lowercase “b” when “boolean” refers to a primitive return type.

! **boot** *v*

Although “boot” is widely recognized among technical users, where usage permits use “start” or “turn on.”

✓ **both** *conj*

Use to refer to two items only (for example, “Create a password for both the administrator and the user”).

To conform to modern usage, and to be precise, use “both” for only two items when used as a conjunction. This usage advice is contrary to the example shown in Merriam-Webster’s Collegiate Dictionary.

⊙ **bottom left, bottom right** *n*

Do not use. Use “lower left” or “lower right” to refer to the location of an item in an interface.

Accessibility requirement: People who are blind or have low vision might not be able to understand information if it is conveyed only by location. Provide additional text information other than location. For example, write “The tables are displayed in the Table List pane, which is in the lower right of the window,” not “The list of tables is displayed in the lower right of the window.”

⊙ **bottom-left, bottom-right** *adj*

Do not use. Use “lower-left” or “lower-right” to refer to the location of an item in an interface.

Accessibility requirement: People who are blind or have low vision might not be able to understand information if it is conveyed only by location. Provide additional text information other than location. For example, write “The tables are displayed in the Table List pane, which is in the lower-right corner of the window,” not “The list of tables is displayed in the lower-right corner of the window.”

! **branch** *n*

Do not use to refer to a group of topics in an information center navigation tree. Use “section.”

The term “branch” is used in many products to describe many different types of objects. Ensure that you use the term consistently within your product documentation.

! **breadcrumb** *n*

Use only to refer to a web interface element that displays the reader’s current position within a site at the top of the web page.

✓ **breadcrumb trail** *n*

Do not abbreviate as “BCT.”

⊙ **breadcrumbing** *n*

Do not use to describe the act of navigating on the web. Use “breadcrumb trail” instead.

✓ **breakpoint** *n*

Write as shown - one word.

⊗ **bring up** *v*

Do not use. This term is ambiguous. Use “start,” “power on,” “open,” or “turn on,” as appropriate.

✓ **British thermal unit** *n*

Write as shown - with an initial uppercase letter on “British” only. The abbreviation is “Btu.”

✓ **broken** *adj*

Use to describe a connection that has been disconnected. Do not use “lost.”

⊗ **BSOD** *n*

Do not use to refer to the “blue screen of death.” Use “stop error,” and describe the type of message received. You can mention “blue screen,” but only as additional contextual information.

Example: “You might receive a stop error on a blue screen, with the message \*\*\* Fatal System Error: ...”

✓ **Btu** *n*

Use as the abbreviation of “British thermal unit” and capitalize it as shown.

✓ **buffer pool** *n*

Write as shown - two words.

! **built in** *adj*

Hyphenate the term if you use it before a noun that it modifies (for example, “built-in diagnostic tools”).

✓ **bus master** *n*

Write as shown - two words.

✓ **buses** *n*

Spell as shown - one “s” - as the plural of “bus.”

“Busses” means “kisses.”

! **business-to-business** *adj*

Do not use the abbreviation “B2B” in technical writing. Spell out “business-to-business,” but consider using a phrase that is less marketing oriented. For example, instead of “a business-to-business relationship,” consider writing “a relationship between one business and another.”

! **business-to-consumer** *adj*

Do not use the abbreviation “B2C” in technical writing. Spell out “business-to-consumer,” but consider using a phrase that is less marketing oriented. For example, instead of “a business-to-consumer relationship,” consider writing “a relationship between a business and a consumer.”

! **business-to-employee** *adj*

Do not use the abbreviation “B2E” in technical writing. Spell out “business-to-employee,” but consider using a phrase that is less marketing oriented. For example, instead of “a business-to-employee relationship,” consider writing “a relationship between a business and an employee.”

⊗ **busmaster** *n*

Do not use. Use “bus master.”

⊗ **busses** *n*

Do not use. Use “buses.”

“Busses” means “kisses.”



**! button** *n*

Use a qualifier with “button” (for example, “radio button” or “toolbar button”) or just refer to a control by its label (for example, “Click New”). Do not use “button” to refer to a key on a keyboard.

✓ **button area** *n*

Use to refer to the area at the bottom of a wizard page that contains the push buttons that apply to the entire wizard, not just one individual page.

## C

**! cache** *v*

If possible, avoid the verb form by using a suitable alternative (for example, “store in a cache”).

✓ **cache** *n*

Use as a noun rather than a verb in most cases.

“Cache” is used as both a noun and a verb, although translators prefer a term be used in only one grammatical sense.

✓ **call out** *v*

Write as two words when used as a verb - “call out.”

✓ **callout** *adj, n*

Write as shown - one word - when used as an adjective or noun.

**! camel case** *adj, n*

Avoid this imprecise colloquialism when possible. Instead, explicitly state your convention and give an example. If you must use this term, write as shown - two words - enclose it in quotation marks, and include an explanation and an example.

Because this term is only one of several terms for the same concept, it causes problems for translators. In addition, it is ambiguous because the capitalization scheme varies.

✓ **can** *v*

Use to indicate ability. Use instead of “could.”

In most cases, use “can” or “might,” not “may.”

⊗ **can not** *v*

Do not use. Use “cannot.”

✓ **cancel** *v*

Use “cancel” or “stop,” not “abort.”

✓ **canceled, canceling** *v*

Spell as shown - not “cancelled” and “cancelling.”

✓ **cancellation** *n*

Spell as shown - not “cancelation.”

This spelling is an exception; the consonant is usually doubled when it introduces a stressed syllable.

⊗ **cancelled, cancelling** *v*

Do not use. Use “canceled” and “canceling.”

- ⊗ **canned** *adj*  
Do not use. Depending on the context, use a more precise word such as “preplanned,” “preconfigured,” or “predefined.”  
“Canned” is a jargon term that has many slang interpretations, and it is too vague to use for a wide range of meanings.
- ✓ **cannot** *v*  
Write as shown - one word.
- ✓ **card** *n*  
Use to refer to a circuit board that is integral to the computer, unless another term (such as “system board”) is more appropriate.
- ✓ **card reader** *n*  
Write as shown - two words.
- ⊗ **case insensitive** *adj*  
Do not use. Use “not case sensitive.”
- ! **case sensitive** *adj*  
Hyphenate the term if you use it before a noun that it modifies (for example, “a case-sensitive password”).
- ✓ **catalog** *n, v*  
Spell as shown - not “catalogue.”
- ⊗ **catastrophic error** *n*  
Do not use. Use “unrecoverable error” or wording that indicates that the error disrupts operations.
- ! **catch** *v*  
Do not use to refer to the detection of an undesirable status situation except in Java documentation, as in “catch an exception.” In all other contexts, use an alternative expression such as “detect an error,” rather than “catch an error.”
- ! **category** *n*  
Do not use to refer to a group of topics in an information center navigation tree. Use “section.”  
The term “category” is used in many products to describe many different types of objects. Ensure that you use the term consistently within your product documentation.
- ⊗ **CBE** *n*  
Do not use this abbreviation of “Common Base Event.” “CBE” is a trademark of another company.
- ⊗ **CBTS** *n*  
Do not use “CBTS” as the abbreviation of “CICS Transaction Services.” “CICS BTS” is the recommended diminution, although “BTS” is acceptable in the appropriate context.
- ✓ **CD drive** *n*  
Use “CD drive” if the read/write characteristic of the drive varies, cannot be predicted, or is irrelevant.
- ! **CD-ROM** *n*  
Do not use to refer to a compact disc. Use “CD.”  
Use “CD-ROM” or “CD-RW” only if you must be specific about the read/write characteristic of the CD.

✓ **CD-ROM drive** *n*

Use to refer to a read-only CD drive.

If the read/write characteristic of the drive varies, cannot be predicted, or is irrelevant, use “CD drive.”

✓ **CD-RW drive** *n*

Use to refer to a CD drive that can be read from and written to (a CD read/write drive).

If the read/write characteristic of the drive varies, cannot be predicted, or is irrelevant, use “CD drive.”

⊗ **CE** *n*

Do not use this abbreviation of “customer engineer,” which is an obsolete term.

⊗ **CEC** *n*

Do not use this abbreviation of “central electronic complex.” Use “CPC” (for “central processor complex”).

⊗ **central electronic complex** *n*

Do not use. Use “central processor complex” or “CPC.”

! **central processing unit** *n*

Use only when the term is used explicitly in the product interface. Otherwise, use “processor” or “microprocessor.” The same advice applies to the abbreviation “CPU.”

“Central processing unit,” or “CPU,” is an older term for “processor” or “microprocessor.”

✓ **central processor complex** *n*

Use “central processor complex” or “CPC,” not “central electronic complex” or “CEC.”

✓ **cents** *n*

Spell as shown - following normal English usage of adding an “s” to “cent” to form the plural.

Although the European Union specifies “cent” as the plural form in its own official publications, use the usual English plural form by adding an “s.” This usual usage has been authorized by the EU and adopted by many publishers.

✓ **character-based interface** *n*

Use this term to contrast with a graphical user interface. Do not use “green screen.”

⊗ **check** *v*

Do not use to refer to marking a check box. Use “select” and “clear.”

✓ **check box** *n*

Write as shown - two words.

✓ **check mark** *n*

Write as shown - two words.

✓ **checklist** *n*

Write as shown - one word.

✓ **child** *n*

Use “child,” not “children,” to describe a noun (for example, “child processes”).

! **child topic** *n*

Do not refer to a “child topic” in an information center, except when writing instructions about navigating. Whenever possible, refer to the specific topic title, not the relationship of topics to one another.

The term “child” is often used to describe a hierarchy of objects. Ensure that you use the term consistently within your product documentation.

⊙ **children** *n*

Do not use “children” to modify plural nouns that include the term “child.” Use “child” (for example, “child processes”).

✓ **chip set** *n*

Write as shown - two words.

⊙ **chipset** *n*

Do not use. Use “chip set.”

! **choose** *v*

Do not use to refer to actions performed on interface elements. Use “click” or “double-click” for menu commands, push buttons, and other interface elements. Use “select” and “clear” for check boxes.

⊙ **Christian name** *n*

Do not use. Use “given name,” not “first name” or “Christian name,” to refer to the name that is used to identify an individual within a group, such as a family.

✓ **chronological** *adj*

Use “chronological,” not “chronologic.”

Example: The events are displayed in chronological order.

✓ **class of service** *n*

Write as three words when used as a noun - “class of service.”

✓ **class path** *n*

Write as shown - two words - unless you are using it as a variable.

✓ **class-of-service** *adj*

Write with hyphens when used as an adjective - “class-of-service.”

✓ **classes of service** *n*

Write as shown as the plural of “class of service.”

! **classpath** *n*

Use only as a variable. Otherwise, use “class path.”

✓ **cleanup, clean up** *n, v*

Write as one word when used as a noun - “cleanup.” Write as two words when used as a verb - “clean up.”

✓ **clear** *v*

Use “clear,” not “deselect” or “unselect,” to refer to removing a mark from a check box.

! **CLI** *n*

In most cases, use “command line” unless you need to make specific reference to the command-line interface, as opposed to the graphical interface.

✓ **click** *v*

Use “click,” not “click on,” to refer to the action of selecting something on a graphical interface.

⊙ **click on** *v*

Do not use. Use “click” instead to refer to the action of selecting something on a graphical interface.

✓ **client** *n*

Use “client,” not “customer,” in marketing collateral.

“Client” implies a higher level of strategic consultation and partnership than “customer.”

✓ **client/server** *adj, n*

Write as shown, with a forward slash. Do not use “client-server.”

✓ **code base** *n*

Use as two words “code base.”

This is a common industry spelling, and does not require usage advice.

✓ **code page** *n*

Write as shown - two words.

✓ **code point** *n*

Write as shown - two words.

✓ **code set** *n*

Write as shown - two words.

⊗ **cold boot** *n*

Do not use. Use “cold start.”

⊗ **cold start** *v*

Do not use. Use “restart,” “start again,” or alternative wording.

✓ **cold start** *n*

Write as shown - two words.

! **combination box** *n*

Use only in information for interface developers to explain how to create a graphical interface. Do not use in instructions about how to use a graphical interface; use the name of the field instead. Do not use “combo box.”

⊗ **combo box** *n*

Do not use as an abbreviation of “combination box.” In instructions about how to use a graphical interface, use the name of the field, as in “the Servers field.” In instructions to interface developers to explain how to create a graphical interface, use “combination box.”

⊗ **command console** *n*

Do not use. In Windows documentation, use “command prompt.” In non-Windows or cross-system documentation, use “command line.”

✓ **command line** *n*

Use to refer to the area where commands are entered in non-Windows or cross-system documentation. Do not use “command line” in Windows documentation; use “command prompt.”

✓ **command prompt** *n*

Use “command prompt,” not “command line” or “command console,” in Windows documentation.

It is rarely necessary to refer to the window in which the command prompt is accessed.

✓ **command-line** *adj*

Write as shown - hyphenated - when used as an adjective (for example, “the command-line interface”).

✓ **comment out** *v*

Use to describe the act of adding characters to the beginning of a line of code to indicate that the line is not to be compiled.

! **Common Base Event** *n*

Do not use “Common Base Event” as a noun. Instead use the generic term “event.” If you must be more specific, write something like “an event that conforms to the Common Base Event specification.”

⊙ **CommServer** *n*

Do not use. Use “Communications Server” and state the operating system to which it applies, such as “Communications Server for AIX” or “Communications Server for z/OS.”

✓ **Communications Server** *n*

State the operating system to which the server applies, such as “Communications Server for AIX” or “Communications Server for z/OS.”

✓ **compile** *v*

Use as a verb. Use as an adjective when describing standard terms (for example, “compile time”) unless an alternative is available (“compiler option”).

! **compile** *adj*

Use as an adjective when referring to compiling (the activity), as in “compile time”. Use “compiler” when referring to the actual compiler, as in “compiler option.”

! **complete** *v*

Do not use as a reflexive verb (for example, “the program completes”). Use “is completed” (for example, “the program is completed”).

✓ **component architecture** *n*

Use “component-based development,” “component model,” or “component architecture,” not “componentization.”

✓ **component model** *n*

Use “component-based development,” “component model,” or “component architecture,” not “componentization.”

✓ **component-based development** *n*

Use “component-based development,” “component model,” or “component architecture,” not “componentization.”

⊙ **componentization** *n*

Do not use in external communication, such as product documentation or marketing literature; instead, use “component-based development,” “component model,” “component architecture,” “shared components,” or another expression.

Because this term is jargon, it should not be used in external communication; instead, use “component-based development,” “component model,” “component architecture,” “shared components,” or some such phrase.

⊙ **componentize** *v*

Do not use. This term is jargon. Use “develop components” or a similar phrase.

✓ **compress** *v*

Use to mean the compressing of files with a compression utility. Do not use “jar,” “tar,” or “zip.” The terms “zip” and “ZIP” are registered trademarks of other companies. Using them might result in trademark infringement.

⊖ **comprised of** *v*

Do not use. Use “consists of” or “composed of” to describe parts of a whole (for example, “the library is composed of five books”).

“Comprised of” is often used to mean “consists of” or “composed of,” but this usage is incorrect. Because “comprise” (which means “to include”) is frequently used incorrectly, consider replacing it with a clearer alternative when possible. Incorrect: The array is comprised of five disks. Incorrect: Five disks comprise the array. Correct: The array comprises five disks. Correct: The array consists of five disks.

⊖ **concurrent peripheral processing** *n*

Do not use. Use “spooling.”

⊖ **congratulations** *n*

Do not use in technical information. State the task that has been accomplished, such as “You have now completed the tutorial.”

If you believe that it is useful to inform readers that they have completed a tutorial or a complex procedure, state the obvious: “You have now completed the tutorial.” Saying “congratulations” can sound patronizing to native English speakers and also creates problems for translators.

! **connect** *v*

Do not use as an intransitive verb (for example, “the power cord connects to the computer”). Use “is connected” (for example, “the power cord is connected to the computer”).

! **console** *n*

Do not use interchangeably with “workstation” or “terminal.”

⊖ **consumability** *n*

Do not use in technical information. Use more precise terms relating to specific features of a product.

Although this term is widely used, it causes translation difficulties.

! **consume** *v*

Do not use when a simpler term such as “use” would be more appropriate. Use only to mean “use up.”

Examples: (1) Instead of “The number of disk pages consumed by all indexes defined on a table,” write “The number of disk pages used by all indexes defined on a table.” (2) Correct: “Because the resources have been consumed, they can no longer be used.”

! **container** *n*

Do not use to describe a high-level topic in an information center. Refer to the topic by its name, not the type of topic.

The term “container” is used in many products to describe many different types of objects. Ensure that you use the term consistently within your product documentation.

! **content pane** *n*

Do not use to refer to the right pane in an information center. Use “topic pane.”

The term “content pane” is correctly used in many products to describe the right pane in the product interface.

⊖ **Contents pane** *n*

Use “navigation pane” to refer to the left pane in an information center. The navigation pane contains a Contents view, which contains the navigation tree for the information center.

The navigation pane contains a Contents view, which contains the navigation tree for the information center.

⊙ **context menu** *n*

Do not use. Use “menu” if possible. Use “pop-up menu” if you must emphasize how the menu functions.

✓ **context-sensitive help** *n*

Use “context-sensitive help” when you are describing how to create different types of help information.  
When addressing users of help, use just “help.”

⊙ **contextual help** *adj*

Do not use to describe how to use the help. Use “help” when you are addressing users of help. Use “context-sensitive help” when you are describing how to create different types of help information.

