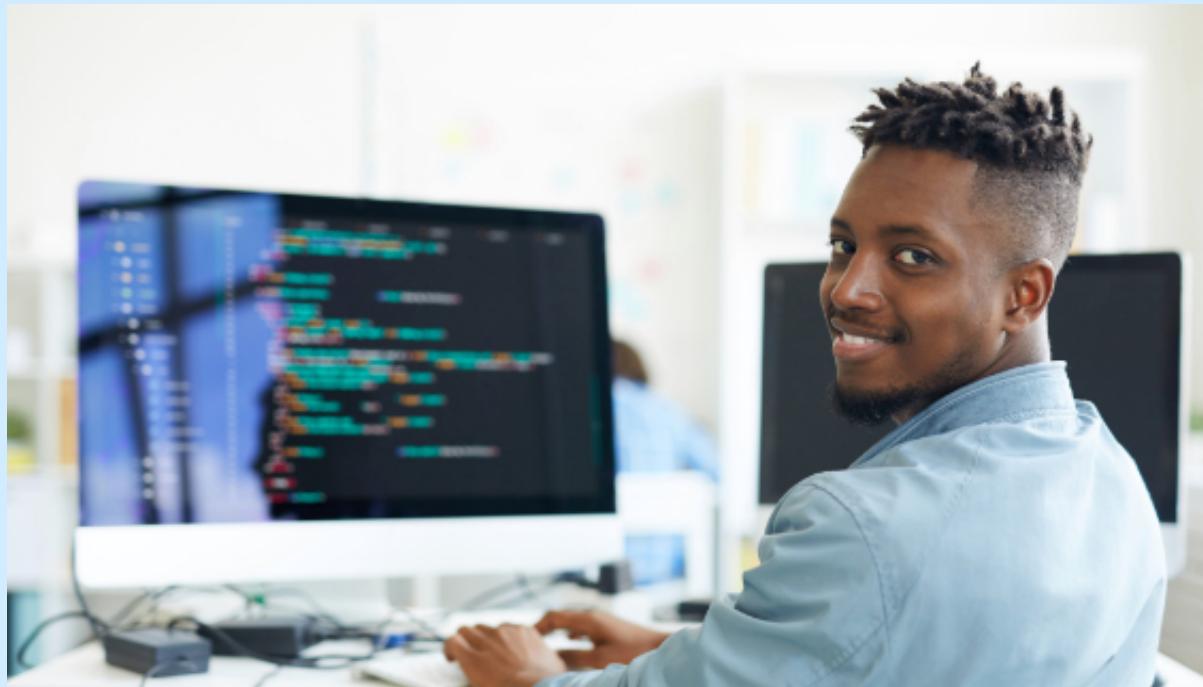


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WORD MANUAL FOR INTERMEDIATE SOFTWARE ENGINEERS



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Olivia Yahner

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WORD FOR SOFTWARE ENGINEERS

v1.7

December 8, 2024

Olivia Yahner

ENG 380 Intermediate Technical Writing | University of Massachusetts

Acknowledgements

This manual, Word Manual for Intermediate Software Engineers represents the culmination of effort, support, and insight from many individuals who contributed to the manual's creation. I would like to express my sincere gratitude to everyone who helped me make this project possible.

First and foremost, I would like to thank my professor and classmates, whose feedback and suggestions molded and shaped my manual into what it is now. Your insights pushed me to refine the manual's content and adapt it to the needs of my target audience.

To the technical professional I consulted with during my research phase, the person who helped implement the API section of my manual, Dad thank you for assisting me with that. I want to thank the rest of my family as well for giving me the encouragement to keep going with this manual throughout the semester.

Lastly, I am grateful to the Microsoft Word's documentation and online communities for providing me with this documentation platform. If it weren't for the professor's recommendation of your platform, I would've never learned how to properly use Microsoft Word.

Thank you all for contributing to the success of my manual. I hope this manual serves as a practical and valuable resource for the readers who want to know how to use the manual for their careers in software engineering.

Sincerely,

Olivia Yahner

December 6th, 2024

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Introduction

Microsoft Word Manual for Intermediate Software Engineers is a guide for software engineers with little to no experience with Microsoft Word. Microsoft Word is not only a documentation editing platform, but a platform that efficiently facilitates communication, project documentations, and collaborations with professional industries.

My manual focuses on guiding my targeted audience through Microsoft Word's most advanced features which will hopefully help software engineers' workflow go smoother, more organized, and professional. The initial struggle with Microsoft Word's most advanced features as well as other features with moderate difficulty. The manual itself helped navigate and learn how to use Microsoft word better, which is one of the expectations for the targeted audience to feel after going through the manual. At the end after learning how to use all of Microsoft Word's most difficult documentation tools, you will be tasked with basic level API documentation.

By the end of my manual, intermediate software engineers should have learned how to design well-structured, visually appealing documents, implement their learnings of Microsoft Word's most advanced features into their technical content, and integrate Microsoft Word's features into broader software engineering tasks. It's not an easy platform to use, but it is an essential documentation tool, especially for Software Engineers.

Getting Started

Audience Assumptions

The target audience of this manual is mid-level Software Engineers required to write usable developer and basic API (Application Programming Interface) documentation.

Software engineers are technically proficient and don't require simple instructions for trivial tasks, so this plan will focus the user's attention to consistent formatting, and readable documentation for engineers.

The following assumptions are made about the target audience

- The audience has strong experience using Microsoft products.
- Fundamental knowledge of Microsoft Word.
- Basic concepts as well as keyboard shortcuts such as
 - Copy/Cut and Paste
 - Undo
 - Redo
 - Saving

Technical Assumptions

The manual is targeted for Microsoft Word v.16, but the concepts apply to across all versions.

Users are assumed to use laptop devices (MacBook, etc.) and not tablet (iPad, etc.)

The screenshots are taken from a MacBook Pro using MacOS Sonoma v14.5

Focus on Key Features

Software Engineers use several features of Word specific to documenting their code for other Software Engineers. This manual will focus only on key features relevant to this task and will not include either trivial or unnecessary features.

