



**DOCUMENT
ENGINEERING**

CMPSC 104 – Document Engineering

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Overview

What is technical writing?

Technical writing is a method of effectively conveying ideas and instructions by structuring content to enhance the reader's understanding and perception of the information.

Who is a Technical Writer?

A technical writer communicates a product's technical aspects to both technical and non-technical audiences. They simplify complex concepts into clear, easy-to-understand language to help consumers understand and effectively use products.

Overview

What does a Technical Writer do?

Being a technical writer is not just about writing in a particular style of English. It is more than that.

What are the skills needed to become a Technical Writer?

- Writing Skills
- Technology Savvy
- Communication Skills
- Active Listening Skills
- Common Sense

Software Industry

The software industry includes the development, maintenance, and publication of software. The purpose of software defines industries' functionality and domain.

U.S.-based big five companies (FAANG)

- Facebook
- Apple
- Amazon
- Netflix
- Google

Types of Software Industry

Product
Companies

Finance
Companies

Project based
Companies /
Consultancy

Security
Companies

Ecommerce
Companies

Cloud
Companies

Apple

Google

Microsoft

McKinsey

Morgan Stanley

Facebook

eBay

McAfee

Amazon

Amazon Web
Services

Citibank

Example of documentation


The following page opens:

<https://www.facebook.com/help>.


How can we help you?

Search help articles...


Popular topics




Account Settings
Adjust settings, manage notifications, learn about name changes and more.




Login and Password
Fix login issues and learn how to change or reset your password.




Privacy and Security
Control who can see what you share and add extra protection to your account.



Marketplace
Learn how to buy and sell things on Facebook.




Groups
Learn how to create, manage and use Groups.



Pages
Learn how to create, use, follow and manage a Page.

Looking for something else?



Visit Business Help Centre
Learn more about promoting your business on Facebook

→

Creating an account

Create an account

How do I create a Facebook account?

Note: You must be at least 13 years old to create a Facebook account.

To create a Facebook account:

1. Go to facebook.com and click **Create new account**.
2. Enter your name, email address or mobile phone number, password, date of birth and gender.
3. Click **Sign Up**.
4. To finish creating your account, you need to [confirm your email address or mobile phone number](#).

If you're having problem creating a Facebook account:

To let us know about the problem you're experiencing while creating a Facebook account, you can fill in [this form](#).

If you're having problems logging in:

- If you're having trouble with your password, learn [how to reset your password](#).
- If you still can't log in, [find out what to do next](#).

How to Write

Technical writing is not that easy as it sounds!

Technical writing helps users achieve their goals easily through clear and effective documentation.

To achieve that goal, you should incorporate the following parameters into your writing:

1. Analyze your audience.
2. Understand the product requirements.
3. Improve your English proficiency.
4. Gather information for documentation.
5. Help users complete tasks.
6. Organize information in a structured manner.
7. Test and edit the documentation.

Audience

Audience in Software Industry:

- End-User
 1. Role: Utilizes products/services.
 2. Documentation: User guides, help manuals, and getting started guides.
- Admin

Role: Maintains product/services; handles troubleshooting and service continuity.

Types: Differentiates between internal (product admin) and external (customer-side) roles.
- Engineer

Role: Develops or operates the product.

Knowledge Transfer: Builds the product (developers) and uses APIs (Infrastructure/Cloud Engineers).

Product Requirements.

Understand what type of documentation your product requires.

Types of documents a Technical Writer may need to create, depending on the product requirements:

- End user documentation: Simplifies product use with clear, non-technical language.
- Admin documentation: Provides detailed, technical instructions for system maintenance.
- Installation Guides: Step-by-step installation instructions with system requirements
- FAQs: Organized Q&A format to address common user questions
- Glossary: Defines specialized terms to aid user understanding
- Knowledge-base articles: Comprehensive resources for self-service problem-solving
- Whitepapers: In-depth reports offering solutions to specific issues
- Videos: Visual training materials for onboarding and education.
- Infographics: Quick, visual summaries of complex information

Types of documents

- End User Documentation: [Microsoft Word Support and Training](#)
- Admin Documentation: [AWS Administration Documentation](#)
- Installation Guides: [Ubuntu Installation Guide](#)
- FAQs: [Google Workspace FAQs](#)
- Glossary: [Microsoft Azure Glossary](#)
- Knowledge-Base Articles: [How to Reset a Netgear Router](#)
- Whitepapers: [Bitcoin Whitepaper](#)
- Videos: [How to Reset a Netgear Router](#)
- Infographics: [Machine Learning Process Infographic](#)

English Proficiency

Technical writing uses clear, concise language and proper grammar to effectively communicate technical details to a global audience in English.

