



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Academic, Industry & Digital Skills

Week 9

Lisa Bassler

Email: l.bassler@uwtsd.ac.uk

Trawsnewid Addysg, Trawsnewid Bywydau
Transforming Education, Transforming Lives

www.uwtsd.ac.uk

Today's Action Plan

- Journal articles, industry reports and credible newspaper articles
- Microsoft Excel: Trends and Charts (including Gantt Charts)
- AI Tool of the Week: Microsoft Copilot for Proofreading



Journal Articles, Industry Reports, Newspaper Articles

Trawsnewid Addysg, Trawsnewid Bywydau
Transforming Education, Transforming Lives

www.uwtsd.ac.uk

Journal Articles

A **journal article** is a written piece of scholarly work published in an academic or professional journal.

These articles are usually focused on a specific topic, presenting **original research, analysis, or a review of existing research.**

They are written by experts in the field and are intended for other researchers, students or professionals.



Key Features of a Journal Article

- **Authorship:** Usually written by researchers or scholars affiliated with universities, research institutions or professional organisations. The authors' credentials are often listed.
- **Peer Review:** Many journal articles undergo **peer review**, meaning other experts in the field evaluate the work for accuracy, validity and quality before publication.

Key Features of a Journal Article

Typical sections include:

- **Abstract** – a brief summary of the article
- **Introduction** – background and purpose of the research
- **Literature Review** - a critical overview of existing research relevant to the study, highlighting gaps the current study aims to address
- **Methods/Methodology** – how the study was conducted
- **Results/Findings** – what the study discovered
- **Discussion/Conclusion** – interpretation and implications of the results
- **References/Bibliography** – sources cited in the research

Purpose: To **share knowledge, report findings or review existing research** in a structured, reliable way.

Citations: Journal articles are often cited by other researchers, making them a key source of credible information for academic work.



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Microsoft Excel



Trawsnewid Addysg, Trawsnewid Bywydau
Transforming Education, Transforming Lives

www.uwtsd.ac.uk

What is Excel?

- A spreadsheet programme developed by Microsoft
- Used for organising, analysing and visualising data
- Part of the Microsoft Office Suite



Key Features of Excel

- ✓ **Data Entry & Storage:** Store numbers, text and dates in cells
- ✓ **Formulas & Functions:** Perform calculations quickly
- ✓ **Charts & Graphs:** Visualise data trends
- ✓ **Data Analysis Tools:** Sort, filter and pivot tables
- ✓ **Automation:** Macros for repetitive tasks



Uses of Excel

- **Personal Use:** Budgeting, calendars, schedules
- **Academic Use:** e.g. research data analysis
- **Business Use:** Financial modeling, sales tracking, reporting
- **Data Analysis & Visualisation:** Charts, graphs, dashboards



Summary

- Excel is a versatile spreadsheet tool
- Helps organise, calculate, visualise and analyse data
- Useful in academics, business and personal life
- Learning Excel is a valuable skill for the future

We will now explore Excel together.



Graphs and Charts

Trawsnewid Addysg, Trawsnewid Bywydau
Transforming Education, Transforming Lives

www.uwtsd.ac.uk



Why Use Graphs and Charts?

- Makes data easier to understand
- Highlights trends, patterns and comparisons
- Communicates information quickly and effectively
- Helps in decision-making and presentations

