

TOPIC 9: WORD PROCESSING II

Advanced Features of Microsoft Word

SENIOR FOUR | ICT COMPREHENSIVE HANDBOOK

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Prerequisites — What You Should Already Know

Before we begin, you must be confident with:



Text and paragraph formatting (bold, italic, font size, spacing)



Inserting tables, images, and shapes in Word



Saving and managing Word documents (Save, Save As, file types)



Page formatting — margins, orientation, and paper size

This topic connects to → [Topic 4: Word Processing I \(S.1\)](#)

What We Will Cover in This Topic

1

Page Numbering (Arabic & Roman Numerals)

2

Page Breaks & Section Breaks

3

Images & Text Wrapping

4

Footnotes & Endnotes

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Multi-Column Layout

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Table Calculations & Mail Merge

SECTION 01

Page Numbering

Arabic Numerals (1, 2, 3...) and Roman Numerals (i, ii, iii...)

Why Do We Use Page Numbers?

Page numbers help readers navigate long documents.

Arabic Numerals

1, 2, 3, 4, 5 ...

Used in the main body of a document.

Roman Numerals

i, ii, iii, iv, v ...

Used in front matter (TOC, abstract).

Section Break

Divides a document into sections
so
each section can have its own
format.

Real-life example: Research papers, textbooks, and reports all use this dual-numbering approach.

Step-by-Step: Applying Different Page Number Formats

STEP 1

Open your document. Go to Insert → Page Number → Format Page Numbers.

STEP 2

Choose Roman numeral format (i, ii, iii...) and set Start at: i. Click OK.

STEP 3

Go to Insert → Page Number → Bottom of Page. Choose a position.

STEP 4

Place cursor at the END of the last page that should use Roman numerals.

STEP 5

Go to Layout → Breaks → Next Page (this inserts a Section Break).

STEP 6

Click on the next page. Go to Insert → Page Number → Format Page Numbers.

STEP 7

Choose Arabic format (1, 2, 3...), set Start at: 1, then click OK.

Useful Tips: Viewing & Navigating Page Numbers

Show/Hide Formatting Marks

To verify the position of a section break:

Home tab → Paragraph group → click the Show/Hide (¶) button.

Click it again to turn it off.

Keyboard Shortcuts

Action	Shortcut / Method
Insert Header	Alt + N, H
Insert Footer	Alt + N, O
Navigate sections	Double-click header/footer area
Close Header/Footer	Esc OR double-click document body
Go to beginning of doc	Ctrl + Home

Quick Check — Page Numbering

1. What is the difference between Arabic and Roman numerals in a document?
2. Which menu do you use to insert a Section Break? (Hint: it's not Insert!)
3. If page iii is the last Roman-numeral page, where exactly do you place the cursor before inserting the Section Break?
4. After the Section Break, why must you use 'Start at: 1' instead of 'Continue from previous section'?
5. TRUE or FALSE: Section breaks affect only page numbering, nothing else.

SECTION 02

Page Breaks & Section Breaks

Controlling how content flows across pages

Types of Breaks in Microsoft Word

A page break forces text to start on a new page. A section break divides a document into independently formatted sections.

Break Type	How to Insert	Purpose
Page Break	Insert → Break → Page Break OR Ctrl+Enter	Moves text to the next page
Next Page Section Break	Layout → Breaks → Next Page	New section starts on a new page
Continuous Section Break	Layout → Breaks → Continuous	New section on the same page
Even Page Section Break	Layout → Breaks → Even Page	Section starts on next even-numbered page
Odd Page Section Break	Layout → Breaks → Odd Page	Section starts on next odd-numbered page

What Can Each Section Control?

Section breaks allow you to apply DIFFERENT settings to different parts of the same document:

- | | |
|---|--|
|  Margins |  Headers and footers |
|  Paper size or orientation |  Columns |
|  Paper source for a printer |  Page numbering |
|  Page borders |  Line numbering |
|  Vertical alignment of text |  Footnote and endnote numbering |

Step-by-Step: Managing Page Breaks

Insert a Manual Page Break

1. Click where you want the new page to start.
2. Go to Layout tab → Pages group → click Page Break.
3. Alternatively press Ctrl + Enter.