Do not use in customer information to describe how to use the help. Instead, describe the help in terms of how the user accesses it. If you are describing how to create different types of help information, use “context-sensitive help.”

✓ **control logical unit** *n*

Use “control logical unit,” not “controlling logical unit” or “control point logical unit.”

If you are describing the logical unit in a Transaction Processing Facility (TPF) type 2.1 node that is used to pass private protocol request units between the TPF type 2.1 node and the logon manager, use “control logical unit,” not “controlling logical unit” or “control point logical unit.”

⊙ **control point logical unit** *n*

Do not use. Use “control logical unit.”

If you are describing the logical unit in a Transaction Processing Facility (TPF) type 2.1 node that is used to pass private protocol request units between the TPF type 2.1 node and the logon manager, use “control logical unit,” not “controlling logical unit” or “control point logical unit.”

⊙ **control-click** *v*

Do not use. Use “press Control while you click” for novice users. Use “press Control and click” for experienced users.

⊙ **controlling logical unit** *n*

Do not use. Use “control logical unit.”

If you are describing the logical unit in a Transaction Processing Facility (TPF) type 2.1 node that is used to pass private protocol request units between the TPF type 2.1 node and the logon manager, use “control logical unit,” not “controlling logical unit” or “control point logical unit.”

✓ **conversion** *n*

Use “conversion,” not “translation,” to refer to the conversion of internal data to a different format.

✓ **converter** *n*

Spell as shown - not “convertor.”

! **coordinated universal time** *n*

Do not use “coordinated universal time” (UTC) and “Greenwich mean time” (GMT) interchangeably.

Coordinated universal time (UTC) is the time scale, based on the *Système International* (SI) second, as defined and recommended by the *Comité Consultatif International de la Radio* (CCIR) and maintained (using an atomic clock) by the *Bureau International des Poids et Mesures* (BIPM). The *Système International* is based on three fundamental units of measure (the meter, the kilogram, and the second) and is sometimes called the “MKS system” because of these units. For most practical purposes, UTC is equivalent to the mean solar time at the prime meridian (0 degrees longitude) of Greenwich, England, which is known as Greenwich mean time. UTC is sometimes called Z time or Zulu time, although this is not preferred.



✓ **corrupt** *v*

Use only as a verb. Use “corrupted” for the adjective form (for example, “The file is corrupted”).

✓ **corrupted** *adj*

Use “corrupted,” not “corrupt” (for example, “The file is corrupted”).

! **could** *v*

Do not use in the present tense to mean “might” or “can.” Use only in the past conditional form, for example, “files that could not be identified.”

✓ **CPC** *n*

Use “CPC,” not “CEC (central electronic complex).”

⊗ **CPO** *adj*

Do not use. Use “spooling.”

⊗ **CPP** *adj*

Do not use. Use “spooling.”

! **CPU** *n*

Use “central processing unit” and its abbreviation, “CPU,” only when the terms are used explicitly in the product interface. Otherwise, use “processor” or “microprocessor.”

“CPU,” or “central processing unit,” is an older term for “processor” or “microprocessor.”

! **crash** *v*

Use a more specific term, such as “fail.”

✓ **criteria** *n*

Use only as a plural noun. For the singular form, use “criterion.”

✓ **criterion** *n*

Use as a singular noun. Use “criteria” only as a plural noun.

✓ **cross-reference** *n*

Write as shown - hyphenated.

⊗ **CRUD** *adj*

Do not use. Use “create, retrieve, update, and delete.”

⊗ **CS/2** *n*

Do not use. Use “Communications Server for OS/2,” or when space is limited, use “CS OS/2.”

⊗ **CS/390** *n*

Do not use. Use “Communications Server for OS/390,” or when space is limited, use “CS OS/390®.”

⊗ **CS/AIX** *n*

Do not use. Use “Communications Server for AIX.”

⊗ **CS/NT** *n*

Do not use. Use “Communications Server for Windows NT.”

⊗ **Ctrl-click** *v*

Do not use. Use “press Ctrl while you click” for novice users. Use “press Ctrl and click” for experienced users.

✓ **customer** *n*

In software development, use “customer” to refer to an individual who uses a product or service.

In a software development context, “customer” is generally used to refer to the role for whom an offering is being designed and developed. In marketing content, however, do not use “customer”; use “client” instead.

## D

✓ **daemon** *n*

Spell as shown - not “demon.”

! **DASD** *n*

Use “DASD,” or “direct access storage device,” only when a more specific term, such as “hard disk drive” or the specific storage-device name, cannot be used.

✓ **data** *n*

Use as a singular noun with a singular verb, even though “data” is the plural of “datum.”

✓ **data file** *n*

Write as shown - two words.

✓ **data flow** *n*

Write as shown - two words.

✓ **data mart** *n*

Write as shown - two words.

✓ **data pool** *n*

Write as shown - two words.

✓ **data set** *n*

Write as shown - two words.

✓ **data sheet** *n*

Write as shown - two words.

✓ **data source** *n*

Write as shown - two words.

✓ **data store** *n*

Write as shown - two words.

✓ **data type** *n*

Write as shown - two words - unless you are using it as a variable.

✓ **database** *n*

Write as shown - one word.

! **datatype** *n*

Use only as a variable. Otherwise, use “data type.”

⊙ **datum** *n*

Do not use. Use “data” as a singular noun with a singular verb.

⊙ **daughterboard** *n*

Do not use. Use the specific name or function of the plug-in adapter that you are referring to.

✓ **daylight saving time** *n*

Write as shown - all lowercase and with the singular “saving.”

✓ **dc** *n*

For the abbreviation of “direct current,” write in lowercase - “dc”.

✓ **DD statement** *n*

Spell as shown. Do not use as a synonym for “ddname.”

! **ddname** *n*

Spell as shown - all lowercase - to represent the name of a DD statement. Do not use “ddname” to mean “DD statement.”

⊙ **DDNAME** *n*

Do not use. Use “ddname.”

✓ **deactivate** *v*

Use “deactivate,” not “inactivate.”

✓ **deallocate** *v*

Use “deallocate,” not “unallocate.”

! **deblock** *v*

Use “unblock” except in CICS information.

⊙ **debuggable** *adj*

Do not use. Rephrase the sentence to use the verb or noun “debug.” For example, change “You must rebuild the debuggable version” to “You must rebuild the version that can be debugged.”

⊙ **decompress** *v*

Do not use to refer to restoring files that were compressed by using a compression utility. Use “extract.”

⊙ **deconfigure** *v*

Do not use. Use “unconfigure.”

⊙ **deinstall** *v*

Do not use. Use “uninstall.”

⊙ **deinstallation** *n*

Do not use. Use “uninstallation.”

! **demilitarized zone** *n*

Do not use “demilitarized zone,” which has military connotations, or “perimeter network.” Use “DMZ.”

A “DMZ,” also referred to in the industry as a “demilitarized zone” or “perimeter network,” is a configuration that includes multiple firewalls, which add layers of protection between a corporate intranet and a public network, such as the Internet.

! **demo** *v*

Do not use, except in marketing content. Use “demonstrate.”

! **demo** *n*

Do not use, except in marketing content. Use “demonstration.”

- ⊗ **demon** *n*  
Do not use to describe a program that runs unattended. Use “daemon.”
- ✓ **demonstrate** *v*  
Use “demonstrate,” not “demo.”
- ✓ **demonstration** *n*  
Use “demonstration,” not “demo.”
- ✓ **demount** *v*  
Use “demount” except in information for a UNIX system, such as AIX. In that case, use “unmount” or “remove.”
- ✓ **deploy** *v*  
Use only as a verb. The noun or adjective is “deployment.”
- ⊗ **deploy** *n*  
Do not use, as in “the deploy.” Use “deployment.”
- ⊗ **deploy** *adj*  
Do not use, as in “the deploy code.” Use “deployment” (for example, “deployment code”).
- ⊗ **depress** *v*  
Do not use to refer to pressing keys, buttons, or latches or typing on a keyboard. Use “press” or “type” to refer to a keyboard, and use “press” to refer to hardware devices.
- ⊗ **deregister** *v*  
Do not use. Use “unregister.”
- ✓ **descendant** *adj, n*  
Spell as shown - not “descendent.”
- ⊗ **descendent** *adj, n*  
Do not use. Use “descendant.”
- ! **deselect** *v*  
Do not use to refer to removing a mark from a check box. Use “clear.” Use instead of “unselect” in other situations.
- ! **designed to** *v*  
In technical information, do not write “designed to” to describe a concrete product function. For example, do not write “product X is designed to provide...”; instead, write “product X provides...”  
In some situations, it is appropriate to use “designed to,” for example, to refer to potential performance benefits but ensure that you do not make a false claim.
- ⊗ **desire** *v*  
Do not use. Use “want.”
- ⊗ **desired** *adj*  
Do not use. Use “required” or “the <item> that you want.”
- ! **destroy** *v*  
Do not use to indicate removal of an object from a database. Write specifically what happens to the object, such as “delete from the database.”

✓ **developer kit** *n*

Use “developer kit,” “Java developer kit,” or “Java SDK” as a generic reference to a developer kit that is not from Oracle.

⊗ **diagnostic** *n*

Do not use as a noun. Use “diagnostics.” Use “diagnostic” only as an adjective (for example, “the diagnostic tests”).

✓ **diagnostic** *adj*

Use only as an adjective (for example, “diagnostic tests”). Do not use as a noun.

“Diagnostic” is an adjective and should be followed by the noun that it is modifying (for example, “tests”).

✓ **diagnostics** *n*

Use as an alternative to “diagnostic tests.”

✓ **dial-up** *adj*

Write as shown - hyphenated. Do not use as a noun, only as an adjective (for example, “the dial-up connection”).

✓ **dialog** *n*

Spell as shown to refer to communication with a computer - not “dialogue.” Spell as “dialogue” only when referring to a conversation between people. Do not use “dialog” for “dialog box.” Use “dialog box” only in technical information for programmers, where it is important to distinguish the different parts of the interface. For most user information, use “window” when referring to a graphical interface.

✓ **dialog box** *n*

Use only in technical information for programmers where it is important to distinguish parts of the interface. Do not use “dialog” or “dialogue box.” For most user information, use “window” when referring to a graphical interface.

A dialog box is a secondary window that gathers additional information from the user.

! **dialogue** *n*

Use “dialogue” only to refer to a conversation between people. Use “dialog” when referring to communication with a computer.

⊗ **dimmed** *adj*

Do not use. If an interface control is displayed but is not available, use “disabled.” If the control is not displayed, use “unavailable.”

! **direct access storage device** *n*

Use “direct access storage device,” or “DASD,” only when a more specific term, such as “hard disk drive” or the specific storage-device name, cannot be used.

! **disable** *v*

Do not use to refer to making something ineffective or incapable. Use only to describe the act of making an interface control or product function unavailable for users of the product.

! **disabled** *adj*

Use only to describe an interface control that is displayed but is not available or a product function that has been made unavailable. If the interface control is not displayed, use “unavailable,” not “disabled.”

! **disc** *n*

Spell as shown only for “compact disc” and “digital video disc.” Otherwise use “disk.”

! **discuss** *v*

Do not use to refer to describing a subject in written information. For example, write “The following section contains information about...” not “The following section discusses...”

! **disk** *n*

Spell as shown for all types of disks except compact discs and digital video discs.

⊙ **dismount** *v*

Do not use. Use “demount” except in information for a UNIX system, such as AIX. In that case, use “unmount” or “remove.”

! **display** *v*

Use only as a transitive verb. For example, write “the message is displayed” or “the system displays a message,” not “the message displays.”

✓ **DMZ** *n*

Use in preference to “demilitarized zone.” Do not use “perimeter network.”

A “DMZ,” also referred to in the industry as a “demilitarized zone” or “perimeter network,” is a configuration that includes multiple firewalls, which add layers of protection between a corporate intranet and a public network, such as the Internet.

✓ **DO-WHILE, Do-While, do-while** *adj*

Write the programming statement as shown - hyphenated - and follow the capitalization convention of the programming language.

⊙ **domestic** *adj*

Do not use “domestic” and “foreign” to differentiate geographic locations. Use the names of the respective countries or regions, or use phrases such as “United States only” and “countries other than the United States.”

⊙ **DOS environment** *n*

Do not use. Use “DOS session.”

✓ **DOS session** *n*

Use “DOS session,” not “DOS environment” or “virtual DOS machine.”

✓ **dotted decimal** *adj*

Write as shown - not hyphenated.

✓ **double quotation mark** *n*

Write as shown to refer to the double quotation mark (") character. Use “quotation mark” to refer generically to a single quotation mark (') or a double quotation mark (") character.

Typically, use the straight keyboard character (") as a double quotation mark. Word processors often distinguish between left double quotation marks (“) and right double quotation marks (”).

⊙ **double quote** *n*

Do not use. Use “double quotation mark.”

⊙ **double quote mark** *n*

Do not use. Use “double quotation mark.”

✓ **double-byte** *adj*

Write as shown - hyphenated.

✓ **double-click** *v*

Write as shown - hyphenated. Also, use “double-click,” not “double-click on” to describe the action.

⊗ **double-click on** *v*

Do not use. Use “double-click.”

✓ **doubleword** *n*

Write as shown - one word.

⊗ **downlevel, down-level** *adj*

Do not use. Use “earlier,” “previous,” or “not at the latest level.”

✓ **downtime** *n*

Write as shown - one word.

⊗ **downward compatible** *adj*

Do not use. Use “compatible with earlier versions.”

⊗ **drag and drop** *v*

Do not use. Use “drag,” which includes the action of dropping an object.

✓ **drag-and-drop** *adj*

Write as shown when used as an adjective - hyphenated.

⊗ **drill down** *n*

Do not use as a noun. Use only as a verb.

✓ **drill down** *v*

Write as shown - two words - and use only as a verb (for example, “Drill down to the folder that contains your file”).

⊗ **drill up** *v*

Do not use. “Drill up” is jargon and should not be used in technical information. Use “navigate.”

⊗ **drilldown** *n*

Do not use as a noun. Use only as a verb, and write as two words - “drill down.”

! **driver** *n*

Use “device drive,” “network drive,” or another appropriate descriptive qualifier on first occurrence in a topic or paragraph. Use “driver” alone only when you are referring to the circuit that sends signals to a device.

! **drop-down** *adj*

Use only if you must specify the type of menu or list.

! **due to** *prep*

Do not use to mean “because of.” Use “due to” only in adjectival clauses. Although the use of “due to” as a synonym of “because of” has some acceptance in modern English usage, it is imprecise and, therefore, not suited to technical writing.

Incorrect: “Due to the power failure, the update stopped.” Correct: “Because of the power failure, the update stopped.” Correct: “The power failure was due to an electrical storm.”

! **dump** *n*

Use carefully to avoid unintentionally offensive phrasing, such as “take a dump.” Preferred usage includes the modifier “memory” (for example, “When the program ends abnormally, it creates a memory dump.”).

⊙ **dumpfile** *n*

Do not use. Use “dump file.”

✓ **DVD drive** *n*

Use if the read/write characteristic of the drive varies, cannot be predicted, or is irrelevant.

! **DVD-ROM** *n*

Use only if you must specify that the DVD is read only; otherwise, use “DVD.” Do not use to refer to a “digital video disc.”

! **DVD-ROM drive** *n*

If the read/write characteristic of the drive varies, cannot be predicted, or is irrelevant, use “DVD drive.”

! **DVD-RW drive** *n*

If the read/write characteristic of the drive varies, cannot be predicted, or is irrelevant, use “DVD drive.”

## E

⊙ **e, e-** *adj*

Do not create terms using the prefix “e” or “e-.”

⊙ **e-book** *adj, n*

Do not use. Use “ebook.”

! **e-commerce** *n*

Do not use to mean the subset of electronic business that involves the exchange of money for goods or services purchased over an electronic medium such as the Internet. Use the term only as part of a product name; otherwise, use a term such as “online business” or “electronic business.”

⊙ **e-fix** *n*

Do not use. Use the appropriate term, such as “fix,” “interim fix,” “program temporary fix,” or “test fix.”

⊙ **e-mail** *adj, n*

Do not use. Use “email.”

⊙ **e.g.** *conj*

Do not use. Use “for example.”

✓ **earlier** *adv*

Use to refer to a previous software version or fix level.

✓ **ebook** *adj, n*

Write as shown - one word. If this term occurs at the beginning of a sentence or title, use “Ebook.”

✓ **EEPROM** *n*

This abbreviation stands for “electrically erasable programmable read-only memory,” not “electronically erasable programmable read-only memory.”

EEPROM is a special type of PROM that can be erased by exposing it to an electrical charge.

⊙ **eFix** *n*

Do not use. Use the appropriate term, such as “fix,” “interim fix,” “program temporary fix,” or “test fix.”



! **either** *adj*

Use to mean “any one of two.”

Although “either” can be used to mean “each,” as in “close the latch on either side of the cover,” avoid this usage. Use “each” to avoid confusion or imprecision.

✓ **EJB** *adj*

Use only as an adjective, as in “EJB server” or “EJB component.”

The artifact that is created by EJB programmers is called enterprise beans, EJB beans, or EJB components, not EJBs. Note that if the noun following “EJB” is uppercase, you should consult your IPL, because the term is a proper noun.

✓ **email** *adj, n*

Write as shown - one word. If this term occurs at the beginning of a sentence or title, use “Email.”