The following features will be included in the manual:

- Editing Margins
- Inserting Page Breaks
- Applying Styles
- Inserting Tables and Reference Tables
- Adding a Title Page
- Adding Headers and Footers
- Enforce Consistency with Word Tools
- Applying Dictionaries

This manual will not address rarely used features such as:

- Mailings
- Design and Themes
- Review

These features are rarely used on Microsoft Word due to accessibilities of similar outside sources



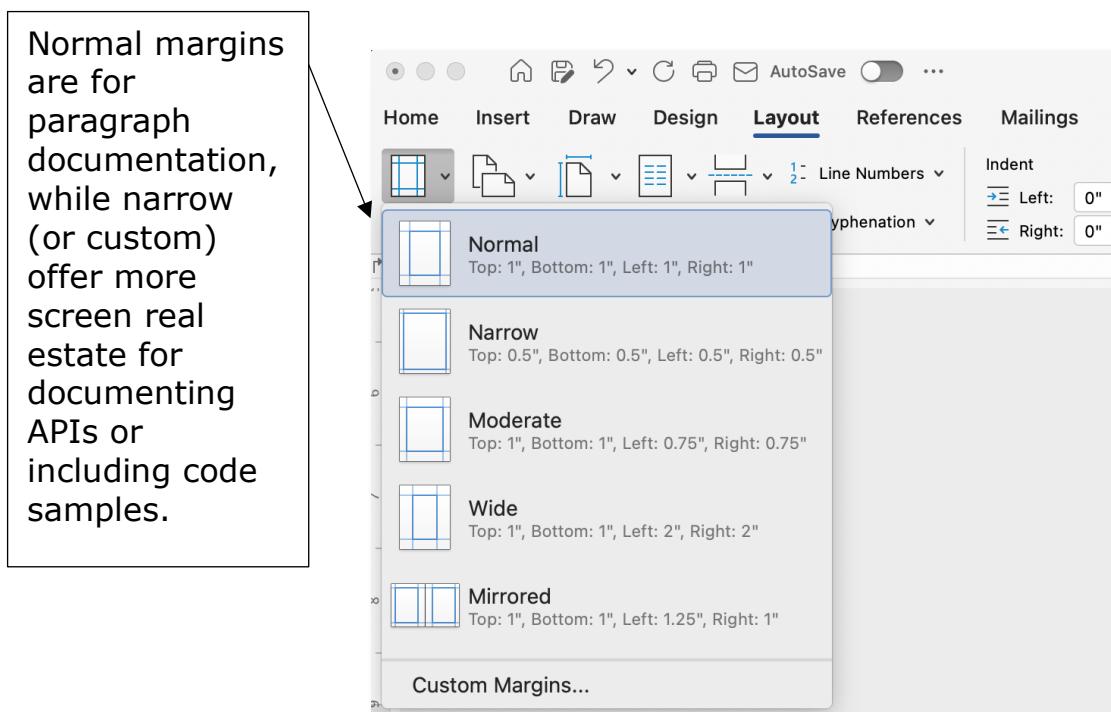
Basic formatting

Editing Margins

Margins define how much whitespace a Word document will offer a reader. In letter format, a user may wish to leave a large margin for readability or for allowing a recipient to write notes.

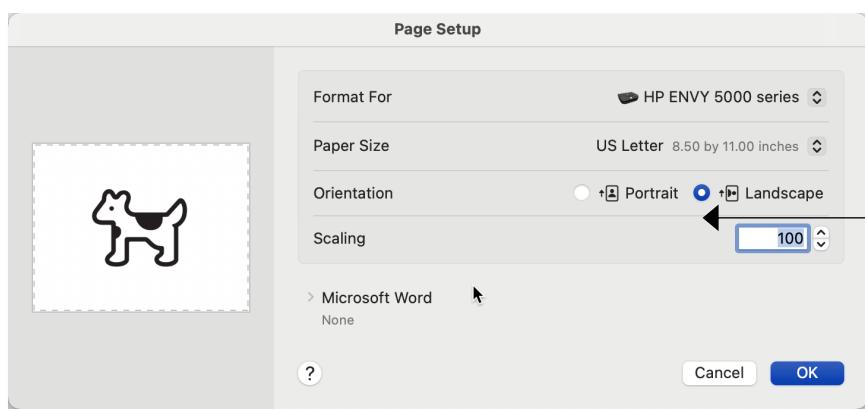
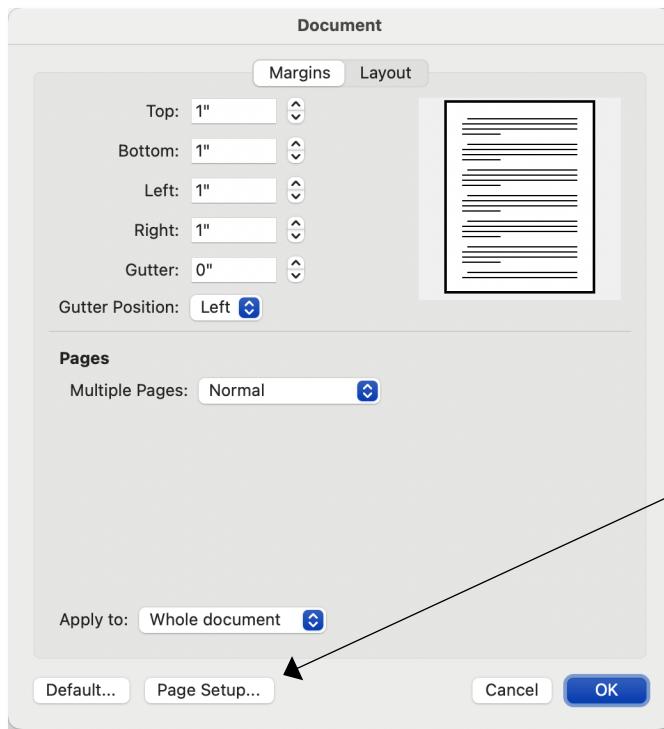
Applying Predefined Margins

1. On the Layout tab, click the Margins icon and select a predefined margin setting:



Defining Custom Margins

1. Apply custom Margins by clicking “Custom Margins...” on the Margin tab shown above.



2. Click OK to apply the margins only to this section of the document. Select “Default...” to change the margins for the entire document.