Prevent a Break Inside a Paragraph

1. Select the paragraph you don't want split across two pages.
2. Page Layout → Paragraph Dialog Launcher → Line and Page Breaks tab.
3. Tick the 'Keep lines together' checkbox.

Delete a Manual Page Break

1. Click View → Draft (so you can see the page break marker).
2. Click on the dotted Page Break line to select it.
3. Press the Delete key.

SECTION 03

Images & Text Wrapping

Controlling how text flows around pictures

Text Wrapping Styles — Quick Reference

Wrapping Style	Description	Best Used For
In Line with Text	Image sits in the text flow like a character	Small icons, simple diagrams
Square	Text wraps in a square around the image boundary	Regular rectangular images
Tight	Text follows the exact shape of the image	Irregular / shaped images
Through	Text flows through transparent areas of the image	Images with transparent backgrounds
Top and Bottom	Text appears above and below only	Full-width images
Behind Text	Image sits behind the text as a background	Watermark-like effects
In Front of Text	Image covers the text completely	Decorative overlays

Step-by-Step: Insert an Image & Set Wrapping

- 1 Click where you want the image to appear in the document.
- 2 Go to Insert → Pictures → This Device (or Online Pictures).
- 3 Browse to your image file and click Insert.
- 4 Click the image to select it — a Layout Options button (⌵) appears at the top-right.
- 5 Click the Layout Options button and choose your desired wrapping style.
- 6 Alternatively: Right-click the image → Wrap Text → select a style.
- 7 Drag the image to position it on the page.

Shortcut: Alt + N, P to insert a picture | Right-click → Format Picture to open the Format pane

Scenario Activity — Text Wrapping

For each situation below, state the BEST text wrapping style and explain why:

- A. You paste a logo at the top of a letter and want text to flow below it but not beside it.
- B. You insert a photo of a person with a transparent background — text should follow their outline closely.
- C. You want an image to act like a faint watermark sitting underneath all the text on the page.
- D. You paste a chart and want text to wrap neatly in a rectangular block around it.
- E. You insert a small icon that should flow with the sentence it belongs to.

SECTION 04

Footnotes & Endnotes

Referencing and providing extra information

Footnotes vs. Endnotes — Key Differences

Both are used to provide additional information without disrupting the flow of the main text.

FOOTNOTE

- ✓ Appears at the bottom of the CURRENT page
- ✓ Good for page-by-page references and comments
- ✓ Numbered continuously (1, 2, 3...) or per page
- ✓ Insert: References → Insert Footnote
- ✓ Shortcut: Alt + Ctrl + F

ENDNOTE

- ✓ Appears at the END of the document (or section)
- ✓ Good for a compiled bibliography or long notes
- ✓ Usually numbered with Roman numerals or letters
- ✓ Insert: References → Insert Endnote
- ✓ Shortcut: Alt + Ctrl + D

Step-by-Step: Inserting a Footnote

Click

Click in the text where you want the footnote reference number to appear.

Navigate

Go to the `References` tab on the Ribbon.

Insert

Click 'Insert Footnote' in the Footnotes group.

Type

A superscript number appears in your text. The cursor jumps to the bottom of the page. Type your footnote text there.

Return

Click back in the main text to continue writing.

Change Format

To change the numbering format (e.g., 1,2,3 → a,b,c):
References → Footnotes Dialog Launcher → Number format drop-down.

SECTION 05

Multi-Column Layout

Arranging text like a newspaper or magazine

Creating a Multi-Column Layout

Columns make dense text easier to read and give a professional, polished appearance.

- 1 Select the text to format into columns (or click anywhere to apply to the whole document/section).
- 2 Go to Layout tab → Columns.
- 3 Choose a preset: One, Two, Three, Left, or Right.
- 4 For custom settings, click 'More Columns'.
- 5 In More Columns you can set: number of columns, width, spacing between columns, and whether to add a vertical line between columns.
- 6 To apply columns to ONLY PART of a document, first create section breaks around that portion.