⊙ **email** *v*

Do not use as a verb. Use only as an adjective or noun, such as in “Send an email.”

✓ **embed** *v*

Write as shown - not “imbed.”

! **enable** *v*

Use to describe the action of making an interface control or product function available to users. Avoid stating that inanimate objects grant abilities to people, as in “the product enables you to...” Whenever possible, use a direct, user-focused alternative such as “you can use the product to...” or “with this product, users can...”

✓ **enabled** *adj*

Use only to describe an interface control or a product function that has been made available.

An interface control or product function that is enabled can also be disabled.

⊙ **end user** *n*

Do not use. Use “user.”

⊙ **end-user interface** *n*

Do not use. Use “graphical interface” or “interface.”

✓ **endpoint** *n*

Write as shown - one word.

✓ **ensure** *v*

Write as shown - not “insure,” except in the context of an insurance policy.

✓ **enter** *v*

Use to refer to entering text in fields in a graphical interface. Alternately, use “type.” Use “type,” “enter,” or “issue” to refer to entering a command on a command line or at a command prompt; use one term consistently throughout your information.

✓ **errata** *n*

Use only as a plural noun. For the singular form, use “erratum.”

✓ **erratum** *n*

Use as a singular noun. Use “errata” only as a plural noun.

✓ **error message** *n*

Write as shown - not “error,” to refer to a message that notifies the user of an error. Use “message” as a generic term to refer to an informational message, a warning message, or an error message.

⊗ **etc.** *n*

Do not use. Use “and so on” when you list a clear sequence of elements, such as “1, 2, 3, and so on” or “Monday, Tuesday, Wednesday, and so on.” When you list items that do not form a clear sequence, use appropriate descriptive wording, such as “device drivers, firmware, and other code.”

✓ **Ethernet** *n*

Write as shown - with an initial uppercase “E”.

⊗ **EUI** *n*

Do not use “end-user interface” or “EUI.” Use “graphical user interface” or “interface.”

✓ **euro** *n*

Write as shown - lowercase.

The word “euro” has a lowercase initial “e,” just as the United States “dollar” has a lowercase initial “d.” Although the European Union specifies “euro” as the plural form in its own official publications, use the usual English plural form by adding an “s.” This usual usage has been authorized by the EU and adopted by many publishers.

✓ **EuroReady** *adj*

Write as shown.

✓ **executable** *adj*

Use only as an adjective, followed by the noun that it is modifying (for example, “executable program” or “executable routine”).

! **execute** *v*

Use only in technical documentation and only if a simpler, less technical term, such as “run” or “issue,” or a more specific term, such as “start” or “enter,” is inappropriate. If “execute” is used as a keyword, you can use it in related text to maintain consistency.

! **exit** *adj, n*

Do not use to mean “exit routine” or “exit program.”

Use “exit” as a noun only to refer to the point in a program from which control exits and goes to an external exit routine or exit program.

! **exploit** *v*

Use only to mean “to make productive use of.” In most cases, write “use.” “Exploit” can have negative connotations, implying that an unfair advantage is being gained.

! **exportation** *n*

Use only in the context of shipping goods and services. Do not use to refer to moving data or files - use “export” as an adjective, followed by a noun (for example, “export operation” or “export process”).

✓ **extract** *v*

Write as shown - not “decompress” or “unzip,” to refer to restoring files that were compressed with a compression utility.

## F

✓ **fail back** *v*

Write as shown - two words - when used as a verb.

✓ **fail over** *v*

Write as shown - two words - when used as a verb.

✓ **failback** *n*

Write as shown - one word - when used as a noun or adjective.

✓ **failover** *n*

Write as shown - one word - when used as a noun or adjective.

! **family name** *n*

Use only when it is necessary to distinguish a family name from other types of surnames, or if you need to be consistent with external material that uses “family name” as a synonym of “surname.” In most cases, use “surname.”

✓ **farther, farthest** *adv*

Use “farther” and “farthest” to express a physical distance. Do not use “further” or “furthest.”

✓ **fast path** *n*

Write as shown - two words. Do not use initial uppercase letters, unless “fast path” is part of a product name or feature name.

✓ **fast-path** *adj*

Write as shown - hyphenated.

! **fatal** *adj*

Use only to refer to situations resulting in death, and not to refer to the failure of a program or application. Use “unrecoverable” or other wording that indicates that an operation is disrupted.

This term is typically used in hardware documentation.

✓ **fax** *n*

Write as shown - lowercase.

✓ **fiber** *adj*

Spell as shown, except in the special case of “Fibre Channel,” where the U.K. English spelling of “fibre” has been adopted. For example, refer to “fiber-optic” and “multimode fiber.”

✓ **Fibre Channel** *n*

Spell as shown to refer to the Fibre Channel standard.

✓ **Fibre Channel** *adj*

Spell as shown to refer specifically to the standard, as in “Fibre Channel standard” and “Fibre Channel Protocol.” Do not hyphenate this term in its adjective form.

✓ **field** *n*

In most cases, write as shown; do not use “text field” or “text entry field.” For example, write “the User ID field” rather than “the User ID text field.” Use a qualifier such as “entry” if necessary to distinguish between different types of fields for a specific audience such as programmers.

- ✓ **file mode** *n*  
Write as shown - two words - unless you are using it as a variable.
- ✓ **file name** *n*  
Write as shown - two words - unless you are using it as a variable.
- ✓ **file set** *n*  
Write as shown - two words - unless you are using it in the context of a UNIX system (such as AIX), in which case it is one word (fileset).
- ✓ **file system** *n*  
Write as shown - two words.
- ✓ **file type** *n*  
Write as shown - two words - unless you are using it as a variable.
- ! **filemode** *n*  
Use only as a variable. Otherwise, use “file mode.”
- ! **filename** *n*  
Use only as a variable. Otherwise, use “file name.”
- ! **filetype** *n*  
Use only as a variable. Otherwise, use “file type.”
- ⊙ **fill in** *v*  
Do not use. Use a more precise verb, such as “complete,” “enter,” or “specify.”  
Examples: (1) “Complete the remarks section.” (2) “Enter the name and address.” (3) “Specify the job queue parameter.”
- ✓ **firewall** *n*  
Write as shown - one word.
- ⊙ **first name** *n*  
Do not use. Use “given name,” not “first name” or “Christian name,” to refer to the name that is used to identify an individual within a group, such as a family.
- ✓ **fix pack** *n*  
Write as shown - lowercase - in the generic sense. Use initial uppercase letters only when referring to a specific fix pack number, as in “Next, install Fix Pack 2.”
- ⊙ **fixed disk drive** *n*  
Do not use. Use “hard disk drive.”
- ✓ **flash** *v*  
Use “flash,” not “blink,” to refer to indicator lights.
- ✓ **flash memory** *n*  
Write as shown - lowercase. Do not use “flash storage.”
- ⊙ **flash storage** *n*  
Do not use. Use “flash memory.”
- ⊙ **floppy, floppy disk, floppy drive** *n*  
Do not use. Use “diskette” and “diskette drive.”

! **florescent** *adj*

Do not use to refer to a type of lighting. Use “fluorescent.”

✓ **fluorescent** *adj*

Spell as shown - not “florescent” - to refer to a type of lighting.

⊙ **FOD** *n*

Do not use. Use “Files On-Demand.”

⊙ **following** *n*

Do not use as a noun except to refer to a group of followers, adherents, or partisans. For example, do not write “Do the following” or “The functions include the following” as lead-in wording to a list. Use “following” only as an adjective, as in “Complete the following steps” or “The adapter has the following functions.”

⊙ **foo, foobar** *n*

Do not use. These terms are variants of an acronym of a profanity that is sometimes used by developers in code. If you see either term in sample code, revise the example or do not publish it. Rewrite any text to omit these terms.

✓ **foot-pound** *n*

Write as shown - hyphenated.

In the metric system, torque is measured in newton-meters. One newton-meter equals 0.738 foot-pound; one foot-pound equals 1.356 newton-meters.

⊙ **for instance** *adv*

Do not use. Use “for example.”

⊙ **foreign** *adj*

Do not use to differentiate geographic locations. Use the names of the respective countries or regions, or use phrases such as “United States only” and “countries other than the United States.”

⊙ **forward compatible** *adj*

Do not use. Use “compatible with later versions.”

✓ **forward slash** *n*

Write as shown to refer to the / character.

! **free** *adj, adv*

Do not use when referring to money or financial transactions. Use “at no cost” or “at no initial cost.”

Some companies interpret “free” to mean free for the life of the product. Because this meaning is rarely the intent of marketers, use of the term can result in legal problems.

⊙ **FTP** *v*

Do not use as a verb, as in “FTP the file.” Use only as a noun or adjective, as an abbreviation for File Transfer Protocol, for example, “Use FTP to copy the file.”

⊙ **fubar** *n*

Do not use. This term is an acronym of a profanity that is sometimes used by developers in code. If you see this term in sample code, revise the example or do not publish it. Rewrite any text to omit the term.

✓ **fullword** *adj, n*

Write as shown - one word.

**! functionality** *n*

Use only to refer to a set of functions and their specified properties. Consider using a simpler term, for example “functions.”

✓ **further, furthest** *adj*

Use to express a degree or quantity, not a physical distance. To express a physical distance, use “farther” and “farthest.”

**G**

✓ **gauge** *n, v*

Spell as shown - “gauge.”

✓ **generally** *adv*

Use to mean “in disregard of specific instances” or “in all instances.” For example, write “Generally, hot-swap devices can be removed and replaced while the server is operating.”

The definitions of “generally,” “normally,” “typically,” and “usually” are similar, and in some cases, more than one of these terms might be applicable. Use your judgment in deciding which term best applies.

**! geography** *n*

Do not use to mean “geographical area.” For example, do not write, “This version is available in all geographies.” Write, for example, “This version is available worldwide.”

**! given** *adj*

Do not use to mean “particular” or “specific.” Consider whether any adjective is necessary.

In many cases, no adjective is necessary. For example, in the sentence “Select this choice to enable a DIMM connector,” no adjective is necessary before “DIMM.”

✓ **given name** *n*

Use “given name,” not “first name” or “Christian name,” to refer to the name that is used to identify an individual within a group, such as a family.

**! GMT** *n*

Do not use “Greenwich mean time” (GMT) and “coordinated universal time” (UTC) interchangeably.

Greenwich mean time (GMT) is the mean solar time at the prime meridian (0 degrees longitude) of Greenwich, England. Greenwich mean time is sometimes called Z time or Zulu time. Although Greenwich mean time and coordinated universal time are sometimes used interchangeably, they are not synonyms.

Greenwich mean time is an approximate time. Because the second is no longer defined in terms of astronomical phenomena, the preferred name for this time scale is coordinated universal time (UTC).

**! graphical user interface, GUI** *n*

Use these terms if you know that your intended audience is familiar and comfortable with what they represent, but in most cases you can write instructions that tell how to access the graphical user interface without using a generic noun.

Avoid “in the GUI, do this” or “in the interface, do that.” In tasks, refer to the specific part of the graphical user interface, such as the name of a window, field, pane, or view. Use “GUI” or “graphical user interface” when you need contrast with named non-GUI components or character-based interfaces, such as a command-line interface.

✓ **gray** *adj*

Spell as shown - not “grey.”

⊙ **grayed, grayed out** *adj*

Do not use. If an interface control is displayed but is not available, use “disabled.” If the control is not displayed, use “unavailable.”

Although the terms “grayed” and “grayed out” are widely used within the computer industry, they are nevertheless jargon and can cause accessibility problems.

! **green screen** *n*

In most cases, use a more precise term such as “3270 application,” “5250 application,” or “character-based interface.”

“Green screen” is occasionally used to refer to monochrome display devices. However, the term “green screen” has a different meaning in the film and video industry, and it probably means little to translators or to a younger generation of programmers. Use more precise terms to refer to 3270 or 5250 applications, data streams, or emulation mode. If you need a term to contrast with “GUI,” use “character-based interface.” If you must use “green screen,” for example because you believe your audience will use it as a search term, enclose the first occurrence in quotation marks to indicate that it is a nonstandard term, clarify what it means, and thereafter use preferred alternatives. For example, write “You can use this tool to add a web interface to 5250 character-based applications (sometimes called “green screen applications”)” and then, having established the equivalence, use “5250 application” for subsequent references in the same document.

! **Greenwich mean time** *n*

Do not use “Greenwich mean time” (GMT) and “coordinated universal time” (UTC) interchangeably.

Greenwich mean time (GMT) is the mean solar time at the prime meridian (0 degrees longitude) of Greenwich, England. Greenwich mean time is sometimes called Z time or Zulu time. Although Greenwich mean time and coordinated universal time are sometimes used interchangeably, they are not synonyms. Greenwich mean time is an approximate time. Because the second is no longer defined in terms of astronomical phenomena, the preferred name for this time scale is coordinated universal time (UTC).

⊙ **grey** *adj*

Do not use. Use “gray.”

✓ **group ID** *n*

Write as shown - two words with “ID” in uppercase.

## H

✓ **halfword** *adj, n*

Write as shown - one word.

✓ **handheld** *adj*

Write as shown - one word. Do not use as a noun.

⊙ **hard boot** *n*

Do not use. Use “Turn the system off and then back on” or “Restart the system.”

⊙ **hard copy** *n*

Do not use. Use “hardcopy.”

✓ **hard disk** *n*

Use to refer to the disk in a hard disk drive.

✓ **hard disk drive** *n*

Write as shown - no hyphenation. “Hard disk” is a common short form, but the longer, more complete term is preferred. Do not use “hard file.”

Ensure that indexes and metadata include “hard file” for users who search for that term.

⊗ **hard drive** *n*

Do not use. Use “hard disk” or “hard disk drive” as appropriate.

⊗ **hard file** *n*

Do not use. Use “hard disk” or “hard disk drive” as appropriate.

✓ **hardcopy** *n*

Write as shown - one word.

! **hash, hash sign** *n*

Use “number sign” to refer to the # character unless you are writing information exclusively for a UK audience.

! **have to** *v*

Use “have to” only when the use of “must” is too restrictive. For example, “you do not have to...” is not the same as “you must not...”

If an action must be performed, use “must,” not “have to”; for example instead of “you have to format the diskette,” write “you must format the diskette.” Consider using imperative mood: “Format the diskette.”

However, write “you might have to format the diskette” when you want to convey that circumstances determine whether you format it; in such cases, “you must format the diskette” clearly would be inaccurate.

! **headless** *adj*

Use only when it is part of the standard terminology of a product. In most cases use an expression such as “from a command prompt” or “without the Eclipse user interface.”

If you must use “headless,” explain what it means in your context and put it in quotation marks. Never use as an adverb, for example, “running headless”; use only as an adjective, for example, “running in “headless” mode.”

! **health** *n*

Use only when it is part of the standard terminology of a product. Otherwise, use “condition,” “state,” or another appropriate term.

! **healthy** *adj*

Use only when it is part of the terminology of a product. Otherwise, use “working correctly” or another appropriate term.

✓ **heat sink** *n*

Write as shown - two words.

✓ **help** *n*

Write as shown - lowercase.

! **higher** *adv*

Do not use to describe versions of software or fix packs. Use “later.”

⊗ **hit** *v*

Do not use to refer to pressing keys or typing on a keyboard. Use “press” or “type.”



✓ **home page** *n*

Write as shown - two words, lowercase. “Home page” has an initial uppercase “H” only when it is part of a proper noun.

The terms “home page,” “web page,” and “website” have different meanings and should not be used interchangeably.

✓ **host ID** *n*

Write as shown - two words with “ID” in uppercase.

✓ **host name** *n*

Write as shown - two words.

! **hostfile** *n*

Use only as a variable. Otherwise, use “host file” or “hosts file.”

! **hostname** *n*

Use only as a variable. Otherwise, use “host name.”

✓ **hover help** *n*

Write as shown - two words. Use “hover help,” not “tooltip” to refer to explanatory text, rich text, or links that can be viewed by moving a cursor over a graphical user interface (GUI) element, such as an icon, field, or text string.

The term “tooltip” refers to a brief, plain text description that is displayed when a cursor is moved over a graphical image, such as an icon, that does not otherwise have a label.

✓ **how-to** *adj*

Write as shown - hyphenated and lowercase. For example, refer to a “how-to procedure.” Do not use as a noun.

⊗ **HOWTO** *n*

Do not use. Use “how-to” (lowercase and hyphenated) only as an adjective (for example, “how-to procedure”).

I

⊗ **i-fix** *n*

Do not use. Use “interim fix.”

⊗ **i.e.** *conj*

Do not use. Use “that is.”

✓ **I/O** *adj*

Write the abbreviation of “input/output” as shown - uppercase with a forward slash.

✓ **ID** *n*

Write the abbreviation of “identification” or “identifier” as shown - all uppercase (for example, “user ID”).

! **if...then** *conj*

Avoid using “then” to introduce an independent clause that follows an “if” clause. For example, write “If you set a password, access is restricted,” not “If you set a password, then access is restricted.”

Use the “if...then” construction only to clarify that a conditional relationship exists between two actions or events. For example, the “if...then” construction can improve clarity when you are joining two long clauses.

⊙ **IF THEN, If Then, if then** *adj*

Do not use. Use “IF-THEN,” “If-Then,” or “if-then” according to the capitalization convention of the programming language.

! **if v. whether** *conj*

Use “if” to express a condition and “whether” to express an alternative.

Example of correct usage: “If the job is canceled, you must determine whether any other jobs exist.”