Page Breaks

Inserting Page Breaks

1. Place the cursor on the beginning of the new section.
2. On the Insert tab, click the Page Break icon and a page break will be inserted into your document

The screenshot shows the Microsoft Word ribbon with the 'Insert' tab selected. In the 'Pages' group, the 'Page Break' icon is highlighted with a callout arrow pointing to it. The main document area contains two sections: 'Section 1' and 'Section 2'. A cursor is positioned at the beginning of 'Section 2'. A callout box to the right of the document area states: 'Page breaks allow the author to make the document easier to read. Specifically, a confusing section can be broken into multiple pages for easier focus.' Another callout box below the document area states: 'Place Cursor here before inserting page break'.

Section 1

Section 1 content: Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Section 2

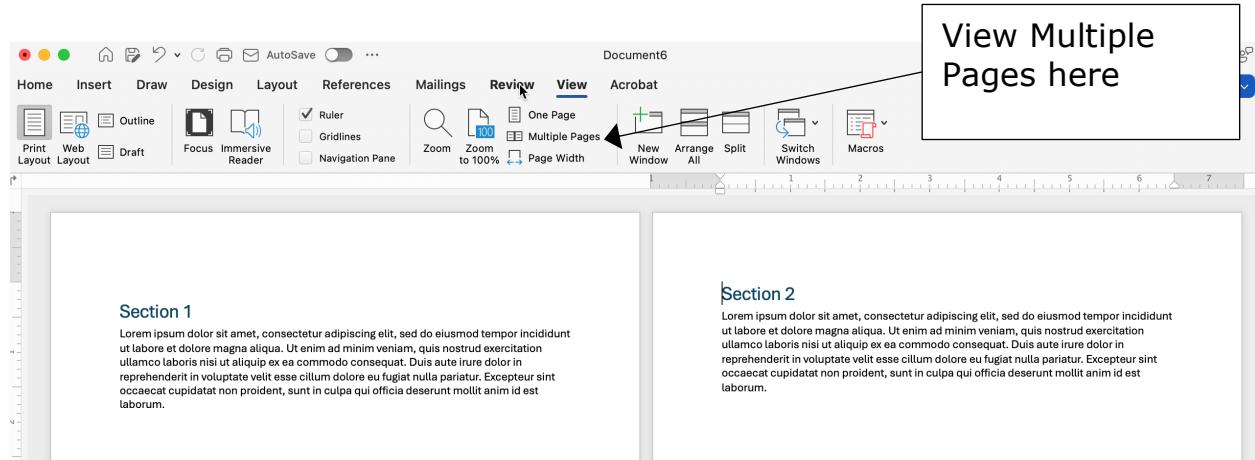
Section 2 content: ~~Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.~~

Page breaks allow the author to make the document easier to read. Specifically, a confusing section can be broken into multiple pages for easier focus.

Place Cursor here before inserting page break

Viewing a document with Page Breaks

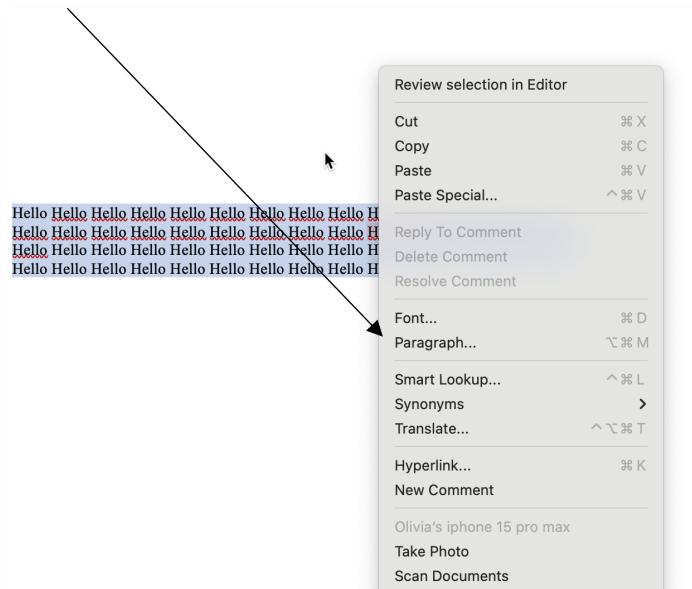
1. In the View tab, click Multiple Pages to view the page on one screen.



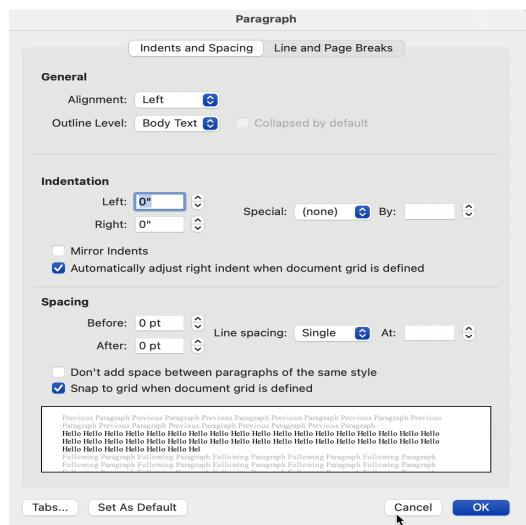
Advanced Formatting

Formatting is an important tool in polishing your documents. The steps below will teach you how to use the formatting tools on Microsoft Word.

1. Select paragraphs you want to format.
2. Navigate to the “Home” tab.
3. For advanced settings, right click on your selected paragraph then chose “paragraph”.



