CMPSC 104 – Document Engineering
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DOCUMENT
ENGINEERING

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Overview

What is technical writing?

Technical writing is a method of conveying ideas and instructions effectively. It involves structuring content in a way that enhances the reader's understanding and perception of the information.

Who is a Technical Writer?

A technical writer is a professional skilled in interpreting and communicating the technical aspects of a product to both technical and non-technical audiences. They simplify complex concepts into clear, easy-to-understand language, acting as industry interpreters who 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

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.

Software Industry

The software industry comprises 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: Microsoft, Apple, Google and Facebook
- Project based Companies / Consultancy: Tata Consultancy Services
- Ecommerce Companies: Amazon, eBay
- Finance Companies: Citibank, Morgan Stanley
- Security Companies: McAfee
- Cloud Companies: Amazon Web Services

How to Write

Technical writing is not that easy as it sounds!

The purpose of technical writing is to enable users to achieve their goals effortlessly 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.

You need to 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
- Admin documentation
- Installation Guides
- FAQs
- Glossary
- Knowledge-base articles
- Whitepapers
- Videos
- Infographics

English Proficiency

Technical writing requires clear, concise communication, blending technical details with proper grammar and style to effectively reach a global audience in UK or US 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 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

- *Content Overview*: Function-oriented descriptions detail every function, feature, and interface element, providing deep conceptual knowledge primarily for technically proficient users like admins and developers.
- *Limitations*: This approach uses technical jargon and assumes prior product knowledge, making it less accessible for end-users needing practical, task-oriented instructions.

Focus on Process

- *Task-Oriented Approach*: Focuses on practical tasks that end-users need to perform, such as creating, opening, and renaming documents, making the information more relevant and directly applicable to user needs.
- *Content Strategy*: This approach prioritizes relevance, practicality, and utility, guiding users through actionable steps and helping them understand the full capabilities of the product, thus often preferred by technical writers for its effectiveness in aiding task completion.

Process-oriented Document

How to create a process-oriented document?

- To achieve this, consider several key elements that shape the content, including grammatical structure, content description methods, and the adopted style.

Grammar Structure

- Active Voice
- Present Tense
- Imperative Verbs

Content description method

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

Visual elements

- Graphics
- Visual Cues

Organizing Information Structurally

Effective technical communication hinges on well-organized information, ensuring users find it coherent and logically structured.

- **Stand in the User's Shoes:** Understand and consider the user's perspective.
- **Document Outline:** Structure the document effectively.
- **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.
- **Topic Segregation:** Organize topics into distinct categories:
  - Tasks
  - Concepts
  - References
- **Comprehensive Topic Coverage:** Ensure all relevant topics are thoroughly addressed.
- **Chronological Organization:** Present information in a logical sequence.
- **Table of Contents:** Often, include a well-organized table of contents helps your users.
- **Parallelism in Information:** Present similar information similarly.
- **Template Usage:** Adhere to established template designs.
- **Style Adherence:** Follow style guidelines consistently.
- **List Presentation:** Ensure all list items are presented consistently.

Testing and Editing the Documentation

Accurate and well-edited documents enhance trust and credibility for both the writers and their organization, making the testing and editing phase essential before release.

- Assurance of Complete Information Collection
- Information Inspection
- Information Review
- Information Styling
- Information Comprehensibility
- Information 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.