Example of incorrect usage: “Inform the administrator if the printer has been started.” This second example can have either of the following meanings: 1. If the printer has been started, tell the administrator. (Tell the administrator only if the printer has been started.) 2. Tell the administrator whether the printer has been started. (Regardless of the situation, you must tell the administrator.)

✓ **IF-THEN, If-Then, if-then** *adj*

Write as shown - hyphenated and using the capitalization convention of the programming language.

⊙ **iFix** *n*

Do not use. Use “interim fix.”

⊙ **ifix** *n*

Do not use. Use “interim fix.”

! **illegal** *adj*

Use only for matters of law. Otherwise, use a term such as “invalid,” “not allowed,” or “incorrect.”

! **illuminate** *v*

Use only as a transitive verb. For example, write “the light is illuminated,” not “the light illuminates.”

⊙ **imbed** *v*

Do not use. Use “embed.”

! **impact** *v*

Use only to mean “to strike forcefully.” Otherwise, use “affect.”

! **importation** *n*

Use only to refer to shipping goods from one country to another. Do not use to refer to moving data or files; use “import” as an adjective, followed by an appropriate noun (for example, “import operation” or “import process”).

! **in conjunction with** *prep*

Use “with” in most cases to avoid wordiness.

⊙ **in depth** *adj*

Do not use. Use “in-depth.”

⊙ **in line** *adj*

Do not use. Use “inline.”

! **in order to** *prep*

Use “to” in most cases to avoid wordiness.

⊙ **in other words** *prep*

Do not use. Use “for example” or “that is.” Ideally, state the original information clearly so that it does not require explanation.

- ⊗ **in spite of** *prep*  
Do not use. Use “regardless of” or “despite.”
- ⊗ **in the event** *conj*  
Do not use. Use “in case,” “if,” or “when.”
- ✓ **in-depth** *adj*  
Write as shown - hyphenated.
- ⊗ **in-line** *adj*  
Do not use. Use “inline.”
- ⊗ **inactivate** *v*  
Do not use. Use “deactivate.”
- ! **inactive** *adj*  
Do not use to refer to an interface control. If an interface control is displayed but is not available, use “disabled.” If the control is not displayed, use “unavailable.”
- ⊗ **inch pound** *n*  
Do not use for the imperial measurement of torque. Use “inch-pound.”
- ✓ **inch-pound** *n*  
Write the imperial measurement of torque as shown - hyphenated.  
  
In the metric system, torque is measured in newton-meters. One newton-meter equals 8.851 inch-pounds; one inch-pound equals 0.113 newton-meter.
- ✓ **indexes** *n*  
Use “indexes” for the plural of “index” unless the context requires “indices,” such as in mathematics.
- ! **indices** *n*  
Use “indexes” for the plural of “index” unless the context requires “indices,” such as in mathematics.
- ! **infinite** *adj*  
Do not use to refer to a large or indeterminate quantity, as in “an infinite number of color combinations.”  
Use an actual number or a scale that relates to a number, as in “more than 1,000,000 color combinations.”
- ⊗ **info center, infocenter** *n*  
Do not use. Use “information center.”
- ⊗ **infopop** *n*  
Do not use. Use “pop-up help.”
- ✓ **information about** *prep*  
Use “information about,” not “information on.”
- ✓ **information center** *n*  
For a generic reference, write as shown - two words, lowercase. To refer to a specific information center, use uppercase “I” and uppercase “C” (for example, “WebSphere Application Server Information Center”).
- ⊗ **information on** *prep*  
Do not use. Use “information about.”
- ✓ **initial capital letters** *n*  
Write as shown - do not abbreviate to “initial caps.”

- ⊙ **initial caps** *n*  
Do not use. Use “initial capital letters.”
- ✓ **inline** *adj*  
Write as shown - one word, unhyphenated.
- ⊙ **input** *v*  
Do not use as a verb. Use “type” or “enter” as appropriate.
- ! **input-output** *adj, n*  
Write as “input/output” except where the hyphenated spelling is established, such as in COBOL.
- ✓ **input/output** *adj, n*  
Write as shown, with a forward slash, except where the hyphenated spelling is established, such as in COBOL.
- ⊙ **install** *adj, n*  
Do not use as an adjective or a noun. Use “installation.”
- ✓ **install** *v*  
Use only as a verb. For the adjective and the noun, use “installation.”
- ✓ **installation** *adj, n*  
Use as an adjective and as a noun, not “install.”
- ⊙ **InstallShield** *adj*  
Do not use to refer to an installation program that was created by using the InstallShield product. Use “installation program” or “installation wizard.”  
InstallShield is a trademark of another company.
- ✓ **instant message** *n*  
Use only as a noun.
- ⊙ **instant message** *v*  
Do not use as a verb. Use wording such as “send an instant message.”
- ⊙ **insure** *v*  
Do not use. Use “ensure.”
- ✓ **interim fix** *n*  
Write as shown - two words, lowercase, no abbreviation.
- ⊙ **internationalization** *n*  
Do not use.
- ! **internet** *n*  
Write with a lowercase “i” to refer to a general collection of interconnected networks that use the Internet suite of protocols.
- ! **Internet** *n*  
Write with an uppercase “I” to refer to the well-known, worldwide collection of interconnected networks that use the Internet suite of protocols and that permits universal public access.
- ⊙ **Internet address** *n*  
Do not use. Use “Internet Protocol address” or “IP address.”

✓ **Internet Protocol address** *n*

Use “Internet Protocol address” or “IP address,” not “Internet address.”

✓ **intranet** *n*

Write as shown - lowercase. Use to refer to an internet that has restricted access, such as in an enterprise or organization.

! **invoke** *v*

Use a simpler term, such as “start” or “call,” if it conveys the same meaning.

Although “invoke” is prevalent in the industry, it might cause problems for translators and readers whose first language is not English.

⊙ **io** *adj*

Do not use as the abbreviation of “input/output.” Use “I/O”.

✓ **IP address** *n*

Use “IP address” or “Internet Protocol address,” not “Internet address.”

⊙ **IPL** *v*

Do not use this abbreviation of “initial program load” as a verb, as in “The system engineer IPLed the system.” Use wording such as “The system engineer loaded the initial program.”

⊙ **irrecoverable** *adj*

Do not use. Use “unrecoverable.”

✓ **issue** *v*

Use “type,” “enter,” or “issue” to refer to entering a command on a command line or at a command prompt. Use one term consistently throughout your information.

⊙ **IT Resources Optimization** *n*

Do not use. Use wording such as “optimization of IT resources.”

IT Resources Optimization is a trademark of another company.

⊙ **ITRO** *n*

Do not use. Use wording such as “optimization of IT resources.”

## J

⊙ **jar** *v*

Do not use to refer to the creation of a Java archive (JAR) file. Use a verb such as “compress” or “archive.”

! **Java Development Kit** *n*

Use only to refer to a developer kit from Oracle. For a generic reference, use “developer kit,” “Java developer kit,” or “Java SDK.”

✓ **Java SDK** *n*

Use “Java SDK,” “Java developer kit,” or “developer kit” as a generic reference to a developer kit that is not from Oracle.

⊙ **JavaBean** *n*

Do not use. Use “JavaBeans.”

✓ **JavaBeans** *n*

Write as shown - one word, uppercase “J,” uppercase “B,” plural.

⊙ **Javadoc, Javadocs, javadocs** *n*

Do not use as a noun. To refer to the output of the Javadoc tool, use “Javadoc information,” “Javadoc HTML documentation,” “API documentation,” or “Java API documentation.”

✓ **Javadoc** *adj*

Write as shown - uppercase “J,” singular. Use only as an adjective. For example, use “Javadoc tool” to describe the tool, or use “Javadoc information,” “Javadoc HTML documentation,” “API documentation,” or “Java API documentation” to describe the output of the tool.

The Javadoc tool from Oracle generates API documentation in HTML format from doc comments in source code.

! **JDK** *n*

Use this abbreviation of “Java Development Kit” only to refer to a developer kit from Oracle. For a generic reference, use “developer kit,” “Java developer kit,” or “Java SDK.”

✓ **job log** *n*

Write as shown - two words.

✓ **job stream** *n*

Write as shown - two words.

⊙ **joblog** *n*

Do not use. Use “job log.”

✓ **judgment** *n*

Spell as shown - not “judgement.”

## K

✓ **k** *n*

Write as shown - lowercase - to mean 1000. Use it only in combination with a unit-of-measure abbreviation, such as bps, Hz, g, or m, never by itself.

For example, write “24 kbps,” not “24 k bits per second.”

✓ **K** *n*

Write as shown - uppercase - to mean 1024. Use it only in combination with the abbreviations of bits (b) and bytes (B), never by itself.

For example, write “64 KB,” not “64 K.”

See “Multiplier prefixes for bits and bytes” on page 172.

✓ **kanji** *adj*

Write as shown - lowercase.

✓ **kbps** *n*

Write as shown - lowercase “k.”

Transmission rates are multiples of 1000, not 1024, and the lowercase “k” always means 1000 in the metric system.

! **keepalive message** *n*

Use only in the context of Internet communication.

Do not confuse with the similar but unrelated term “liveness message.”

⊖ **key** *v*

Do not use. Use “type” or “press.”

✓ **keystore** *n*

Write as shown - one word.

! **kill** *v*

Do not use except when you are documenting a UNIX system, such as AIX. Use “end” or “stop.”

! **kilobyte** *n*

Use the abbreviation KB or kB, not the spelled-out form. If your audience needs to see the spelled-out form of an abbreviation, include the spelled-out form parenthetically on first use only, and use only the abbreviation in all other occurrences.

In SI metric style, the abbreviation of the prefix kilo is lowercase “k”. However, this guide distinguishes between uppercase “K” (meaning 1024) and lowercase “k” (meaning 1000). Therefore, KB means 1024 bytes, and kB means 1000 bytes.

See “Multiplier prefixes for bits and bytes” on page 172.

## L

✓ **labeled** *adj, v*

Spell as shown - not “labelled.”

⊖ **laptop** *n*

Do not use to refer to hardware. Use “notebook” to refer to a mobile computer.

For safety, do not use wording that implies that such a computer can be used while placed on a person’s lap.

⊖ **last name** *n*

Do not use. Use “surname,” not “last name,” to refer to the name that is used to identify an individual as a member of a group, such as a family, tribe, or caste.

✓ **later** *adv*

Use to refer to a subsequent software version or fix level.

! **launch** *v*

Do not use unless it is part of the terminology of the product that you are documenting. Use “start” or “open.”

✓ **launchpad** *n*

Write as shown - one word.

✓ **left** *adj*

Use “left,” not “left-hand.”

✓ **Left Arrow key** *n*

Write as shown - uppercase “L” and “A” and unhyphenated.

✓ **left-align** *v*

Use “left-align,” not “left-justify.”

✓ **left-aligned** *adj*

Write as shown - hyphenated. Use “left-aligned,” not “left-justified,” to refer to text that is aligned at the left margin.

⊗ **left-hand** *adj*

Do not use. Use “left.”

⊗ **left-justified** *adj*

Do not use. Use “left-aligned.”

⊗ **left-justify** *v*

Do not use. Use “left-align.”

✓ **leftmost** *adj*

Use to refer to something farthest to the left (for example, on a page or a panel).

! **legacy** *adj*

Do not use to refer to older software, applications (as in “legacy product”), values, programming languages, or technologies that are being supplemented or replaced. In particular, avoid any implication that a product is old-fashioned or might not include up-to-date technologies. However, it is all right to refer to “legacy data.”

Because this usage can cause problems for our clients, specify the product information without any explanatory adjectives. For products that are still supported, but are not being actively developed, use “existing,” “heritage,” “traditional,” “established,” “mature,” “earlier,” or another appropriate neutral description in preference to “legacy.” To compare an existing value with a newer one, use words showing time relationships, such as “earlier” or “previous.”

! **let** *v*

Avoid stating that inanimate objects grant abilities to people, as in “the product lets you...” Whenever possible, use a direct, user-focused alternative such as “you can use the product to...” or “with this product, users can...”

! **leverage** *v*

Do not use in technical information. Write “use.” For example, write “to use the power management mode,” not “to leverage the power management mode.” In marketing content, use this term only to mean to “gain an advantage by the use of something.” For example, write “leverage the experience of 4,400 consultants” or “to leverage your existing service life cycles.”

In technical information, “leverage” does not translate correctly in some languages. Although it is employed widely in marketing content, avoid overuse of the term.

✓ **licensed program** *n*

Use “licensed program,” not “program product.”

✓ **life cycle** *n*

In most cases, write as shown - two words. Use “lifecycle” (one word) only if it is used in a product interface, is part of an established product name, or is part of the name of an external standard.

✓ **life-cycle** *adj*

In most cases, write as shown - hyphenated. Use “lifecycle” (one word) only if it is used in a product interface, is part of an established product name, or is part of the name of an external standard.

! **light** *v*

Do not use as an intransitive verb. For example, write “the LED is lit,” not “the LED lights.”



- ! **like** *conj*  
Do not use to mean “such as.”
- ⊙ **line cord** *n*  
Do not use. Use “power cable” or “power cord.”
- ✓ **link-edit** *v*  
Write as shown - hyphenated.
- ✓ **link-editing** *n*  
Write as shown - hyphenated.
- ✓ **Linux** *adj*  
Write as shown - uppercase “L”. Use only to refer to the Linux operating system or the kernel. Do not describe it as a “UNIX system.” Linux is not a certified UNIX system.
- ! **lite** *adj*  
Avoid using this term to describe or explain that a function or product has limited capabilities. It is appropriate to use the term when it is part of a formal, approved product or function name, but in those instances, it is still preferable to avoid the term in explanatory text.
- ! **liveness message** *n*  
Use only in the context of High Performance Routing (HPR).  
Do not confuse “liveness message” with the similar but unrelated term “keepalive message.”
- ! **load** *v*  
Do not use as a synonym for “install.”
- ⊙ **loadtime** *n*  
Do not use. Use the noun “load time” or the adjective “load-time.”
- ⊙ **localization** *n*  
Do not use.
- ✓ **log file** *n*  
Write as shown - two words.
- ✓ **log in** *v*  
Write as shown when used as a verb - two words.
- ! **log in to** *v*  
Write as shown - three words. Use only in documentation for UNIX systems, such as AIX. Otherwise, use “log on to.”
- ⊙ **log into** *v*  
Do not use. Use “log in to.”
- ✓ **log off** *v*  
Write as shown when used as a verb - two words.
- ! **log off from** *v*  
Write as shown - three words. Do not use “log off of.” In documentation for UNIX systems (such as AIX), use “log off.”

- ⊗ **log off of** *v*  
Do not use. Use “log off from.”
- ✓ **log on** *v*  
Write as shown when used as a verb - two words.
- ✓ **log on to** *v*  
Write as shown - three words.
- ⊗ **logfile** *n*  
Do not use. Use “log file.”
- ✓ **login** *adj, n*  
Write as shown when used as an adjective or noun - one word.
- ✓ **logoff** *adj, n*  
Write as shown when used as an adjective or noun - one word.
- ✓ **logon** *adj, n*  
Write as shown when used as an adjective or noun - one word.
- ⊗ **look and feel** *n*  
Do not use. Use wording that more specifically expresses what you mean.
- ! **look-and-feel** *n*  
In technical information, use wording that more specifically expresses what you mean.
- ! **lose** *v*  
Do not use to refer to a connection, as in “the connection is lost” or “you lost the connection.” Use “broken.”
- ! **lost** *adj*  
Do not use to refer to a connection, as in “the connection is lost” or “you lost the connection.” Use “broken.”
- ! **lower** *adv*  
Do not use to describe versions of software or fix packs. Use “earlier.”
- ✓ **lower left, lower right** *n*  
Use “lower left” or “lower right,” not “bottom left” or “bottom right,” to refer to the location of an item in an interface.  
  
Accessibility requirement: People who are blind or have low vision might not be able to understand information if it is conveyed only by location. Provide additional text information other than location. For example, write “The tables are displayed in the Table List pane, which is in the lower right of the window,” not “The list of tables is displayed in the lower right of the window.”
- ✓ **lower-left, lower-right** *adj*  
Use “lower-left” or “lower-right,” not “bottom-left” or “bottom-right,” to refer to the location of an item in an interface.  
  
Accessibility requirement: People who are blind or have low vision might not be able to understand information if it is conveyed only by location. Provide additional text information other than location. For example, write “The tables are displayed in the Table List pane, which is in the lower-right corner of the window,” not “The list of tables is displayed in the lower-right corner of the window.”
- ✓ **lowercase** *adj*  
Write as shown - one word - to refer to small letters.

The term “lower case” (two words) refers only to one of the two cases in which compositors stored type: the lower case, where they stored small letters.

## M

### ⊙ **M.V.** *n*

Do not use. Use “major vector.”

### ! **machine** *n*

Use a more specific term such as “workstation,” “personal computer,” “server,” or “component.” In the mainframe context, use the name of the operating system followed by the word “system” as in “OS/390 system.”

### ⊙ **main directory** *n*

Do not use. Use “root directory.”

### ✓ **makefile** *n*

Write as shown - one word.

### ! **manager** *n*

Do not confuse the concept of a client/server model with that of an agent/manager model.

Clients depend on servers, and agents depend on managers. Regarding requests, clients request services from servers, and managers request services from agents.

### ⊙ **manipulation button** *n*

Do not use. Use “right mouse button.”

### ⊙ **marketing rep** *n*

Do not use. Use “marketing representative.”