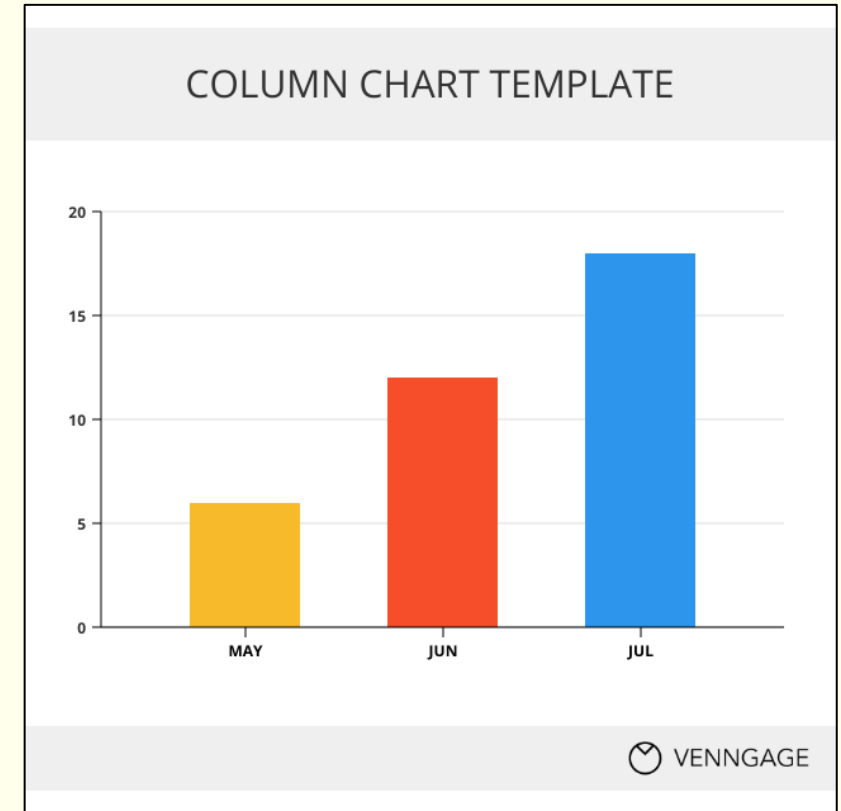
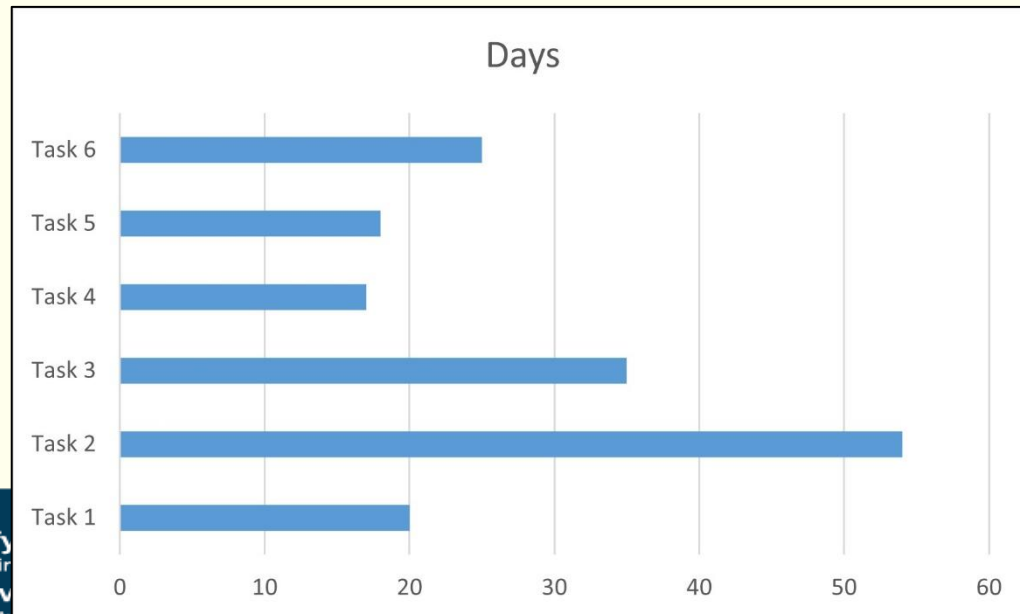


Types of Charts in Excel

- ✓ **Column Chart:** Compare values across categories
- ✓ **Bar Chart:** Horizontal version of column chart
- ✓ **Line Chart:** Show trends over time
- ✓ **Pie Chart:** Show proportions of a whole
- ✓ **Area Chart:** Highlight cumulative trends
- ✓ **Scatter Plot:** Show relationships between two variables