4. Modify your settings (Line spacing, alignment, and indentation tools).



Applying Styles

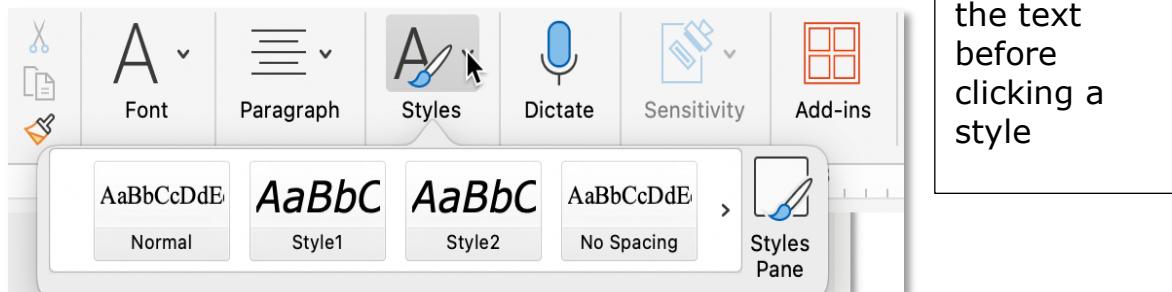
Built-in Style

Built-in Styles are combinations of formats with different characteristics (Bolded, underlined, Italicized).

1. On your “Home” tab, locate the “Styles” section.



2. Place your cursor where you want to style, then click on the small arrow located on the bottom-right corner to extend the “Styles” panel.

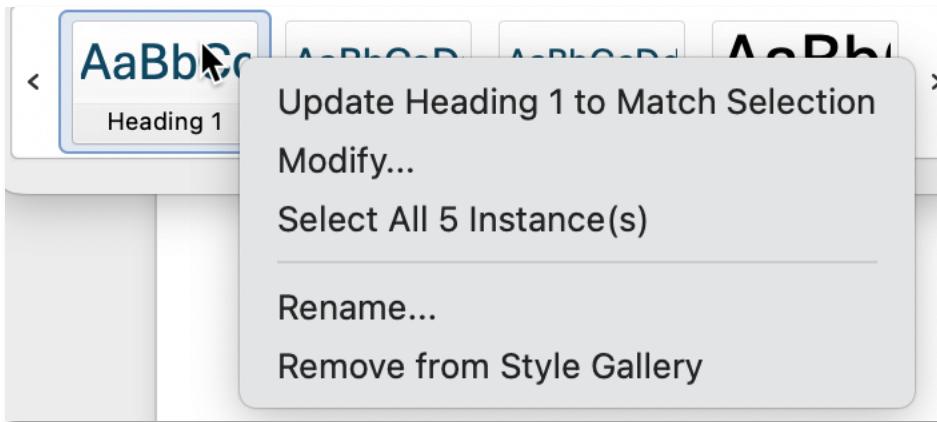


3. Select a pre-existing style (Normal, Style 1, Style 2, etc.). Your text will then gain the style you have chosen.

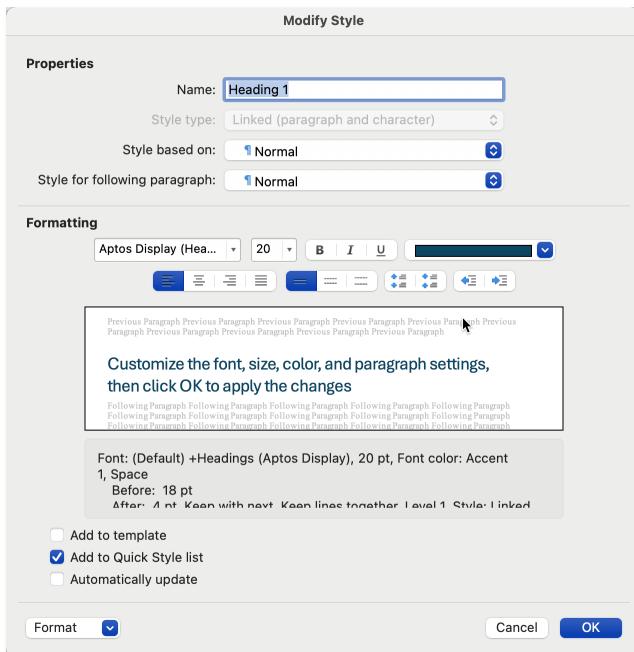
Modifying a Style

Modifying a style is a helpful tool to make your document more balanced and cleaner.

1. Right-click the style of your choice, then select “Modify”.



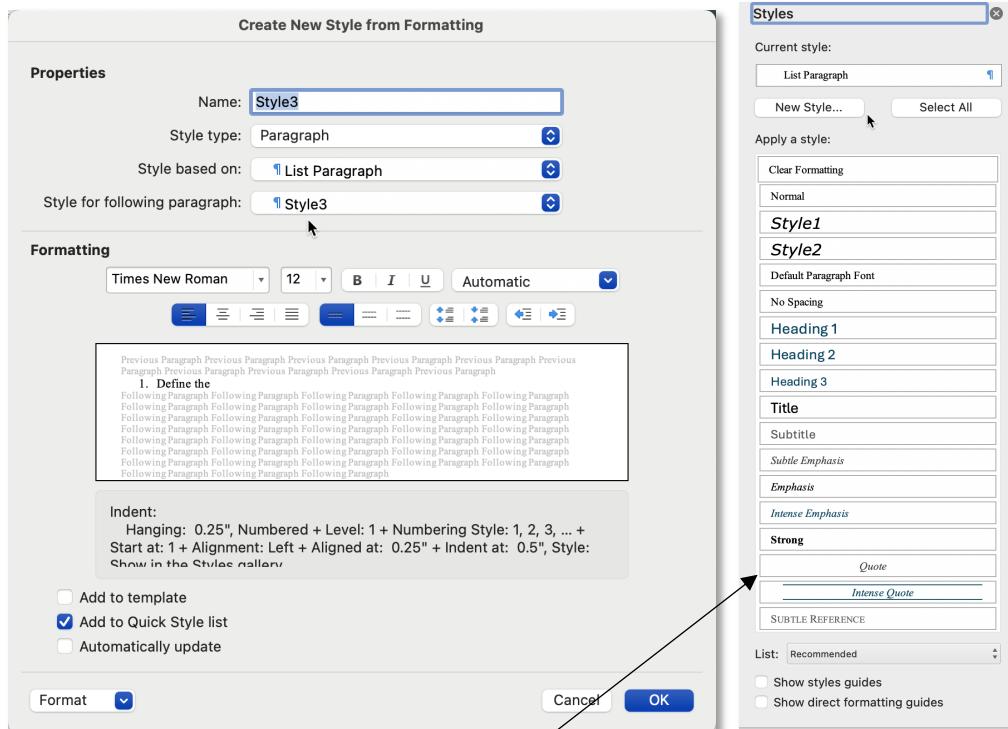
2. Customize the font, size, color, and paragraph settings, then click OK to apply the changes.