### ✓ **marketing representative** *n*

Use “marketing representative,” not “marketing rep” or “sales representative.”

### ✓ **mashup** *n*

Write as shown - one word.

### ! **master and slave** *n*

Do not use “slave.” Use “subordinate” to refer to the devices controlled by the master device.

Note that “master and subordinate” are not synonyms of “parent and child.” In a UNIX system (such as AIX), “master and slave” is acceptable usage.

### ! **may** *v*

Use only to indicate permission. Otherwise, use “can” or “might.”

“May” is overused in technical information and should in most instances be changed to “can” or “might.”

### ⊙ **memory stick** *n*

Do not use.

This term is a trademark of Sony.

Use “USB flash drive.”

### ✓ **menu bar** *n*

Write as shown - two words.

- ✓ **message** *n*  
Use “message” as a generic term to refer to an informational message, a warning message, or an error message.
- ✓ **metadata** *n*  
Spell as shown - no hyphen.
- ✓ **mice** *n*  
Use “mice” as the plural of “mouse.”
- ⊗ **microcomputer** *n*  
Do not use. Use “personal computer” or “PC”.
- ✓ **midmarket** *adj, n*  
Write as shown - one word.
- ✓ **might** *v*  
Use “might” to indicate probability or possibility.
- ! **migrate** *v*  
Do not use to mean “upgrade” or “port.”  
The terms “migrate,” “upgrade,” and “port” are not synonyms. To migrate is to move data, users, or applications to a new program, platform, or environment. Migration can occur between unlike systems, for example, between two different vendors’ databases, and migrating usually involves more work than upgrading. To upgrade is to replace software with a new release or fix level of the same program or to replace hardware with a newer model or more powerful technology. An upgrade involves little work on the user’s part. To port is to move an application program from the operating system for which it was developed to a different operating system. Porting requires less effort than redevelopment. With open technologies such as Java, porting might require no extra work at all.
- ! **mixed case** *adj*  
Hyphenate the term if you use it before a noun that it modifies (for example, “a mixed-case password”).
- ! **mobile** *adj*  
Use “mobile” only as a general term to refer to notebooks and handheld devices that are employed by a user who is frequently moving among various locations and might be using different types of network connections (for example, dial-up, LAN, or wireless)."
- ⊗ **motherboard** *n*  
Do not use. Use “system board.”
- ✓ **mount point** *n*  
Write as shown - two words.
- ⊗ **mouse button 1** *n*  
Do not use. Use “left mouse button.”
- ⊗ **mouse button 2** *n*  
Do not use. Use “right mouse button.”
- ⊗ **mouse over** *v*  
Do not use. Use “point to” or “move the mouse pointer over.”  
“Mouse” is not a verb, and “mouse over” is probably impossible to translate.

✓ **move** *v*

Use “move” to refer to moving a cursor, not “position.”

✓ **multichannel** *adj*

Write as shown - one word.

⊖ **multijobbing** *n*

Do not use. Use “multitasking.”

✓ **multimedia** *n*

Write as shown - one word.

✓ **multitasking** *n*

Use “multitasking,” not “multijobbing.”

✓ **multitiered** *adj*

Write as shown - one word. Do not use “multi-tier” or “multi-tiered.”

! **must** *v*

Use “must,” not “have to” or “need to,” unless “must” is too restrictive. For example, “you do not have to...” is not the same as “you must not...”

If an action must be performed, use “must,” not “have to” or “need to”; for example, instead of “you have to format the diskette,” write “you must format the diskette.” Consider using imperative mood: “Format the diskette.” However, write “you might have to format the diskette” when you want to convey that circumstances determine whether you format it; in such cases, “you must format the diskette” clearly would be inaccurate.

✓ **MVS**® *n*

Do not confuse “MVS” with “z/OS.”

“MVS” has been used to refer to operating systems such as OS/MVS, MVS/XA, and MVS/ESA. The code that was known as the operating system called MVS/ESA is the basis for z/OS. The combination of MVS/ESA SP-JES2 (or JES3) and MVS Data Facility Product (MVS/DFP or DFSMS/MVS) composed the MVS/ESA operating system. In addition, the old OpenEdition MVS base services were integrated into MVS/ESA SP. Optional features such as OpenEdition MVS Shell and Utilities, OpenEdition MVS Debugger, MICR/OCR, ESCON® Director, and others were also included in MVS/ESA SP. In z/OS, the term “MVS” refers to those services and functions that were provided by the Base Control Program (BCP) of the MVS/ESA operating system. MVS (or BCP, as it is sometimes called) is a base element of z/OS. You might need to use “MVS” as an adjective, but you should do this only if the context requires you to identify the Base Control Program of z/OS. For example, if you are writing about the specific set of commands that deal with the MVS element of z/OS and it is important for the reader to understand that you are referring to only that set of commands (and not to TSO, RACF®, JES2, or JES3 commands), write “MVS commands.”

## N

! **N/A** *adj*

Write as shown to mean “not available” or “not applicable.” Use this abbreviation only when it is not practical to spell it out.

✓ **name server** *n*

Write as shown - two words.

✓ **namespace** *n*

Write as shown - one word - to refer to a document at one specific website that identifies the names of particular data elements or attributes used within an XML file.

⊙ **national language support (NLS)** *n*

Do not use.

⊙ **national language version (NLV)** *n*

Do not use.

! **native** *adj*

Avoid this term when a less-ambiguous term such as “local,” “basic,” or “required” is available.

! **navigate** *v*

Use only when a more direct verb, such as “click,” “select,” “browse,” or “go to,” is not applicable. Use only to provide direction to a location (for example, “Navigate to the directory that contains the files that you want to edit”).

! **navigation** *n*

Do not use as a noun. For example, do not refer to “the navigation” to describe the Contents view in an information center. Use only as an adjective (for example, “navigation tree”).

It is acceptable to use “navigation” as a noun in an index, where nouns are preferred to gerunds.

! **navigation pane** *n*

If you have to refer to the left pane in an information center, use “navigation pane.” In general, refer to the views that are displayed in the navigation pane, not the pane itself.

The navigation pane typically displays views such as Contents, Search Results, Index, and Bookmarks.

! **navigation tree** *n*

Use only to refer to the structure of information center topics. Use “Contents view” to refer to the view that contains the information center contents.

! **navigator** *n*

Do not use to refer to the navigation pane in an information center. Use “navigation pane,” or use “Contents view” to refer to the view that contains the information center contents.

The term “navigator” is used in some products to describe various product features, such as the graphical resource in a Lotus Notes database that comprises hotspots for users to access different parts of the database. Ensure that you use the term consistently within your product documentation.

! **need to** *v*

Avoid using “need to” to refer to a requirement that a product or procedure imposes. Use “must” or, in constructions in which “must” is not idiomatically correct, use “have to” or “required to.”

If an action must be performed, prefer “must,” not “need to.” For example, instead of writing “you need to format the diskette,” write “you must format the diskette.” Alternately, consider using imperative mood: “Format the diskette.” For conditional actions, write “you might have to format the diskette.” Avoid “you do not need to format the diskette.” “Need to” implies a requirement that is imposed from within, and “have to” implies a requirement that is imposed from without.

⊙ **network-centric computing** *n*

Do not use. Use “network computing.”

! **new** *adj*

Do not use “new” to describe products, functions, features, technologies, or standards, other than in topics such as “Summary and changes” or “What’s new” that are updated for each release.

A topic that describes something as “new” might be in circulation long after the “new” item has become established or obsolete.

⊙ **new-line** *adj*

Do not use. Write “newline.”

✓ **newline** *adj*

Write as shown - one word. For example, write “newline character.”

✓ **newton-meter** *n*

Write as shown - hyphenated.

In the United States customary system (or the American system), torque is measured in foot-pounds or inch-pounds. One newton-meter equals 0.738 foot-pound or 8.851 inch-pounds; one foot-pound equals 1.356 newton-meters; and one inch-pound equals 0.113 newton-meter.

✓ **NFS** *n*

Use “NFS” as an abbreviation for “Network File System,” not “network file server.”

An NFS server is a Network File System server.

⊙ **no.** *n*

Do not use as an abbreviation of “number.” Spell out “number.”

The abbreviation “no.” causes problems for translation tools. Because the period marks the end of a translatable segment, translation tools would not associate “no.” with the text that follows, and translators might interpret “no.” as the word “no” at the end of a sentence, not as an abbreviation of “number.”

! **non-English** *adj*

Do not use “non-English” to refer to the language in which information, software, or other text is written.

Use “in languages other than English” or “non-English-language.” Use “non-English-language” only as an adjective, as in “non-English-language document.”

✓ **nonpageable** *adj*

Use “nonpageable,” not “virtual-equals-real” or “V=R.”

⊙ **nonpaged** *adj*

Do not use. Use “nonpageable.”

⊙ **nonrecoverable** *adj*

Do not use. Use “unrecoverable.”

✓ **normally** *adv*

Use to mean “in a manner that does not deviate from a standard pattern.” For example, write “The process is running normally.”

The definitions of “generally,” “normally,” “typically,” and “usually” are similar, and in some cases, more than one of these terms might be applicable. Use your judgment in deciding which term best applies.

! **not available** *adj*

Do not use to refer to an interface control. If an interface control is displayed but is not available, use “disabled”; if the control is not displayed, use “unavailable.”

✓ **notebook** *n*

Use “notebook” to refer to a mobile computer or to an interface element that resembles a physical notebook with pages and tabs.

✓ **null** *adj*

Use “null” only as an adjective, for example, “If a field is null.” For the noun form, use “null value,” for example, “Enter a null value.”

It is preferable to use “null” as an adjective because “null” has various interpretations, such as a blank, a zero value, and a class with no members.

! **NULL** *adj*

Write as shown - uppercase - only if the user is to enter it that way, or if it is a keyword that is spelled that way.

Most occurrences of “null” are not written in uppercase.

✓ **number sign** *n*

Use to refer to the # character unless you are writing information exclusively for a UK audience, in which case use “hash sign,” or unless you are writing information exclusively for a US or Canadian audience, in which case use “pound sign.”

✓ **numeric** *adj*

Use “numeric,” not “numerical.”

Example: The Date field contains numeric data.

⊗ **numerical** *adj*

Do not use. Use “numeric.”

Example: The Date field contains numeric data.

⊗ **NWSAA** *n*

Do not use. Use “NetWare for SAA.”

**O**

! **object oriented** *adj*

Hyphenate the term if you use it before a noun that it modifies (for example, “object-oriented programming”).

! **obsolete** *v*

Use only as a transitive verb, as in “This version obsoletes previous versions.” Consider using a simpler term, as in “This version replaces previous versions.”

✓ **offline** *adj, adv*

Write as shown - one word.

⊗ **offline storage** *n*

Do not use. Use “auxiliary storage.”

✓ **offload** *adj, v*

Write as shown - one word.

⊗ **okay** *adj, n*

Do not use. Use “OK,” but only to refer to the text in an interface element.



✓ **on demand** *adv*

Write as shown - two words.

⊙ **on line** *adj*

Do not use. Use “online.”

⊙ **on ramp** *n*

Do not use. Use a term such as “access method,” or rewrite the information. For example, instead of writing “your on-ramp to fast, affordable meetings,” write “your solution for fast, affordable meetings.”

The term “on-ramp,” used to describe a quick way of accessing a product or feature, is colloquial.

⊙ **on the other hand** *conj*

Do not use. Use “however,” “alternatively,” or “conversely.”

✓ **on-demand** *adj*

Write as shown - one word, hyphenated.

Consider using the term as an adverb instead - “on demand.” For example, consider writing “You can deliver these services on demand” instead of “You can deliver on-demand services.”

⊙ **on-line** *adj*

Do not use. Use “online.”

⊙ **on-ramp** *n*

Do not use. Use a term such as “access method,” or rewrite the information. For example, instead of writing “your on-ramp to fast, affordable meetings,” write “your solution for fast, affordable meetings.”

The term “on-ramp,” used to describe a quick way of accessing a product or feature, is colloquial.

✓ **on-site** *adj, adv*

Write as shown - hyphenated.

! **once** *adv*

Use only to mean “one time.” Do not use as a conjunction to mean “after” or “when.”

✓ **online** *adj, adv*

Write as shown - unhyphenated.

✓ **online help** *n*

Write as shown - two words, lowercase.

⊙ **onsite** *adj*

Do not use. Use “on-site.”

! **Open Source** *adj*

Use only to refer to the Open Source Initiative. Otherwise, use “open source.”

✓ **open source** *adj*

Write as shown - two words, lowercase - except when referring to the Open Source Initiative.

✓ **orient** *v*

Use “orient,” not “orientate.”

⊙ **orientate** *v*

Do not use. Use “orient.”

⊙ **out-of-the-box** *adj*

Do not use. Use text that is suitable for the context and the noun to which this adjective applies. For example, write “applications that you can rapidly integrate into the system,” “items that are ready for immediate use,” “default settings,” “initial values,” or “built-in components.”

“Out-of-the-box” typically refers to something that is ready for customers to use as is, without modification.

! **output** *v*

Do not use if a clearer and more direct alternative is available. For example, “to produce a report” is better than “to output a report.”

⊙ **overhead** *n*

Do not use. Use terminology that is more specific. For example, write “running large queries can increase processor usage,” not “running large queries can increase overhead.”

“Overhead” is ambiguous.

## P

✓ **p.m.** *adj*

Write as shown - lowercase with a period after each letter. Do not use P.M.

! **page** *n*

Use to refer to the part of a notebook where a user makes selections or types data, or use to describe a web-based user interface that is displayed in a browser. For example, a browser-based application on a PDA displays pages. Do not confuse “page” with “tab” or “window.”

✓ **pane** *n*

Use to refer to a separate area in a split window.

A window can be split into two or more panes. For example, a window can have one pane with a group of buttons for one function and other panes for other content. Use lowercase for pane names, as in “the resource management pane.”

! **panel** *n*

Do not use “panel,” “screen,” and “window” interchangeably because they are not synonyms. A “panel” is an area of a screen that displays formatted information and can also include entry fields.

A “screen” is the physical surface of a display device, not the information that is displayed. A “window” is an area of the screen with visible boundaries in which an application program or information is displayed or in which a dialog is presented.

✓ **parent process** *n*

Use “parent process,” not “parent task.”

⊙ **parent task** *n*

Do not use. Use “parent process.”

! **parent topic** *n*

Do not use to refer to a topic in an information center, except when writing instructions about navigating. Whenever possible, refer to the specific topic title, not the relationship of topics to one another.

✓ **parent-child** *adj, n*

Write as shown - hyphenated.

! **patch** *n*

Do not use to mean a software fix. Use a more precise term that is appropriate for your product, such as “fix,” “test fix,” “interim fix,” “fix pack,” or “program temporary fix.”

✓ **path name** *n*

Write as shown - two words.

⊙ **PCOMM** *n*

Do not use. Use “Personal Communications.”

! **PDF** *n*

Do not use as a noun, as in “in a PDF.” Instead of using this construction, use the file type as an adjective followed by the word “file,” as in “in a PDF file.”

! **pel** *n*

Use this abbreviation for “picture element” only in information about the printing industry. See also “pixel.”

! **per** *prep*

Do not use to mean “according to.” Use a phrase such as “according to,” “as,” or “as in.”

⊙ **perimeter network** *n*

Do not use. Use “DMZ.”

A “DMZ,” also referred to in the industry as a “demilitarized zone” or “perimeter network,” is a configuration that includes multiple firewalls. These firewalls add layers of protection between a corporate intranet and a public network, such as the Internet.

! **permit** *v*

Do not use in the sense of an inanimate object granting abilities to people, as in “the product permits you to...,” unless the object is a type of authorization that does grant abilities, as in “DBADM authority permits you to create database objects.” Whenever possible, use a direct, user-focused alternative such as “you can use the product to...” or “with this product, users can...”

✓ **Personal Communications** *n*

Use “Personal Communications,” not “PCOMM.”

✓ **personal computer** *n*

Write as shown - lowercase.

✓ **Phillips screw, Phillips screwdriver** *n*

Write as shown - uppercase “P.”

⊙ **phone** *n*

Do not use. Use “telephone,” “cell phone,” or “mobile phone.”

! **pixel** *n*

Use this abbreviation for “picture element” only in information that does not relate to the printing industry. See also “pel.”

✓ **PL/I** *n*

Write as shown - uppercase “i,” not the numeral “1.”

! **planar** *n*

Do not use to mean “system board.”

⊙ **planar board** *n*

Do not use. Use “system board.”

! **platform** *n*

Do not use this ambiguous term if you can use a more precise term or phrase, such as “operating system.”

! **please** *adv*

Do not use in technical information. Terms of politeness are superfluous, convey the wrong tone for technical material, and are not regarded the same way in all cultures. In marketing information, terms of politeness might be appropriate.

✓ **Plug and Play** *adj*

Write as shown - three words, uppercase “P” on “Plug” and “Play.”

✓ **plug-in** *adj, n*

Write as shown - hyphenated.

✓ **podcast** *n*

Write as shown - one word, lowercase.

⊙ **pop up** *v*

Do not use. Use “opens” (for example, “When the window opens,...”).

! **pop-up** *adj, n*

Use only if you must specify the type of menu, list, or window.

⊙ **pop-up blocker** *n*

Do not use. Use “software to block pop-up ad windows.”

! **pop-up help** *n*

Use only if you must emphasize how the help functions. Otherwise, use “help.”

⊙ **pop-up killer** *n*

Do not use. Use “software to block pop-up ad windows.”