SECTION 06

Watermarks & Document Security

Protecting and branding your documents

Adding a Watermark

A watermark is a faint text or image that appears behind the content of every page.

Common examples: DRAFT, CONFIDENTIAL, DO NOT COPY

Insert a Preset Watermark

1. Go to the Design tab.
2. Click Watermark.
3. Choose a preset (DRAFT, CONFIDENTIAL...).

Insert a Custom Watermark

1. Design tab → Watermark → Custom Watermark.
2. Select 'Text watermark'.
3. Type your text, choose font, size, colour, and layout (Diagonal or Horizontal).
4. Click OK.

Remove a Watermark

1. Go to the Design tab.
2. Click Watermark.
3. Click 'Remove Watermark' at the bottom of the dropdown.

Document Security — Password Protection

Microsoft Word offers several levels of protection for sensitive documents:

Protection Type	Description
Password to Open	Users must enter a password to open and read the document.
Password to Modify	Users can read the document but must enter a password to edit it.
Restrict Editing	Allows specific editing restrictions (read-only, tracked changes only, comments only).
Mark as Final	Marks the document as final to discourage editing — not fully secure.

How to Set a Password to Open:

File → Info → Protect Document → Encrypt with Password → Enter password → Confirm password → Save (Ctrl + S)

⚠ WARNING: If you forget your password, you CANNOT recover the document. Store passwords safely!

SECTION 07

Table of Contents & List of Figures

Automatic navigation for long documents

Creating an Automatic Table of Contents

Word generates a TOC automatically — but your document **MUST** use built-in Heading styles (Heading 1, 2, 3).

PREPARE

Select each major heading → Home → Styles → apply Heading 1, Heading 2, or Heading 3.

POSITION

Place your cursor where the TOC should appear (usually after the cover page).

INSERT

References tab → Table of Contents → Custom Table of Contents.

CONFIGURE

In the dialog: choose Tab leader style, Format, and the number of heading levels (Show levels).

FINISH

Click OK — the TOC is inserted with headings and page numbers automatically.

UPDATE

If headings change: click inside the TOC → right-click → Update Field → choose Update entire table.

Shortcut: Press **F9** while the TOC is selected to update it.

Understanding Heading Styles

The Styles panel on the Home tab controls how headings are detected by the Table of Contents:

Heading 1

Major chapter titles or main sections

CHAPTER 1: INTRODUCTION TO ICT

Heading 2

Sub-sections within a chapter

1.1 What is a Computer?

Heading 3

Further sub-divisions

1.1.1 Parts of a Computer

Normal

Regular body text — NOT included in the TOC

Computers are electronic devices that...

Creating a List of Figures

Similar to a TOC, the List of Figures automatically lists all captioned images and tables.

A. Adding Captions to Images

Step 1: Click on the image or table.

Step 2: References tab → Insert Caption.

Step 3: In the Caption dialog, enter a description after the auto-generated number (e.g. 'Figure 1: World Map').

Step 4: Choose position — Below for figures, Above for tables.

Step 5: Click OK.

B. Inserting the List of Figures

Step 1: Place cursor where the list should appear (usually after the TOC).

Step 2: References tab → Insert Table of Figures.

Step 3: Ensure Caption label is set to 'Figure'.

Step 4: Choose a format and click OK.

Step 5: Update like the TOC — click list → F9 or right-click → Update Field.

SECTION 08

Writing Mathematical Equations

Word's built-in Equation Editor

Using the Equation Editor

Microsoft Word has a built-in Equation Editor for fractions, exponents, roots, integrals, matrices, and more.