Creating a new Style

Instead of using the default styles given to you, you can create your own new style or edit a default style to your liking.

1. In the “Styles” Pane, click on “New Style”.
2. Name your new style in the format settings then click OK.



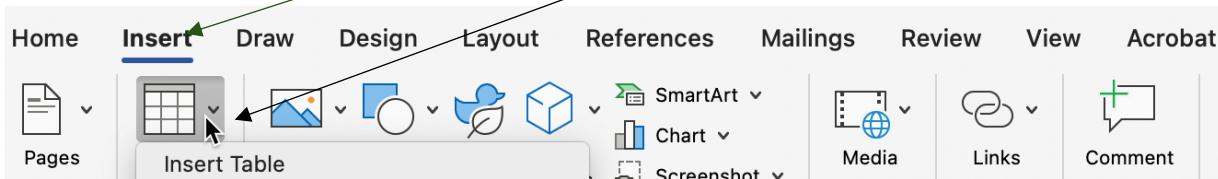
Apply and change the properties and format of your new style before pressing the OK button.

Inserting Tables and Reference Tables

Inserting tables is a very helpful tool in keeping numerical data organized. Software engineers deal with a lot of numerical data and codes which is why using tables can be a helpful tool in this case.

Inserting a Table

1. Place your cursor where you want your table to be.
2. Go to the “Insert” tab and select “Table”.



3. Choose the number of rows and columns you want

A screenshot of the 'Insert Table' dialog box. It shows a grid of 10 columns and 8 rows of checkboxes. A green arrow points from the text 'Choose the number of rows and columns you want' to this grid. To the right of the dialog, a callout box contains the following text:

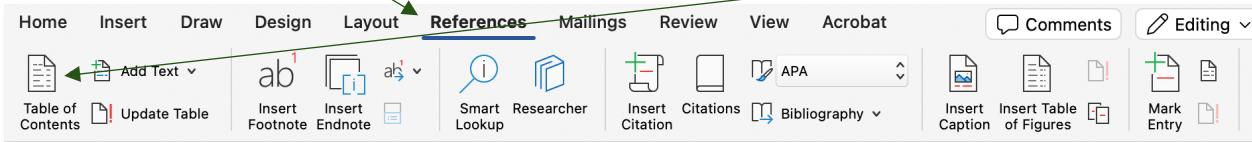
The maximum is 10 columns and 8 rows.
However, you can add up to 63 columns and virtually unlimited rows on a table.

The dialog also includes options at the bottom: 'Insert Table...', 'Draw Table', and 'Convert Text to Table...'.

Inserting Reference Table

A reference table is a tool to help you find a specific section you want to look back on in non-chronological order.

1. In your “references” tab, click “Insert Table of Contents”.



2. Choose any of the pre-built layout options or customize the layout numbers and heading levels.

The screenshot shows the 'Automatic Table of Contents' dialog box. It displays four pre-built layout options:

- Classic:** Shows a standard table of contents with 'Heading 1', 'Heading 2', and 'Heading 3' levels.
- Contemporary:** Shows a table of contents with 'HEADING 1', 'HEADING 2', and 'HEADING 3' levels.
- Formal:** Shows a table of contents with 'HEADING 1', 'HEADING 2', and 'Heading 3' levels.
- Modern:** Shows a table of contents with 'Heading 1', 'Heading 2', and 'Heading 3' levels, where 'Heading 2' and 'Heading 3' are aligned to the right.

At the bottom of the dialog box, there are two buttons: 'Custom Table of Contents...' and 'Remove Table of Contents'.

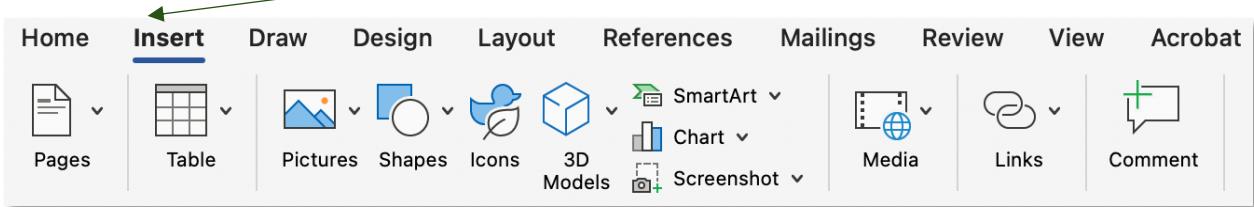
The customization option for your reference table can be found here

Adding a Title Page

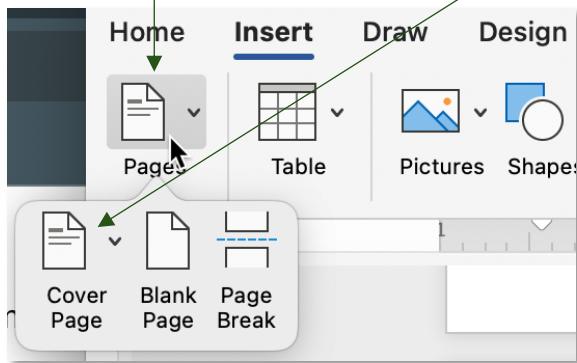
Adding title pages helps organize and separate sections on a Microsoft word document. Title pages keep information separate, clear, and provide a readable flow.