! **pop-up menu** *n*

Use only if you must emphasize how the menu functions. Otherwise, use “menu.”

! **port** *v*

Do not use to mean “migrate” or “upgrade.”

The terms “port,” “migrate,” and “upgrade” are not synonyms. To port is to move an application program from the operating system for which it was developed to a different operating system. Porting requires less effort than redevelopment. With open technologies such as Java, porting might require no extra work at all. To migrate is to move data, users, or applications to a new program, platform, or environment. Migration can occur between unlike systems, for example, between two different vendors’ databases, and migrating usually involves more work than upgrading. To upgrade is to replace software with a new release or fix level of the same program or to replace hardware with a newer model or more powerful technology. An upgrade involves little work on the user’s part.

! **position** *v*

Do not use to refer to moving a cursor. Use “move.”

⊙ **post-requisite** *adj, n*

Do not use. Use “prerequisite.”

- ✓ **prerequisite** *adj, n*  
Write as shown - unhyphenated.
- ! **pound sign** *n*  
Use to refer to the # character only if you are writing information exclusively for a US or Canadian audience. Otherwise, use “number sign.”
- ✓ **power cable** *n*  
Use “power cable” or “power cord,” not “line cord.”
- ✓ **power cord** *n*  
Use “power cord” or “power cable,” not “line cord.”
- ⊙ **power down** *v*  
Do not use. Use “power off” or “turn off.”
- ✓ **power off** *v*  
Write as shown - two words.
- ✓ **power on** *v*  
Write as shown - two words.
- ✓ **power-off** *adj*  
Write as shown - hyphenated.
- ✓ **power-on** *adj*  
Write as shown - hyphenated.
- ⊙ **pre-requisite** *adj, n*  
Do not use. Use “prerequisite.”
- ✓ **preinstall** *v*  
Use “preinstall,” not “preload.”
- ✓ **preinstalled** *adj*  
Use “preinstalled,” not “preloaded.”
- ✓ **preinstalled software** *n*  
Use “preinstalled software,” not “preload.”
- ⊙ **preload** *v*  
Do not use. Use “preinstall.”
- ⊙ **preload** *n*  
Do not use. Use “preinstalled software.”
- ⊙ **preloaded** *adj*  
Do not use. Use “preinstalled.”
- ⊙ **prepend** *v*  
Do not use. Use “add a prefix to.”
- ✓ **prerequisite** *adj, n*  
Write as shown - unhyphenated.

- ✓ **press** *v*  
Use “press,” not “depress,” “hit,” “punch,” “push,” or “strike.”
- ⊗ **preventative** *adj*  
Do not use. Use “preventive.”
- ✓ **preventive** *adj*  
Use “preventive,” not “preventative.”
- ⊗ **prior to** *prep*  
Do not use. Use “before.”
- ✓ **program operator** *n*  
Use “program operator,” not “programmed operator.”
- ⊗ **program product** *n*  
Do not use. Use “licensed program.”
- ✓ **programmable workstation** *n*  
Use “programmable workstation,” not the abbreviation “PWS.”  
“PWS” is a trademark of another company.
- ⊗ **programmed operator** *n*  
Do not use. Use “program operator.”
- ⊗ **Programming Language/I** *n*  
Do not use. Use “PL/I.”
- ! **proper** *adj*  
Do not use to mean “correct,” “applicable,” or “appropriate.”
- ⊗ **pub/sub** *adj, n, v*  
Do not use. Use “publish/subscribe” (adjective, noun) or “publishing and subscribing” (verb).
- ✓ **publish/subscribe** *adj, n*  
Write as shown, with a forward slash.
- ⊗ **pull down** *adj*  
Do not use. Use “pull-down,” but only if you must specify the type of menu or list.
- ! **pull-down** *adj*  
Use only if you must specify the type of menu or list.
- ⊗ **pulldown** *adj*  
Do not use. Use “pull-down,” but only if you must specify the type of menu or list.
- ! **punch** *v*  
Do not use to refer to pressing keys or typing on a keyboard. Use “press” or “type.”
- ! **push** *v*  
Do not use to refer to pressing keys or typing on a keyboard. Use “press” or “type.”
- ⊗ **PWS** *n*  
Do not use. Use “programmable workstation.”

## Q

✓ **quick tour** *n*

Write as shown - two words, in lowercase, when used generically in text. In a title or banner, capitalize the first letter of each word (for example, Quick Tour for WebSphere Message Broker).

✓ **quiesce** *v*

Use as either an intransitive verb, as in “I/O operations quiesce,” or a transitive verb, as in “The program quiesces I/O operations.”

Although some dictionaries do not recognize “quiesce” as a verb and others recognize it only as an intransitive verb, its use in the industry is widespread and acceptable.

✓ **quotation mark** *n*

Write as shown to refer generically to a single quotation mark (') or double quotation mark (") character.

! **quote** *n*

Do not use to refer to cited text. Use “quotation.”

! **quote** *v*

Use to refer to citing text. Do not use to mean to enclose in quotation marks, as in “quote the string.”

⊙ **quote mark** *n*

Do not use to refer generically to a single quotation mark (') or a double quotation mark (") character. Use “quotation mark.”

! **quoted** *adj*

Do not use to mean enclosed in quotation marks, as in “quoted string.”

! **quotes** *n*

Do not use to refer generically to single quotation mark (') or double quotation mark (") characters. Use “quotation marks.”

## R

! **radio button** *n*

Avoid using “radio button” in technical documentation unless you must specify the type of control being referred to. In general, refer to the control by its label alone. For example: Click New.

✓ **re-create** *v*

Use “re-create,” which refers to creating again, not “recreate,” which refers to taking recreation.

⊙ **re-occur** *v*

Do not use. Use “recur.”

✓ **read-only** *adj*

Write as shown - hyphenated.

✓ **read/write** *adj, n*

Write as shown, with a forward slash.

✓ **readme** *adj*

Write as shown - all lowercase letters. Use as an adjective to modify the word “file.” For example, write “in the readme file,” not “in the readme.”

- ✓ **real time** *n*  
Write as shown - unhyphenated.
- ✓ **real-time** *adj*  
Write as shown - hyphenated.
- ! **reboot** *n*  
“Reboot” is widely recognized among technical users, but where usage permits, use “restart.”
- ! **recommend** *v*  
Avoid if possible. A phrase such as “We recommend that you take the following action” could create a potential marketing or legal problem.
- ⊙ **recreate** *n*  
Do not use to refer to creating again. Use “re-create.”
- ✓ **recur** *v*  
Use “recur,” not “reoccur” or “re-occur.”
- ✓ **Redbooks®** *adj*  
Always use this term for an IBM Redbooks publication as an adjective, capitalized, and in the plural form. Preface it with “IBM” the first time you use it. Thereafter, you can use “Redbooks publication.”
- ✓ **redesign** *v*  
Use “redesign,” not “repair,” to refer to making changes to code.
- ! **refer to** *v*  
Use “see” both for references within a document and for cross-references to other material.
- ! **reference** *v*  
Do not use as a synonym for “refer to.” In cross-references, use “see,” not “refer to.”
- ⊙ **rendezvous** *n*  
Do not use in products that use BPEL (Business Process Execution Language). Use “join” instead.
- ⊙ **reoccur** *v*  
Do not use. Use “recur.”
- ! **repair** *v*  
Do not use to refer to making changes to code. Use “redesign.”
- ⊙ **requestor** *n*  
Do not use. Use “requester.”
- ! **reside** *v*  
Use “reside” to refer to someone’s place of residence, not as a location for inanimate objects.  
Example of correct usage: “If you reside in the United States or Canada, you can contact IBM Support at 1-800-IBM-SERV.” Example of incorrect usage: “The application must reside in the C:\Program Files directory.” Instead, use “The application must be in the C:\Program Files directory.”
- ⊙ **respective** *adj*  
Do not use. Rewrite to avoid using this word.  
For example, write “Return each drive to its bay,” not “Return the drives to their respective bays.”



⊖ **respectively** *adv*

Do not use. Rewrite to avoid using this word to associate parts of a sentence.

For example, write “Use the FILEPATH option to specify fixed data from a file. Use the DIRECTORYPATH option...,” not “Use the FILEPATH or DIRECTORYPATH option to specify fixed data from a file or directory, respectively.”

⊖ **retry** *v*

Do not use “retry” as a verb. Use “try again.” For example, do not write “retry connecting to the server.” Write “try connecting to the server again.”

! **reusable** *adj*

Do not use as a synonym for the more specific term “serially reusable.”

Do not use as a synonym for “reentrant” or “reenterable,” which refer to concurrent use rather than serial use.

✓ **right** *adj*

Use “right,” not “right-hand.”

✓ **right adjust** *v*

Use to refer to shifting characters or digits to the right in a storage area.

! **right adjusted** *adj*

Hyphenate the term if you use it before a noun that it modifies (for example, “right-adjusted digits”). Use to refer to characters or digits that are shifted to the right in a storage area.

✓ **right align** *v*

Use “right align,” not “right justify,” to refer to aligning text at the right margin.

✓ **Right Arrow key** *n*

Write as shown, with initial capital letters R and A, and unhyphenated.

⊖ **right double-click** *v*

Do not use.

Use “double right-click.”

✓ **right-aligned** *adj*

Write as shown - hyphenated. Use “right-aligned,” not “right-justified,” to refer to text that is aligned at the right margin.

✓ **right-click** *v*

Use “right-click” when writing for experienced users. Use “Using the right mouse button, click...” when writing for novice users. Also, use “right-click,” not “right-click on,” just as you use “click,” not “click on.”

⊖ **right-hand** *adj*

Do not use. Use “right.”

⊖ **right-justified** *adj*

Do not use. Use “right-aligned.”

⊖ **right-justify** *v*

Do not use. Use “right-align.”

✓ **rightmost** *adj*

Use to refer to something farthest to the right (for example, on a page or a panel).

✓ **road map** *n*

Write as shown - two words.

✓ **roll back** *v*

Write as shown when used as a verb - two words.

✓ **roll forward** *v*

Write as shown when used as a verb - two words.

✓ **roll-forward** *adj*

Write as shown - hyphenated. The preferred usage is as an adjective (usually modifying “recovery”) rather than alone as a noun.

✓ **rollback** *n*

Write as shown when used as a noun or an adjective - one word.

! **root** *n*

For clarity, use “root” as an adjective in most cases. However, the term can be used as a noun in some circumstances, such as in reference to a UNIX user account ID: “Log on as root.”

✓ **root** *adj*

Use this word as an adjective to refer to “root user” or “root authority,” for example, “log in as a root user.”

Where feasible, use “root” as an adjective. However, “root” is sometimes acceptable as a noun, such as when it refers to the ID for a UNIX user account.

✓ **round-robin scheduling** *n*

Write as shown.

⊗ **round-robin task dispatching** *n*

Do not use. Use “round-robin scheduling.”

✓ **rule set** *n*

Write as shown - two words.

! **run** *v*

Do not use “run” to refer to specifying a command on a command line or at a command prompt. Use “type,” “enter,” or “issue.” Use one term consistently throughout your information. You can use “run” in running text, for example, “If you run the abc command...”

! **run time** *n*

Write as shown - two words. Use only in expressions relating to time, such as “at run time” or “during run time.” Do not use as a single word except as an adjective, as in “runtime environment.” Never hyphenate.

⊗ **runnable** *n*

Do not use as a noun. Use only as an adjective, as in “runnable interface.”

✓ **runtime** *adj*

Write as shown - unhyphenated. This spelling is consistent with the Oracle “Java Runtime Environment.” See also “run time.”

## S

### ⊙ **sales representative** *n*

Do not use. Use “marketing representative.”

### ⊙ **sanity check** *n*

Do not use. Explain exactly what you mean. For example, use “test” or “evaluate.”

Jargon, such as “sanity check,” is difficult to translate and is difficult to understand by readers whose first language is not English. For example, rather than writing “The quotes received from the vendors undergo a sanity check to establish whether the technical solution matches the requested services,” you might write “The quotes received from the vendors are checked to verify that the technical solution matches the requested services.”

### ✓ **scalable** *adj*

Spell as shown.

### ✓ **schemas** *n*

Use “schemas,” not “schemata.”

According to Webster’s, both “schemas” and “schemata” are acceptable plural forms of “schema.” However, for consistency’s sake, use “schemas.”

### ⊙ **schemata** *n*

Do not use. Use “schemas.”

### ! **screen** *n*

Do not use “panel,” “screen,” and “window” interchangeably because they are not synonyms. A “screen” is the physical surface of a display device, not the information that is displayed.

A “panel” is an area of a screen that displays formatted information and can also include entry fields. A “window” is an area of the screen with visible boundaries in which an application program or information is displayed or in which a dialog is presented.

### ✓ **screen capture** *n*

Use “screen capture,” not “screenshot” or “screen cap” to refer to a graphic that is part or all of an interface that is displayed on a screen.

### ⊙ **screencap** *n*

Do not use. Use “screen capture.”

### ⊙ **screenshot** *n*

Do not use. Use “screen capture.”

### ! **seamless window** *n*

Use only in programmer documentation. For user documentation, use “runs in a window on the desktop.”

### ⊙ **second name** *n*

Do not use. Use “surname,” not “second name,” to refer to the name that is used to identify an individual as a member of a group, such as a family, tribe, or caste.

### ⊙ **secondary storage** *n*

Do not use. Use “auxiliary storage.”

### ! **section** *n*

In an information center, use to refer to a group of topics in a navigation tree. In a book, do not use in a heading in an information unit. Use as appropriate to refer to a subdivision of text within a chapter or an appendix.

✓ **Secure Shell** *n*

Write as shown - two words, initial uppercase letters.

! **select** *v*

In general, use the verb “click” to indicate an action using a mouse. For check boxes, use “select” and “clear.”

Examples include:

“Click the Product icon to select it.” “Click Create > Hotspot > Link Hotspot.” “Click OK.” “Select the Start check box.” “The Start check box is selected.”

✓ **selected** *adj*

Use to refer to a check box, radio button, menu item or other interface element that is marked or highlighted after selection.

⊙ **selection button** *n*

Do not use. Use “left mouse button.”

⊙ **serial database** *n*

Do not use. Use “nonpartitioned database environment.”

! **server** *n*

Be careful not to confuse the concept of a client/server model with that of an agent/manager model. A client and an agent are alike in their direction of dependency but are opposites in their direction of requests.

Client and agent are similar - but not the same - in that they are both dependent on something else. The client is dependent on the server, and the agent is dependent on the manager. However, they are opposites regarding requests. The client requests services from the server, and the manager requests services from the agent. So, a client and an agent are alike in their direction of dependency but are opposites in their direction of requests.

✓ **service-oriented architecture** *n*

Write as shown - lowercase. In technical documentation, hyphenate “service-oriented.” In marketing collateral, it is common practice to omit the hyphen (“service oriented architecture”).

✓ **set up** *v*

Write as shown when used as a verb - two words.

✓ **setup** *adj, n*

Write as shown when used as an adjective or noun - one word.

⊙ **shift-click** *v*

Do not use. For novice users, write “press Shift while you click.” For experienced users, write “press Shift and click.”

⊙ **ship** *v*

Do not use to indicate that something is included in or with a product. Use “include” or “included.”

Example: Write “The feature is included with the product” rather than “The feature is shipped with the product.”

✓ **shortcut** *adj, n*

Write as shown - one word.

⊙ **shortcut menu** *n*

Do not use. Use “menu” if possible. Use “pop-up menu” if you must emphasize how the menu functions.

**! should** *v*

Always prefer a more direct verb or way of saying something. Omit “should,” or use “must” or “might,” as appropriate.

For example, use “Reset the parameters,” not “You should reset the parameters.”

**! Show Me** *n*

Do not use as a noun (“a Show Me”) to describe a demonstration created with viewlet or Flash technology. Use “demonstration” or “tutorial.” The phrase is permissible as a control label, where it is used as a command.

Some products use “Show Me” as the menu label that opens an animated demonstration. That usage is fine. The term is a command and should not be used as the name of the information type that has been created.

✓ **shut down** *v*

Write as shown when used as a verb - two words.

✓ **shutdown** *adj, n*

Write as shown when used as a noun or an adjective - one word.

**! sibling topic** *n*

Do not refer to a “sibling topic” in an information center. Whenever possible, refer to the specific topic title, not the relationship of topics to one another.

The term “sibling” is often used to describe a hierarchy of objects. Ensure that you use the term consistently within your product documentation.

✓ **sign off** *v*

Write as shown when used as a verb - two words.

✓ **sign off from** *v*

Write as shown - three words.

✓ **sign on to** *v*

Write as shown - three words.

⊙ **signon** *v*

Do not use. Use “sign on.”

The silent “g” can lead to misreading in “signon.”

⊙ **signon** *adj, n*

Do not use. Use “sign-on.”

The silent “g” can lead to misreading in “signon”.

⊙ **Simple Object Access Protocol** *n*

Do not spell out. Use “SOAP.”

**! simply** *adv*

Avoid this word because it is usually superfluous.

**! since** *adv*

To facilitate translation, use this word only to refer to time. Do not use it as a synonym for “because.”

✓ **single quotation mark** *n*

Write as shown to refer to the single quotation mark (') character. Use “quotation mark” to refer generically to a single quotation mark (') or a double quotation mark (") character.

Typically, use the straight keyboard apostrophe (') character (') as a single quotation mark. Word processors often distinguish between left single quotation marks (') and right single quotation marks (').