Element	Shortcut / Method	Example
New Equation	Insert tab → Equation OR Alt + =	Opens equation box
Fraction	\frac + Space	a/b format
Square Root	\sqrt + Space	$\sqrt{x}$
Power/Superscript	^ then character	x^2
Subscript	_ then character	x_1
Pi symbol	\pi + Space	π
Summation	\sum + Space	Σ
Integral	\int + Space	$\int$

Built-in equations: Area of Circle ($A=\pi r^2$), Pythagorean Theorem ($a^2+b^2=c^2$), Quadratic Formula, Binomial Theorem, and more.

Practice: Type These Equations in Word

1

.

Quadratic Formula:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

2

.

Pythagorean Theorem:

$$a^2 + b^2 = c^2$$

3

.

Area of a Circle:

$$A = \pi r^2$$

4

.

Simple Interest:

$$I = \frac{PRT}{100}$$

5

.

Area of Triangle:

$$A = \frac{1}{2} \times \text{base} \times \text{height}$$

SECTION 09

Table Calculations & Mail Merge

Formulas in tables and personalised documents

Performing Calculations in Word Tables

Microsoft Word can perform simple calculations within table cells using the Formula tool.

Formula	What It Does	Typical Use
=SUM(LEFT)	Adds all numbers to the LEFT of the current cell	Calculate row total
=SUM(ABOVE)	Adds all numbers ABOVE the current cell	Calculate column total
=AVERAGE(LEFT)	Average of numbers to the left	Row average
=AVERAGE(ABOVE)	Average of numbers above	Column average

How to Insert a Formula:

1. Place cursor in the desired cell.
2. Go to Table Layout tab → Formula.
3. Type or select your formula (e.g. =SUM(LEFT)).
4. Click OK. To update: right-click the result → Update Field.

Mail Merge — Overview

Mail Merge allows you to create personalised documents for MANY recipients at once — letters, labels, emails, certificates.

Main Document

The letter or template that contains merge fields, e.g. «FirstName», «Address».



Data Source

A list of recipient information — typically an Excel spreadsheet or a Word table.



Merged Output

The final personalised documents produced by combining the template with the data.

Step-by-Step: Creating a Mail Merge

- 1 Prepare your data source (Excel file with columns: FirstName, LastName, Address, Score, etc.).
- 2 Open a new Word document for your letter template.
- 3 Mailings tab → Start Mail Merge → Letters (or Emails, Labels, etc.).
- 4 Click Select Recipients → Use an Existing List. Browse to and open your Excel file. Select the correct sheet and click OK.
- 5 Write your letter. Where variable data goes, click Insert Merge Field and choose the relevant field. Example: 'Dear «FirstName» «LastName»,'
- 6 Click Preview Results to check how letters look with real data. Use navigation arrows to preview each recipient.
- 7 Click Finish & Merge → Print Documents (to print) OR Edit Individual Documents (to save all merged letters as a file).

SECTION EXAM

Scenario Questions

Apply what you have learned — think like a professional

Examination-Style Scenario Questions

Sc. 1

You have written a 30-page research report. The first 5 pages (cover, abstract, TOC) should use Roman numerals; the rest should use Arabic numerals starting at 1. Explain step-by-step how you would achieve this.

Sc. 2

Your school needs to send 200 personalised invitation letters to parents. How would you use Mail Merge to create all 200 letters efficiently?

Sc. 3

You inserted an image but the text is NOT wrapping around it — it sits on a line by itself. What is the likely cause, and how would you fix it?

Sc. 4

Mark a 50-page report as 'CONFIDENTIAL' on every page. Which feature would you use and how?

Sc. 5

You added three new chapters and now the Table of Contents page numbers are wrong. How do you update the TOC?

COMPREHENSIVE PROJECT — HOMEWORK 2

Create a professional 10+ page document on a topic of your choice (e.g. 'The History of Computing').



Cover page (no page number)



At least 3 footnotes and 2 endnotes



Table of Contents (Roman numeral i)



One section in 2-column layout



Main content (Arabic numerals 1 onward)



A DRAFT watermark



At least 2 section breaks changing layout



Password protected (use your name as the password)



At least 3 images with text wrapping and captions



At least 2 mathematical equations



A List of Figures

END OF TOPIC 9

WORD PROCESSING II