Inserting a Cover Page

1. Navigate to the "Insert" tab.



2. Click on "Pages", then click on "Cover Page"

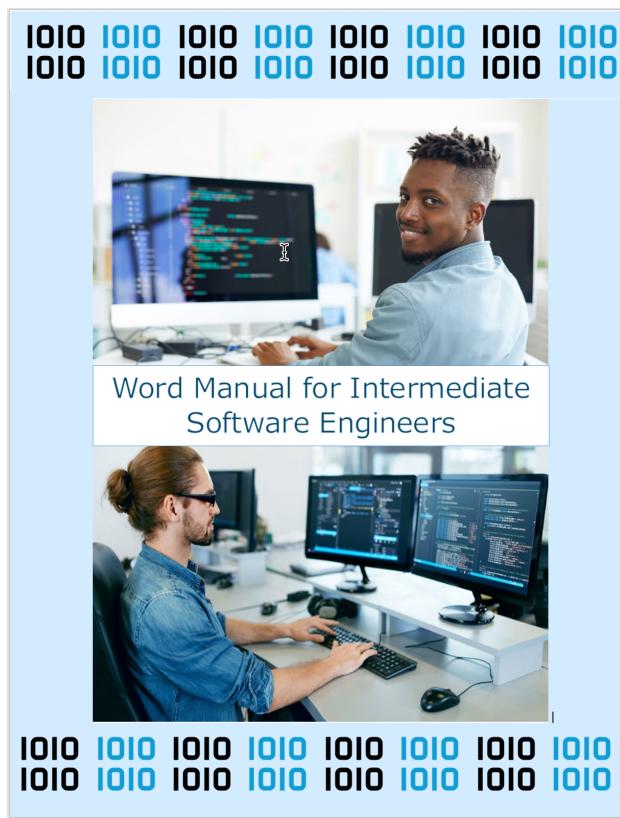


3. Choose any of the templates below

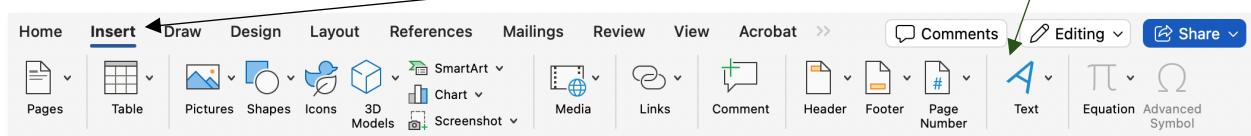


Customizing a Cover Page

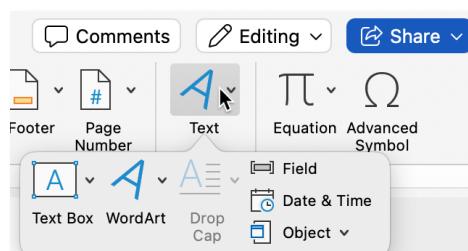
1. After inserting your cover page, replace the text holder with your document title, your name, and additional information relevant to your document



2. For additional text boxes, go to the "insert" tab, select "text".



3. Click on the dropdown arrow of "Text", and then select "Text Box". Then drag your cursor and create a box where you want on your cover page.

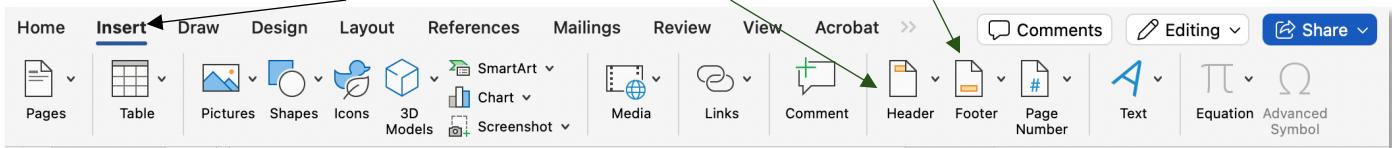


Adding Headers and Footers

A header is text placed at the top of a page, while footers are placed on the bottom of a page. They are areas where the information of a document, chapter headings, and page numbers are located.

Inserting Headers and Footers

1. Go to the “insert” tab and click “Header” or “Footer”



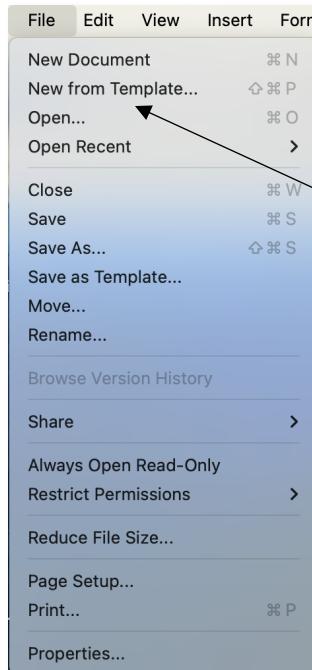
2. Pick any of the designs for your header and footer from the drop down.

A screenshot showing two open 'Built-in' design galleries side-by-side. The left gallery is for 'Header' and the right is for 'Footer'. Both galleries show various pre-designed templates like 'Blank', 'Austin', 'Badge', and 'Banded'. At the bottom of each gallery are 'Edit Header/Footer' and 'Remove Header/Footer' buttons. Below the galleries, a preview area shows a header with three sections labeled '[Type here]' and a footer with one section labeled '[Type here]'. A 'Header' tab is active at the bottom of the preview area, which also displays the text 'Applying Styles'.

Best Practices

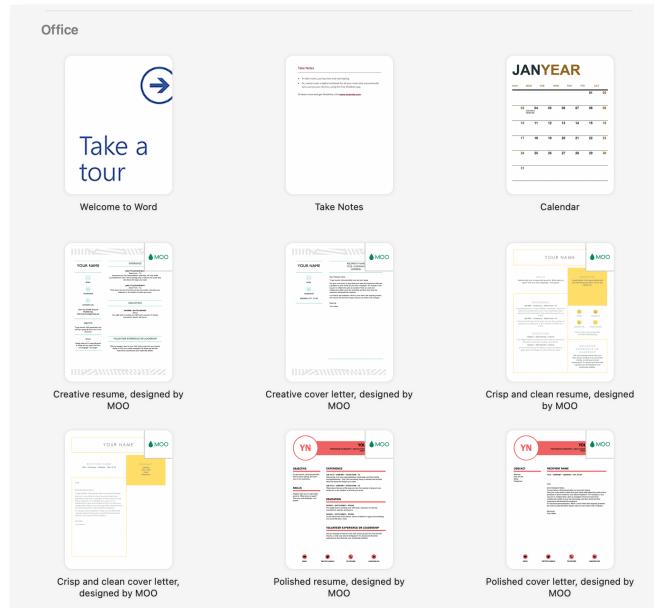
Now that you know the hardest applications of Microsoft Word, here are the best practices to use when documenting as a Software Engineer.