⊙ **single quote** *n*

Do not use. Use “single quotation mark.”

⊙ **single quote mark** *n*

Do not use. Use “single quotation mark.”

✓ **single sign-on** *n*

Write as shown, with “sign-on” hyphenated.

! **slave** *adj, n*

Do not use. Use “subordinate,” unless you are using “slave” in the context of a UNIX system (such as AIX), where “slave” is acceptable.

✓ **smart card** *n*

Write as shown - two words.

⊙ **SME routine** *n*

Do not use. Use “session management exit routine.”

⊙ **SNA network interconnect exit** *n*

Do not use. Use “session management exit routine enhancement” or “enhanced session management exit routine.”

! **so** *conj*

Do not use by itself as a conjunction. Use a less ambiguous alternative such as “so that” or “therefore.”

✓ **SOA** *adj*

Use the article “an” with this abbreviation. This suggests the pronunciation “S-O-A,” not the pronunciation “soah.”

✓ **SOAP** *n*

Write as shown. Do not spell out as “Simple Object Access Protocol.”

SOAP was originally an acronym for Simple Object Access Protocol. Though the term itself is still used, the acronym was dropped in Version 1.2 of the SOAP specification because the protocol is not mainly used for “object” access. Instead, it is an XML-based messaging protocol. The SOAP specification is currently maintained by the XML Protocol Working Group of the World Wide Web Consortium.

✓ **socket interface** *n*

Spell as shown - “socket interface. Do not use “sockets interface.”

✓ **SOCKS-enabled** *adj*

Spell as shown - “SOCKS-enabled.” Do not use “socksified.”

⊙ **soft boot** *n*

Do not use. Use “Press Ctrl+Alt+Del to restart the system.”

✓ **softcopy** *n*

Write as shown - one word.

✓ **software** *n*

Write as shown - one word.

⊖ **solution** *v*

Do not use as a verb. Use “solve.”

✓ **solution** *n*

Use “solution” to describe a combination of products, software, services, or technology that addresses a particular customer problem or project.

The term “offering” refers to the general hardware, software, or service elements, but “solution” refers to the application of an offering in a specific customer environment by means of offering enabling services.

⊖ **sort merge** *n*

Do not use. Use the separate words “sort” and “merge.”

⊖ **sort-merge** *v*

Do not use. Use the separate words “sort” and “merge.”

⊖ **sort/merge** *v*

Do not use. Use the separate words “sort” and “merge.”

⊖ **spawn (a process)** *v*

Do not use. Use “create.”

✓ **spool** *v*

Write as shown - all lowercase, although it is an acronym for “simultaneous peripheral operations online.”

✓ **spooling** *adj*

Use “spooling,” not “concurrent peripheral processing,” “CPP,” “concurrent peripheral operations,” or “CPO.”

✓ **SQL** *adj*

Use the article “an” with this abbreviation.

This suggests the pronunciation S-Q-L, rather than the more slang “sequel,” which is the pronunciation often used with Microsoft SQL Server.

✓ **SQLJ** *n*

Spell as shown - with an uppercase letter “J.”

✓ **stand-alone** *adj*

Write as shown - hyphenated. Do not use as a noun.

⊖ **start up** *v*

Do not use. Use “start.”

! **startup** *adj*

Write as shown when used as a noun or an adjective - one word.

✓ **store** *n*

In most contexts requiring a noun, use “storage” instead of “store.” In data warehousing, the term “data store” is acceptable.

! **strike** *v*

Do not use to refer to pressing keys or typing on a keyboard. Use “press” or “type.”

✓ **style sheet** *n*

Write as shown - two words.

- ✓ **stylesheet** *adj*  
Write as shown - one word, as in Extensible Stylesheet Language (XSL).
- ✓ **subtopic** *n*  
Write as shown - one word.
- ⊙ **sunset** *v*  
Do not use. If possible, use a more specific term such as “withdraw from service” or “withdraw from marketing.” Otherwise, use a more general term such as “discontinue” or “no longer support.”
- ✓ **supersede** *v*  
Write as shown - not “supercede.”
- ⊙ **supertask** *n*  
Do not use to describe a high-level task topic in an information center. Refer to the specific topic title, not the type of topic.
- ✓ **surname** *n*  
Use “surname,” not “last name” or “second name,” to refer to the name that is used to identify an individual as a member of a group, such as a family, tribe, or caste.  
  
You can use “family name” rather than “surname” if it is necessary to distinguish a family name from other types of surnames, or if you need to be consistent with external material that uses “family name” as a synonym of “surname.”
- ✓ **sync** *adj*  
Spell as shown when used as an adjective - not “synch.”
- ✓ **sync** *v*  
Spell as shown when used as a verb - not “synch.”
- ✓ **sync point** *n*  
Write as shown - two words. Use sync point as the abbreviated form of “synchronization point.”
- ! **system** *n*  
Avoid if you can use a more specific term (such as “computer” or “operating system”). Use “system” to mean the computer, its operating system, and its peripheral devices.
- ✓ **system administrator** *n*  
Write as shown - all lowercase.
- ✓ **system analyst** *n*  
Write as shown.
- ✓ **system board** *n*  
Use “system board,” not “motherboard,” “planar,” or “planar board.”
- ✓ **system engineer** *n*  
Use “system engineer,” not “systems engineer.”
- ✓ **system programmer** *n*  
Use “system programmer,” not “systems programmer.”
- ✓ **systems management** *n*  
Some existing product names might include the singular form “System Management,” but this term should usually be “systems management.”



## T

### ! **tab** *v*

Do not use as a verb to describe navigation in a GUI. Use only to refer to moving a cursor on a display, or the print head of a printer, to a preset location.

### ! **table of contents** *n*

Do not use to refer to the contents of an information center. Use “Contents view.” Use “table of contents” only in books, white papers, and similar documents.

### ✓ **table space** *n*

Write as shown - two words.

### ✓ **tap** *v*

Use only to refer to selecting something on a handheld device.

For information about making selections in a graphical interface, see entries for “click” and “select.”

### ⊙ **tar** *v*

Do not use to refer to the creation of a tape archive (tar) file. Use a verb such as “compress” or “archive.”

### ⊙ **tarball** *n*

Do not use. Use “tar file.”

### ✓ **target disk** *n*

This is a synonym for “destination disk.”

### ✓ **target drive** *n*

This is a synonym for “destination drive.”

### ✓ **target file** *n*

This is a synonym for “destination file.”

### ✓ **taskbar** *n*

Write as shown - one word.

### ⊙ **TCP/IP network** *n*

Do not use. Use “Internet Protocol network” or “IP network.”

“IP network” is more accurate than “TCP/IP” network because (1) the transmission control protocol (TCP) is not a required protocol when IP is used and (2) the network consists of subnetworks that are connected with IP. The use of “TCP/IP network” can lead people to believe that the network is connection-oriented because TCP is a connection-oriented protocol; actually, the network has the characteristics of IP: it is connectionless. However, almost every vendor’s product that allows users to connect with this network has “TCP/IP” in the product name. Thus, the use of “TCP/IP network” is common despite its inaccuracy.

### ! **teamroom** *n*

Write as shown - all lowercase - except to refer to a Lotus Notes TeamRoom.

### ✓ **technology preview** *n*

Write as shown - lowercase. Do not abbreviate as “tech preview.”

“Tech preview” could be erroneously interpreted as “technical preview.”

### ✓ **telecommunication** *n*

Write as shown - singular - to refer to communication at a distance (for example, by telephone). To refer to the science of telecommunication, use “telecommunications.”

✓ **telecommunications** *n*

Write as shown - plural - to refer to the science of telecommunication. To refer to communication at a distance (for example, by telephone), use “telecommunication.”

! **teleprocessing** *n*

Use only to refer to remote-access data processing. Do not use to refer to distributed data processing.

⊗ **teleprocessing line** *n*

Do not use. Use “telecommunication line” or “transmission line.”

⊗ **Telnet** *v*

Do not use as a verb. For example, write “Use Telnet to connect to the server,” not “Telnet to the server.”

! **terminal** *n*

Use only in a mainframe context. In other contexts, use “workstation” or “personal computer.”

! **terminate** *v*

Do not use to refer to stopping a program or operation. Use “end” or “stop.”

✓ **test case** *n*

Write as shown - two words.

! **text field, text entry field** *n*

In most cases, use “field” (for example, “the User ID field”). Use a qualifier such as “text” or “entry” only if necessary to distinguish between different types of fields for a specific audience, such as programmers.

! **thank you** *n*

Do not use in technical information. Terms of politeness are superfluous, convey the wrong tone for technical material, and are not regarded the same way in all cultures. In marketing information, terms of politeness might be appropriate.

✓ **that** *conj*

Use “that,” without a comma, to introduce a restrictive clause. Use “which,” preceded by a comma, to introduce a nonrestrictive clause.

Consider the following examples: (1) The system units, which have two drives, are floor-standing models. (Nonrestrictive) (2) The system units that have two drives are floor-standing models. (Restrictive)

In the first example, all of the system units are floor-standing models and each has two drives. In the second example, some of the system units have two drives, and some do not. Only the ones with two drives are floor-standing models. See “Relative pronouns” on page 29 for more information.

✓ **then** *adv*

In a two-step procedure that is written as one sentence, punctuate “then” as shown in the following examples: (1) “Do this, and then do that.” (2) “Do this; then do that.”

The first example is preferable, but you can use the style shown in the second example if you need to save space. Note that “then” is not a coordinating conjunction (such as “and,” “or,” and “but”). Using “then” as a coordinating conjunction creates a run-on sentence, as in the following example: “Do this, then do that.”

! **there is, there are** *v*

Avoid at the beginning of an independent clause. In most cases rewrite to remove the phrase. For example, instead of “There are three recovery control data sets in the product” write “The product includes three recovery control data sets.”

✓ **thin client** *n*

Write as shown - two words.

- ✓ **thin-client** *adj*  
Write as shown - hyphenated.
- ⊙ **through** *adj*  
Do not use as an adjective. Use “finished” or “completed.”
- ! **throw** *v*  
Use only in Java documentation, as in “throw an exception.” Otherwise, use an alternative construction such as “produce an error.”
- ⊙ **throwable** *n*  
Do not use as a noun. Use only as an adjective, as in “throwable exception” and “throwable class,” and use only in Java documentation.
- ! **throwable** *adj*  
Use only as an adjective, as in “throwable exception” and “throwable class,” and use only in Java documentation.
- ⊙ **thru** *prep*  
Do not use. Use “through.”
- ⊙ **thumbstick** *n*  
Do not use. Use “USB flash drive.”
- ✓ **time out** *v*  
Write as shown - two words.
- ✓ **time slice** *n*  
Write as shown - two words.
- ✓ **time stamp** *v*  
Write as shown - two words.
- ! **time stamp** *n*  
Write as shown - two words. Use “timestamp” only in a DB2 context.
- ⊙ **time-out** *n*  
Do not use. Use “timeout.”
- ✓ **timeout** *adj, n*  
Write as shown - one word.
- ⊙ **timeslice** *n*  
Do not use. Use “time slice.”
- ⊙ **toggle off, toggle on** *v*  
Do not use. Use “toggle.”  
Example: Toggle the switch to the off position.
- ✓ **token ring** *n*  
Write as shown - two words.
- ✓ **token-ring** *adj*  
Write as shown - hyphenated.

✓ **toolbar** *n*

Write as shown - one word.

✓ **toolbar button** *n*

Spell as shown to indicate a button on a toolbar. Do not refer to a toolbar button as an “icon.”

A toolbar button usually has a graphical label, but avoid referring to a toolbar button as an “icon.” In instructions, you can usually write “Click X on the Y toolbar.”

✓ **toolbox** *n*

Write as shown - one word.

! **tooling** *n*

Do not use to refer to a set of development tools associated with a product. Use the simpler, more accurate term “tools.”

“Tooling” can be used as an adjective to refer to activities that tool makers perform, for example, “the Eclipse tooling platform.”

✓ **toolkit** *n*

Write as shown - one word.

✓ **tooltip** *n*

Write as shown - lowercase and one word. Use “tooltip,” not “hover help,” to refer to a brief, plain text description that is displayed when a cursor is moved over a graphical image, such as an icon, that does not otherwise have a label.

The term “hover help” refers to explanatory text, rich text, or links that can be viewed by moving a cursor over a graphical user interface (GUI) element, such as an icon, field, or text string.

⊙ **ToolTip** *n*

Do not use. Use “tooltip.”

⊙ **top left, top right** *n*

Do not use. Use “upper left” or “upper right” to refer to the location of an item in an interface.

Accessibility requirement: People who are blind or have low vision might not be able to understand information if it is conveyed only by location. Provide additional text information other than location. For example, write “The tables are displayed in the Table List pane, which is in the upper right of the window,” not “The list of tables is displayed in the upper right of the window.”

⊙ **top-left, top-right** *adj*

Do not use. Use “upper-left” or “upper-right” to refer to the location of an item in an interface.

Accessibility requirement: People who are blind or have low vision might not be able to understand information if it is conveyed only by location. Provide additional text information other than location. For example, write “The tables are displayed in the Table List pane, which is in the upper-right corner of the window,” not “The list of tables is displayed in the upper-right corner of the window.”

✓ **topic** *n*

Use “topic,” not “article” or “topic node,” to refer to an information unit in topic-based information.

⊙ **topic node** *n*

Do not use to refer to a topic in an information center navigation tree. Use “topic.”

✓ **topic pane** *n*

Use “topic pane,” not “content pane,” to refer to the right pane in an information center, where a topic is displayed, to avoid possible confusion with the Contents view in the navigation pane.

✓ **topic-based information** *n*

Use “topic-based information,” not “article-based information,” to refer to information that has been divided into concept, task, and reference topics.

✓ **totaled** *v*

Spell as shown - one “l.”

! **touch** *v*

Do not use to refer to using a keyboard key or hardware control. Use “press” or “type” to refer to using keys on a keyboard, and use “press” to refer to a hardware control.

⊙ **touchscreen** *n*

Do not use. Use “touch-sensitive screen.”

✓ **toward** *prep*

Use “toward,” not “towards.”

⊙ **transition** *v*

Do not use. Use “make the transition,” “move,” “migrate,” or “change.”

! **translation** *n*

Use to refer to language translation, such as from English to German. Do not use to refer to the conversion of internal data to a different format. Use “conversion.”

! **transparent** *adj*

Do not use to refer to an operation that the user is unaware of, as in “transparent to the user.” Use “not apparent.”

⊙ **tree view** *n*

Do not use to refer to the structure of information center topics. Use “navigation tree.”

⊙ **trillion** *n*

Do not use. Use numerals, not the word, because the value of a trillion is not the same in all countries.

✓ **troubleshoot** *v*

Write as shown - one word.

✓ **truststore** *n*

Write as shown - one word.

! **twistie** *n*

Avoid in technical documentation, unless you need to specify the type of control being referred to. In general, refer to the control by its label only. Use “expand” to refer to clicking a twistie to display content. Use “collapse” to refer to clicking a twistie to hide content (for example, “Expand Properties”).

⊙ **twisty** *n*

Do not use. To refer to the control itself, use “twistie.”

⊙ **TY-RAP** *n*

Do not use. Use “cable tie”; “TY-RAP” is a trademark.

✓ **type** *v*

Use “type” or “enter” to refer to entering text in fields in a graphical interface. Use “type,” “enter,” or “issue” to refer to entering a command on a command line or at a command prompt; use one term consistently throughout your information.

✓ **typically** *adv*

Use to mean “in a manner or circumstance that conforms to the characteristics of a type or group” or “in typical circumstances.” For example, write “A hot-swap device typically has a handle that you can grasp to remove the device from its bay.”

The definitions of “generally,” “normally,” “typically,” and “usually” are similar, and in some cases, more than one of these terms might be applicable. Use your judgment in deciding which term best applies.

⊗ **typo** *n*

Do not use. Use “typing error,” “typographical error,” or other wording.

## U

✓ **UK** *n*

Write as shown - all uppercase, no periods, and no spaces - as the abbreviation of “United Kingdom.”

⊗ **un-install** *v*

Do not use. Use “uninstall.”

⊗ **unallocate** *v*

Do not use. Use “deallocate” to refer to releasing a resource assigned to a task, program, or user.

✓ **unallocated** *adj*

Use to mean “not allocated” or “never allocated.”

✓ **unavailable** *adj*

Use “unavailable,” not “not available,” to describe an interface control that is not displayed. If the interface control is displayed but is not available, use “disabled.”

✓ **unblock** *v*

Write as shown - one word. Use “unblock,” not “deblock,” except in CICS information.

⊗ **uncheck** *v*

Do not use to refer to removing a mark from a check box. Use “clear.”

✓ **uncomment** *v*

Use to describe the act of removing characters from the beginning of a line of code that indicate that the line is not to be compiled.

✓ **unconfigure** *v*

Use “unconfigure,” not “deconfigure.”

! **undeploy** *v*

Use only for Policy Management. For other products, use “remove” or “withdraw.”

✓ **uninstall** *v*

Write as shown - not hyphenated. Use “uninstall,” not “deinstall.”

✓ **uninstallation** *n*

Use “uninstallation,” not “deinstallation.”

## **! UNIX** *adj*

Write as shown - uppercase - to refer to the UNIX operating system.