Essential Components of Technical Writing:

- Use simple, clear, and direct words; avoid complex vocabulary.
- Define new or unfamiliar terms clearly.
- Consistently use terms to maintain clarity and avoid confusion.
- Correctly spell out unfamiliar acronyms initially and use consistently.

Crafting Effective Sentences:

- Employ short, clear sentences to enhance understanding.
- Avoid negative constructions; use positive statements.
- Maintain parallel structure in lists and comparisons.
- Minimize passive constructions like "there is/there are".
- Choose strong verbs and provide specific data over vague descriptions.

English Proficiency

Grammar and Punctuation:

- Use active voice to make sentences clear and direct.
- Keep verb tenses consistent, preferably in the present tense.
- Ensure subject-verb agreement.
- Apply correct punctuation to clarify and enhance readability.

Tone and Style:

- Use a consistent and appropriate tone; avoid colloquial language.
- Employ imperative mood for instructions and indicative for facts.
- Adhere to organizational style guides; use standard templates.
- Ensure all sections include an introduction, detailed steps, and references.

English Proficiency

Quality and Consistency:

- Ensure documents are grammatically correct and free from typos.
- Maintain uniform terminology throughout the document.
- Continuously update style guides and adopt new technologies for better user experience.

Gather Information for Documentation

In software industry, writers must continually gather updated information to remain effective.

To effectively gather information, follow these three steps:

1. Understand the product.
 - Inquiry and Clarity:
 1. Ask questions to understand the product's purpose, design, and functionality.
 2. Identify and document any unclear aspects or gaps in knowledge.
2. Develop a search strategy.
 - Planning:
 1. Develop a list of keywords and essential questions.
 2. Frame a strategy based on the audience's needs and the timing of information retrieval.
3. Gather materials.
 - Resource Utilization:
 1. Use surveys, interviews with Subject Matter Experts (SMEs), and existing documentation to gather comprehensive information.
 2. Analyze audience feedback and case studies to refine the content.

Help Users Complete Tasks.

Now that we have all the resources and information gathered, what should we do with this information?

Focus on Product

- Provides detailed descriptions of functions, features, and interface elements for **technical users like admins and developers**.
- Limitations: Uses technical terms and assumes prior knowledge, making it difficult for end-users who need practical instructions.

Focus on Process

- **Task-Oriented Approach**: Concentrates on practical tasks users need to perform, such as creating, opening, and renaming documents.
- Emphasizes clear, actionable steps to help users understand and use the product effectively, making it more useful for task completion.

Process-oriented Document

How to create a process-oriented document?

Key elements that shape the content: **Grammar Structure**

- Active Voice
- Present Tense
- Imperative Verbs

Content description method

- User's Perspective
- Headings
- Task Segregation
- Completeness

Visual elements

- Graphics
- Visual Cues

Organizing Information Structurally

- **Stand in the User's Shoes:** Understand and consider the user's perspective.
- **Document Outline:** Structure the document effectively.
- **Detailed Document Introduction:**
 - Coverage: Clearly state what the document covers.
 - Reader Prerequisites: Specify the prior knowledge expected from readers.
 - Scope: Clarify what the document does not cover.
- **Categorized Topics:** Organize topics into distinct categories:
 - Tasks
 - Concepts
 - References

Organizing Information Structurally

- **Complete Coverage:** Ensure all relevant topics are thoroughly addressedChronological
- **Consistent Presentation:** Use parallelism, adhere to templates, and maintain style consistency.
- **Uniform Lists:** Ensure all lists are formatted consistently for easy reading.

Testing and Editing the Documentation

Accurate documents enhance trust and credibility, making editing essential before release.

- Assurance of Complete Information Collection
- Inspection
- Review
- Styling
- Comprehensibility
- Quality Check
- Application of Information

Reference

- Google's Technical Writing Course
- Chicago Manual of Style
- Carey, Michelle, Moira McFadden Lanyi, Deirdre Longo, Eric Radzinski, Shannon Rouiller, and Elizabeth Wilde. Developing quality technical information: A handbook for writers and editors. Pearson Education, 2014.