1. Use Templates for Consistency by clicking “File > New” and selecting from available options



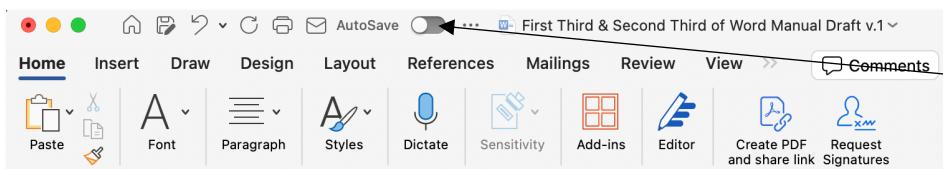
File is located at the top of your computer screen, make sure you selected Microsoft Word before clicking “File”

2. Customize templates as needed for specific projects or branding.



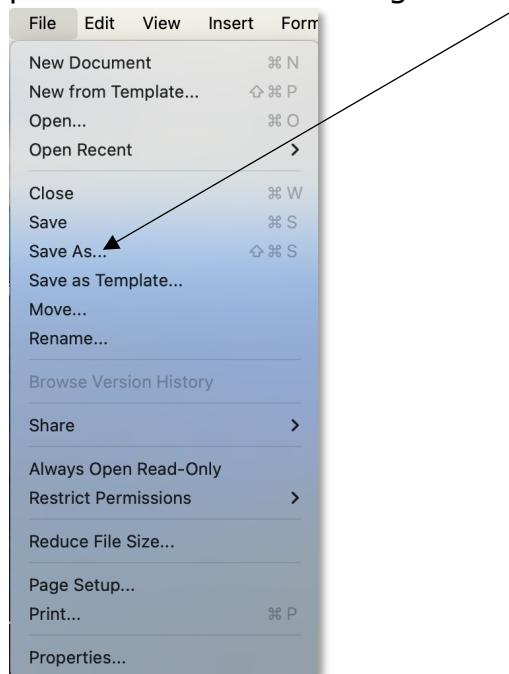
Save and Backup Frequently

1. Turn on “Autosave” when working on Microsoft Word or OneDrive to prevent data loss.



Autosave is located at the top of the Microsoft Word window above the “selections” tab

2. To save manually, press Ctrl + S or clicking “File > Save As”.



Utilize Keyboard Shortcuts

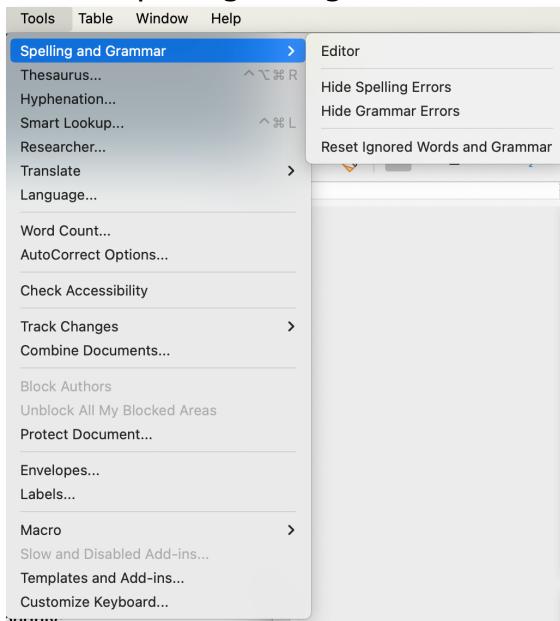
1. Familiarize yourself with common shortcuts to improve efficiency.
(Ctrl + Z for undo, Ctrl + Y for redo)
2. Utilize Macros to familiarize yourself with more shortcuts.



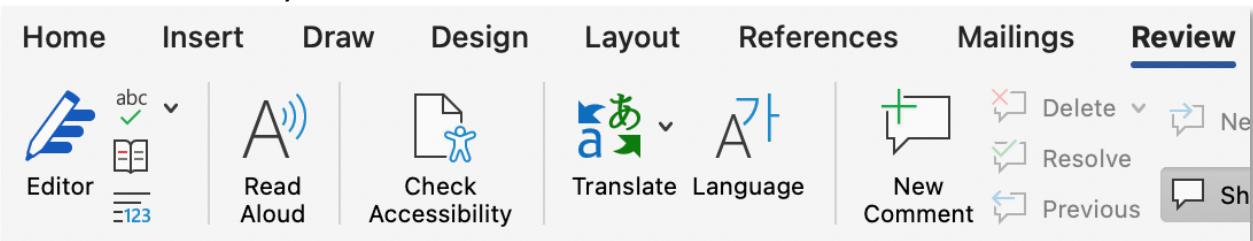
You can also use the internet to look up shortcuts