The Open Group holds the trademark on this term; its trademark guidelines indicate that the preferred usage is “the UNIX system.” Use the UNIX trademark only when you refer to the fact that AIX is a UNIX system or when you refer to products that are certified UNIX operating systems. Do not use as a generic descriptor to refer to other operating systems that are similar to the UNIX system, such as Linux. For example, do not write “On UNIX operating systems, enter the...” Instead, write “On operating systems such as AIX or Linux, enter the...” For complete trademarking rules, see The Open Group’s guidelines at [www.opengroup.org/tm-guidelines.htm](http://www.opengroup.org/tm-guidelines.htm).

## ⊙ **unjar** *v*

Do not use to refer to the extraction of a Java archive (JAR) file. Use “extract.”

## ✓ **unmount** *v*

Use “unmount” or “remove” in documentation for a UNIX system, such as AIX. Otherwise, use “demon.”

## ✓ **unrecoverable** *adj*

Use “unrecoverable,” not “irrecoverable.”

“Unrecoverable” does not have the same translation concerns as “irrecoverable,” which was the previously preferred term.

## ✓ **unregister** *v*

Use “unregister,” not “deregister.”

## ⊙ **unselect** *v*

Do not use. Use “clear” to refer to removing a mark from a check box. Use “deselect” in other situations.

## ⊙ **untar** *v*

Do not use to refer to the extraction of a tape archive (tar) file. Use “extract.”

## ⊙ **unzip** *v*

Do not use “unzip” to mean restoring files from a compressed file. Use “extract.”

The terms “zip” and “ZIP” are registered trademarks of other companies. Using “zip” or “ZIP” can result in a trademark infringement.

## ⊙ **updatable** *adj*

Do not use. Rewrite the sentence (for example, “can be updated” or “can be changed”).

## ⊙ **updation** *n*

Do not use. There is no such word as “updation.” The correct noun is “update.”

## ⊙ **upgradable** *adj*

Do not use. Use “upgradeable.”

## **! upgrade** *v*

Do not use to mean “migrate” or “port.”

The terms “upgrade,” “migrate,” and “port” are not synonyms. To port is to move an application program from the operating system for which it was developed to a different operating system. Porting requires less effort than redevelopment. With open technologies such as Java, porting might require no extra work at all. To migrate is to move data, users, or applications to a new program, platform, or environment. Migration can occur between unlike systems, for example, between two different vendors’ databases, and migrating usually involves more work than upgrading. To upgrade is to replace software with a new release or fix level of the same program or to replace hardware with a newer model or more powerful technology. An upgrade involves little work on the user’s part.

✓ **upgradeable** *adj*

Write as shown - not “upgradable.”

✓ **upper left, upper right** *n*

Use “upper left” or “upper right,” not “top left” or “top right,” to refer to the location of an item in an interface.

Accessibility requirement: People who are blind or have low vision might not be able to understand information if it is conveyed only by location. Provide additional text information other than location. For example, write “The tables are displayed in the Table List pane, which is in the upper right of the window,” not “The list of tables is displayed in the upper right of the window.”

✓ **upper-left, upper-right** *adj*

Use “upper-left” or “upper-right,” not “top-left” or “top-right,” to refer to the location of an item in an interface.

Accessibility requirement: People who are blind or have low vision might not be able to understand information if it is conveyed only by location. Provide additional text information other than location. For example, write “The tables are displayed in the Table List pane, which is in the upper-right corner of the window,” not “The list of tables is displayed in the upper-right corner of the window.”

✓ **uppercase** *adj*

Write as shown - one word - to refer to capital letters.

⊙ **upward compatible** *adj*

Do not use. Use “compatible with later versions.”

! **URL** *n*

If your audience includes web novices, either use “web address” or do not use a term at all. For example, write “go to <http://www.ibm.com...>,” not “go to the following URL...”

“URL” is the abbreviation of “Uniform Resource Locator.”

✓ **US** *n*

Write as shown - all uppercase, no periods, and no spaces - as the abbreviation of “United States.”

⊙ **us** *pron*

Do not use to refer to a company (for example, “Call us...”).

Uncertainty about the identity of “us” - the writers of the information unit, the management of the product-development group, or the management of the company - can cause a potential marketing or legal problem.

✓ **usable** *adj*

Spell as shown.

⊙ **USASCII** *n*

Do not use. Use “ASCII” or “US-ASCII.”

US-ASCII is the 7-bit version of ASCII, which preceded and is the basis of subsequent 8-bit versions such as Latin-1 and coded character sets such as Unicode.

⊙ **USASI** *n*

Do not use. Use “ANSI.”

⊙ **useable** *adj*

Do not use. Use “usable.”



**! user defined** *adj*

Hyphenate the term if you use it before a noun that it modifies (for example, “user-defined data types”).

✓ **user ID** *n*

Write as shown - two words, uppercase “ID” - unless you are referring to a variable, which should be written as “userid” (one word and lowercase “ID”).

**! user interface, UI** *n*

Use these terms if you know that your intended audience is familiar and comfortable with what they represent, but in most cases you can write instructions that tell how to access the user interface without using a generic noun.

Avoid “in the UI, do this” or “in the interface, do that.” In tasks, refer to the specific part of the user interface, such as the name of a window, field, pane, or view. Use “UI” or “user interface” when you need contrast with named non-UI components or character-based interfaces, such as a command-line interface.

✓ **user name** *n*

Write as shown - two words - unless you are using it as a variable.

⊙ **user-friendly** *adj*

Do not use in technical documentation. If a product feature or interface is user-friendly, the information will clearly show this; there is no need to state it explicitly.

**! userid** *n*

Use only as a variable. Otherwise, use “user ID”.

**! username** *n*

Use only as a variable. Otherwise, use “user name.”

**! using** *n*

To avoid ambiguity, replace this gerund with either “by using” or “that uses.”

To refer to something “using” one thing or another is often ambiguous. For example, the sentence “Back up the server using ABC” might mean “Back up the server by using ABC” or “Back up the server that uses ABC.” This advice also applies to gerunds other than “using.” For more information, see “International audiences” on page 235.

✓ **usually** *adv*

Use to mean “in a manner that can be expected” or “in most instances.” For example, write “The failure of a device is usually indicated by a lit system-error LED.”

The definitions of “generally,” “normally,” “typically,” and “usually” are similar, and in some cases, more than one of these terms might be applicable. Use your judgment in deciding which term best applies.

**! UTC** *n*

Do not use “coordinated universal time” (UTC) and “Greenwich mean time” (GMT) interchangeably.

Coordinated universal time (UTC) is the time scale, based on the *Système International* (SI) second, as defined and recommended by the *Comité Consultatif International de la Radio* (CCIR) and maintained (using an atomic clock) by the *Bureau International des Poids et Mesures* (BIPM). The *Système International* is based on three fundamental units of measure (the meter, the kilogram, and the second) and is sometimes called the “MKS system” because of these units. For most practical purposes, UTC is equivalent to the mean solar time at the prime meridian (0 degrees longitude) of Greenwich, England, which is known as Greenwich mean time. UTC is sometimes called Z time or Zulu time, although this is not preferred.

⊙ **utilize** *v*

Do not use. Use the simpler word “use.”

**V**

✓ **V ac** *n*

Write as shown - a space between the number and V - to mean volt ac or volts ac (for example, “115 V ac”).

✓ **V dc** *n*

Write as shown - a space between the number and V - to mean volt dc or volts dc (for example, “5 V dc”).

⊙ **Velcro** *n*

Do not use. Use “hook-and-loop fastener” as the generic term for this product; “Velcro” is a trademark.

⊙ **version** *v*

Do not use as a verb. Use a phrase such as “create a version” or “assign a version number.” Do not use “versioning” either.

✓ **version** *adj*

Use “version control software,” not “versioning software” or “file versioning software.”

Avoid other ambiguous phrases, such as “versioned transaction” or “versioned database.”

✓ **versus** *conj*

Do not abbreviate as “vs.” Spell it out or rewrite with equivalent wording such as “compared to.”

! **via** *prep*

Use this term, which means “by way of,” to refer to routing data, such as in “Messages are routed via SMTP.” In other situations, try to replace “via” with one of the following synonyms: “across,” “along,” “by,” “from,” “on,” or “through.”

⊙ **virtual DOS machine** *n*

Do not use. Use “DOS session.”

✓ **Virtual Storage Access Method** *adj*

After the first occurrence of this term, use the acronym “VSAM,” because the acronym is more commonly recognized.

✓ **Virtual Telecommunications Access Method** *adj*

After the first occurrence of this term, use the acronym “VTAM®,” because the acronym is more commonly recognized.

⊙ **virtual-equals-real** *adj*

Do not use. Use “nonpageable.”

⊙ **virtual-equals-virtual** *adj*

Do not use. Use “pageable.”

✓ **voice mail** *n*

Write as shown - two words.

⊙ **vs.** *conj*

Do not use the abbreviation. Spell it out as “versus” or rewrite with equivalent wording such as “compared to.”

✓ **VSAM** *adj*

Use this acronym after the first occurrence of “Virtual Storage Access Method” because the acronym is more commonly recognized.

✓ **VTAM** *adj*

Use this acronym after the first occurrence of “Virtual Telecommunications Access Method” because the acronym is more commonly recognized.

## W

⊖ **w/o** *prep*

Do not use. Spell out “without.” Likewise, do not abbreviate “with” as “w/”.

⊖ **wait condition** *n*

Do not use. Use “wait state.”

✓ **wait state** *n*

Use “wait state,” not “wait condition.”

⊖ **warm boot** *n*

Do not use. Use “warm start.”

⊖ **warm start** *v*

Do not use. Rewrite to describe the process of starting the computer using previously initialized settings.

✓ **warm start** *n*

Write as shown - two words.

⊖ **warning notice** *n*

Do not use. Use “attention notice.”

! **we** *pron*

Do not use to refer to a company (for example, “We recommend...”).

Uncertainty about the identity of “we” - the writers of the information unit, the management of the product-development group, or the management of the company - can cause a potential marketing or legal problem.

✓ **web** *adj, n*

Write as shown - lowercase “w.”

! **Web** *adj, n*

Write as shown - initial uppercase “W” - only at the start of a sentence, when it is part of a product name, when you refer to a web version such as Web 2.0, or when you write “World Wide Web.” Otherwise write with a lowercase “w”.

✓ **web address** *n*

Write as shown - two words, lowercase “w.”

✓ **web browser** *n*

Write as shown - two words, lowercase “w.”

✓ **web conference** *n*

Use “web conference,” not Webinar.

- ✓ **web page** *n*  
Write as shown - two words, lowercase “w.”  
The terms “web page,” “home page,” and “website” have different meanings and should not be used interchangeably.
- ✓ **web server** *n*  
Write as shown - two words, lowercase “w.”
- ✓ **web service** *n*  
Write as shown - lowercase “w,” lowercase “s” - except in product or function names such as “Web Services Definition Language.”
- ⊙ **web-enable** *v*  
Do not use as a verb. Rewrite, for example “enable for the web.” You can use the adjective “web-enabled.”
- ✓ **webcast** *n*  
Write as shown - one word, lowercase “w.”
- ⊙ **Webinar** *n*  
Do not use. “Webinar” is a trademark. Use “web seminar” or “web conference.”
- ✓ **webmaster** *n*  
Write as shown - lowercase “w.”
- ⊙ **webmistress** *n*  
Do not use. Use “webmaster,” which applies to men and women.
- ✓ **website** *n*  
Write as shown - one word.  
The terms “website,” “home page,” and “web page” have different meanings and should not be used interchangeably.
- ! **whether or not** *conj*  
Use “whether or not” only to mean “regardless of whether” (for example, “Log shunting runs whether or not log archiving is enabled”). Otherwise, use “whether.”
- ✓ **which** *pron*  
Use “which,” preceded by a comma, to introduce a nonrestrictive clause. Use “that,” without a comma, to introduce a restrictive clause.  
Consider the following examples: (a) - nonrestrictive: The system units, which have two drives installed, are floor-standing models. (b) - restrictive: The system units that have two drives installed are floor-standing models. In the first example, all of the system units are floor-standing models and all have two drives installed. In the second example, some of the system units have two drives installed and some do not. Only the ones with two drives installed are floor-standing models. See “Relative pronouns” on page 29 for more information.
- ! **while** *conj*  
Use “while” only to refer to a period of time. To avoid potential ambiguity, do not use the term as a synonym for “although” or “though” in documentation.
- ⊙ **whilst** *conj*  
Do not use. Use “while.”

✓ **white paper** *n*

Write as shown - two words.

! **white space** *n*

Write as shown - two words, except in programming languages that use “whitespace” as one word.

✓ **wildcard** *adj, n*

Write as shown when used as an adjective or noun - one word.

⊙ **wildcard** *v*

Do not use as a verb; use only as a noun or adjective.

! **window** *n*

Do not use “window,” “panel,” and “screen” interchangeably. They are not synonyms. A window is an area of the screen with visible boundaries in which an application program or information is displayed or in which a dialog is presented. Also, windows open; they do not appear or display.

A panel is an area of a screen that displays formatted information and can also include entry fields. A screen is the physical surface of a display device, not the information that is displayed.

! **Windows** *adj*

Use “Windows operating system” or “Windows system,” as appropriate.

✓ **Windows 32-bit operating system** *n*

Write as shown - not “32-bit Windows operating system.” Use this term only for experienced users and only if referring to the applicable operating systems by name is impractical.

This term refers to 32-bit Microsoft Windows operating systems such as Windows 95, Windows 98, Windows NT, Windows 2000, and Windows XP. It excludes Windows 3.1 (a 16-bit operating system) and earlier versions. “Windows 32-bit operating system” is appropriate for experienced users, but novice users might not understand the 32-bit distinction.

✓ **Windows for Workgroups** *n*

Write as shown - “Workgroups” as one word.

⊙ **wiring closet** *n*

Do not use. Use “telecommunications closet.”

⊙ **wish** *v*

Do not use. Use “want.”

✓ **wizard** *n*

Write as shown - lowercase. Use this generic term when you are writing about a specific wizard (for example, the TCP/IP configuration wizard). Do not capitalize “wizard” except in places such as titles and headings where you always use initial capital letters.

If you use initial capital letters when the name of the wizard is not part of a title or heading, you run the risk of trademark infringement, because many wizard names have been trademarked.

✓ **word** *n*

Use “word,” not “fullword,” unless “fullword” has special significance or is part of system or programming terminology.

! **workaround** *n*

Write as shown when used as a noun - one word. Although commonly considered to be programming jargon, “workaround” is acceptable for use if it is restricted to documentation written for programmers.

- ✓ **workflow** *n*  
Write as shown - one word.
- ✓ **workgroup** *n*  
Write as shown - one word.
- ✓ **workload** *n*  
Write as shown - one word.
- ✓ **workspace** *n*  
Write as shown - one word.
- ✓ **workstation** *n*  
Write as shown - one word.
- ✓ **World Wide Web** *n*  
Write as shown - three words, initial uppercase letters.
- ⊙ **world wide, world-wide** *adj*  
Do not use. Use “worldwide.”
- ✓ **worldwide** *adv*  
Write as shown when used as an adverb - one word.
- ✓ **worldwide** *adj*  
Write as shown when used as an adjective - one word.  
The only exception is World Wide Web, which is the name created by the consortium.
- ! **would** *v*  
Use only to refer to an unfulfilled condition or hypothesis and to express the future in the past, for example, “the command was rejected because it would have resulted in the ClusterName attribute being blank.” Do not use as an auxiliary verb, for example, “you would need administrator authority to...” Instead, use the present tense, for example “you need administrator authority to...”.

## XYZ

- ✓ **X Window System** *n*  
Write as shown. Do not use “X-Windows” or “X-Window System.”
- ✓ **x1** *adj*  
This term is pronounced “by one” and takes the indefinite article “a,” not “an.” Similar terms are x4 (by four), x8 (by eight), and so on.
- ⊙ **XSA** *n*  
Do not use. Use “extended subarea addressing.”
- ✓ **zero** *v*  
Use “zero,” not “zero out,” to refer to resetting to zero.
- ⊙ **zero out** *v*  
Do not use. Use “zero” to refer to resetting to zero.

✓ **zeros** *n*

Write as shown, not “zeroes.”

⊗ **zip** *v*

Do not use “zip” to mean the compressing of files with a compression utility. Use “compress,” which applies to a variety of formats and utilities.

The terms “zip” and “ZIP” are registered trademarks. Using “zip” or “ZIP” can result in a trademark infringement.

⊗ **zip file, zipped file** *n*

Do not use to refer to a compressed file. Use “archive” or “compressed file,” which applies to a variety of formats and utilities. To refer to a file that has an extension of “zip,” it is acceptable to use “.zip file.” Do not use “.ZIP file.”

The terms “zip” and “ZIP” are registered trademarks. Using “zip” or “ZIP” can result in a trademark infringement.

⊗ **Zulu time** *n*

Do not use. Use “Coordinated Universal Time.”

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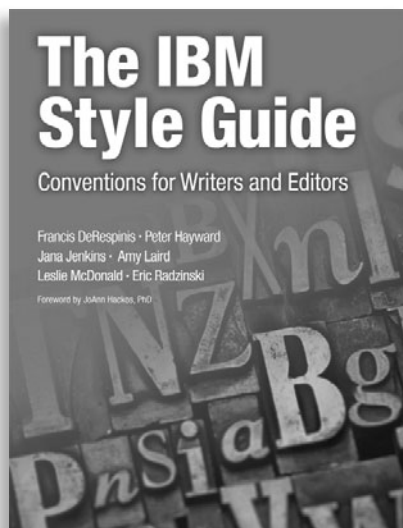
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