Review and Proofread Thoroughly

1. Enable spelling and grammar under “Tools”

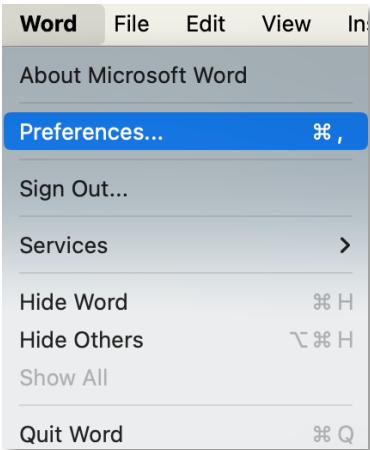


2. Use “Read Aloud” on the “Review” tab to catch errors you might have missed visually.

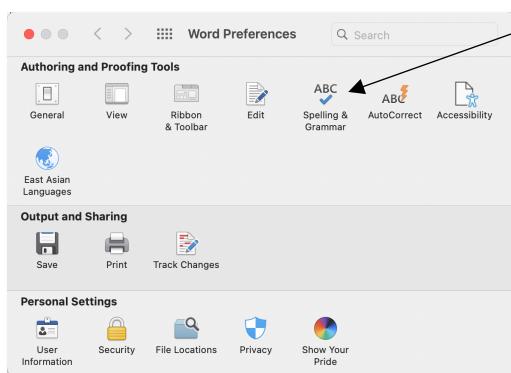


Applying Dictionaries

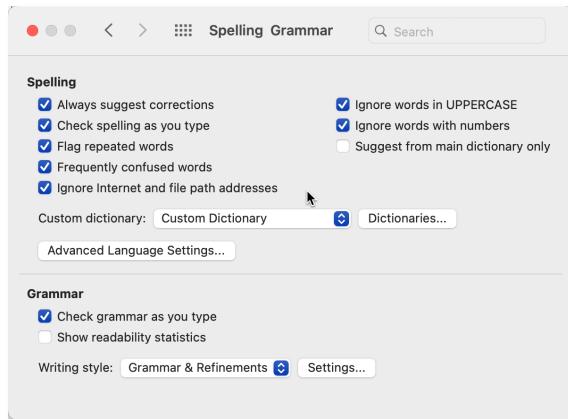
1. Go to the “Word” tab located at the top of your laptop and select preferences.



2. Under “Authoring and Proofing Tools”, select Spelling and Grammar



3. Select your dictionary preferences or language for multilingual documents.



Appendix

Using MS Word to Document APIs

Apply what you learned in your manual to document API integration to automate tasks, manage documents programmatically, or connect with other applications.

An API (Application Programming Interface) is the documentation referenced by software engineers when writing code to automate tasks, manage documents programmatically, or connect with other applications.

One layout for a very simple API for managing “widgets” is provided below. This layout uses tables, fonts, and bullet points to define what is code vs what is description. Note that a monospaced font (e.g., Courier New) is used for code snippets (JSON in this example).

Write a Simple Introduction

Explain the purpose of the API. Example:

"This API allows users to manage widgets through basic operations like creating, reading, updating, and deleting widgets."

Document the Endpoints

Finally, a detailed definition of each endpoint will include:

- Method (POST, GET, PUT, DELETE)
- Endpoint (the tail end of the URL, /widgets for example)
- Headers (Content-Type and Authorization)
- Request Body (the DATA for CREATE and UPDATE methods)
- Response Body (the result of the request)

Putting It All Together

Introduction

This API allows users to manage widgets through basic operations like creating, reading, updating, and deleting widgets

Endpoints Overview

Operation	HTTP Method	Endpoint	Description
Create	POST	/widgets	Create a new widget
Read	GET	/widgets/{id}	Retrieve widget details
Update	PUT	/widgets/{id}	Update an existing widget
Delete	DELETE	/widgets/{id}	Remove a widget

Endpoint Details

Create Widget

- **Method:** POST
- **Endpoint:** /widgets
- **Headers:**
 - Content-Type: application/json
 - Authorization: Bearer <API_KEY>
- **Request Body (Example):**

JSON

```
{  
    "name": "Example Widget",  
    "type": "Type A",  
    "price": 19.99  
}
```

- **Response:**
 - 201 Created

JSON

```
{  
    "id": 123,  
    "name": "Example Widget",  
    "type": "Type A",  
    "price": 19.99  
}
```

Read Widget

- **Method:** Get
- **Endpoint:** /widgets/{id}
- **Path Parameter:**
 - id (integer): ID of the widget
- **Response:**
 - 200 OK

JSON

```
{  
    "id": 123,  
    "name": "Example Widget",  
    "type": "Type A",  
    "price": 19.99  
}
```

- 404 Not Found

JSON

```
{  
    "error": "Widget not found"  
}
```

Update Widget

- **Method:** PUT
- **Endpoint:** /widgets/{id}
- **Request Body (Example):**

JSON

```
{  
    "name": "Updated Widget",  
    "price": 25.99  
}
```

- **Response:**
 - 200 OK

JSON

```
{  
    "id": 123,  
    "name": "Updated Widget",  
    "type": "Type A",  
    "price": 25.99  
}
```

Delete Widget

- **Method:** DELETE
- **Endpoint:** /widgets/{id}
- **Request Body (Example):**

JSON
{ "name": "Updated Widget", "price": 25.99 }

- **Response:**
 - 204 No Content

Error Codes

Code	Message	Description
400	Bad Request	Invalid request payload
401	Unauthorized	Missing/invalid API key
404	Not Found	Resource does not exist
500	Internal Server Error	Unexpected server issue

Conclusion

You have reached the end of the Microsoft Manual, Congratulations! This means you went through each section of the manual and learned how to use Microsoft Word's most challenging features. Your newly acquired documentation skills and knowledge of Microsoft Word's shortcuts should enable you to be a fast efficient software engineer.

Your key takeaways include:

- Understanding Microsoft Word's built-in tools: dictionaries, styles, margins, and headers/footers for formatting, polishing, and perfecting your documents.
- Employing best practices for efficiency such as proofreading, templates, applying built-in styles or creating your own styles.
- Understanding how to utilize Microsoft Word's most advanced features like custom dictionaries, API integration, to tailor Word to your unique projects.

Remember, the skills you learned can be applied to a wide range of projects, from technical documentation to creative writing. For further assistance or to explore more advanced features, consult Microsoft Word's help resources or see online tutorials.

Thank you for using this manual. Happy writing!

This edition of Word for Software Engineers was printed on December 6th, 2024. It was set in a modern sans-serif typeface designed for clarity and readability in both print and digital formats. The text layout was created using Microsoft Word version 16, leveraging its robust design and formatting features to ensure precision and consistency.

The publication reflects the author's expertise in professional writing, technical communication, and user-centric design. Olivia Yahner's distinct approach integrates her background in writing and technical disciplines to bridge the gap between clear communication and complex software concepts.

Printed and bound in Pembroke, MA.

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