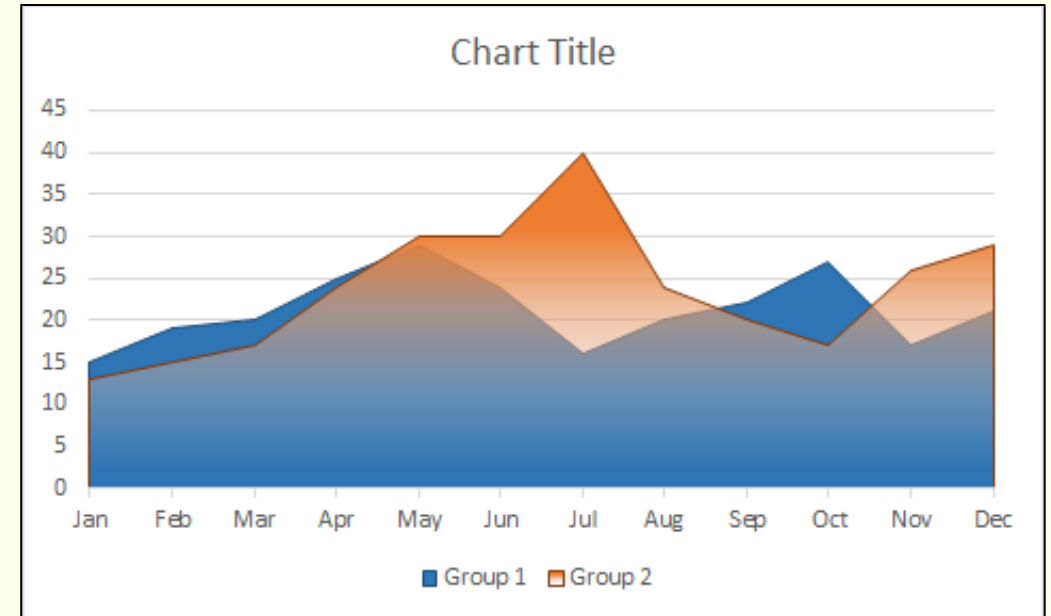
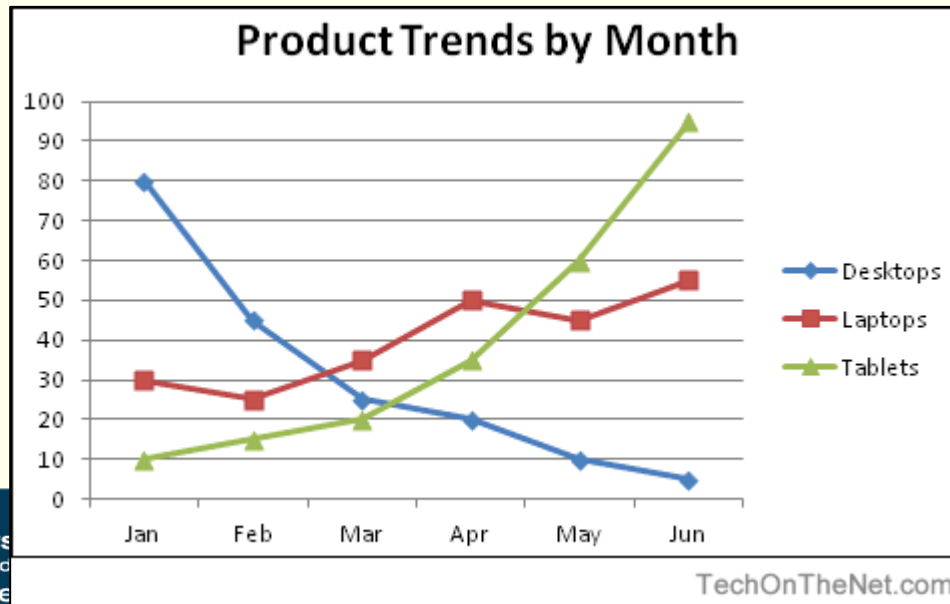
Column and Bar Charts

- Best for comparing categories
- Column: vertical bars
- Bar: horizontal bars
- Example: Compare sales of products A, B, C



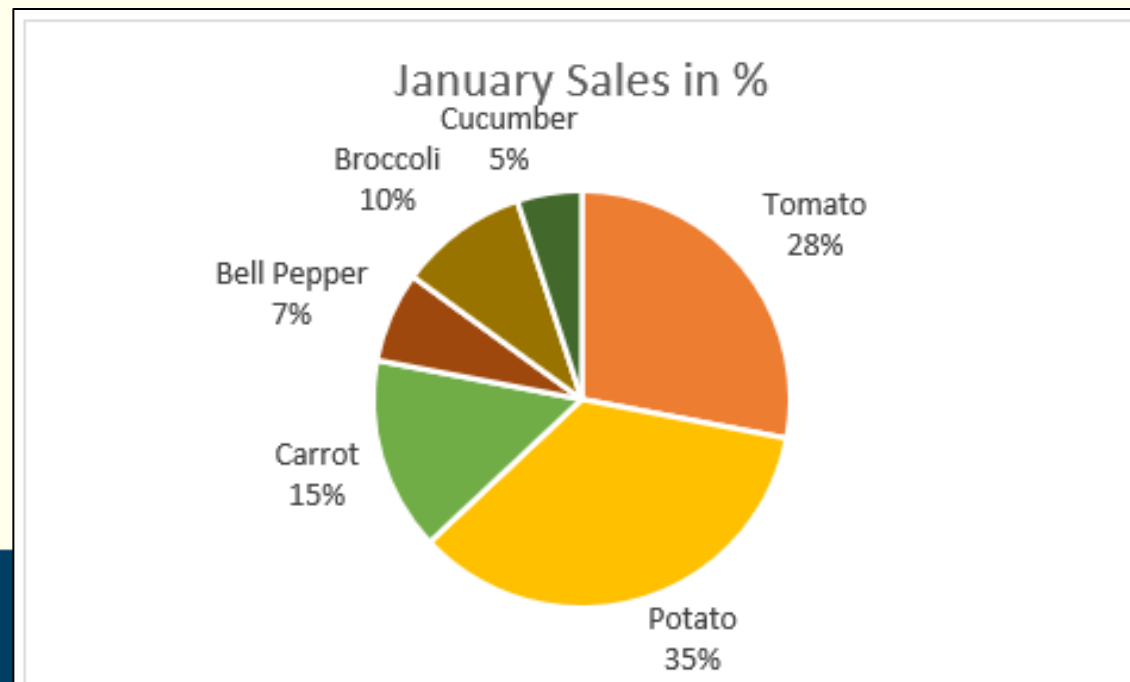
Line and Area Charts

- Show trends over time
- Line: simple trend line
- Area: emphasises cumulative values
- Example: Track monthly revenue over a year



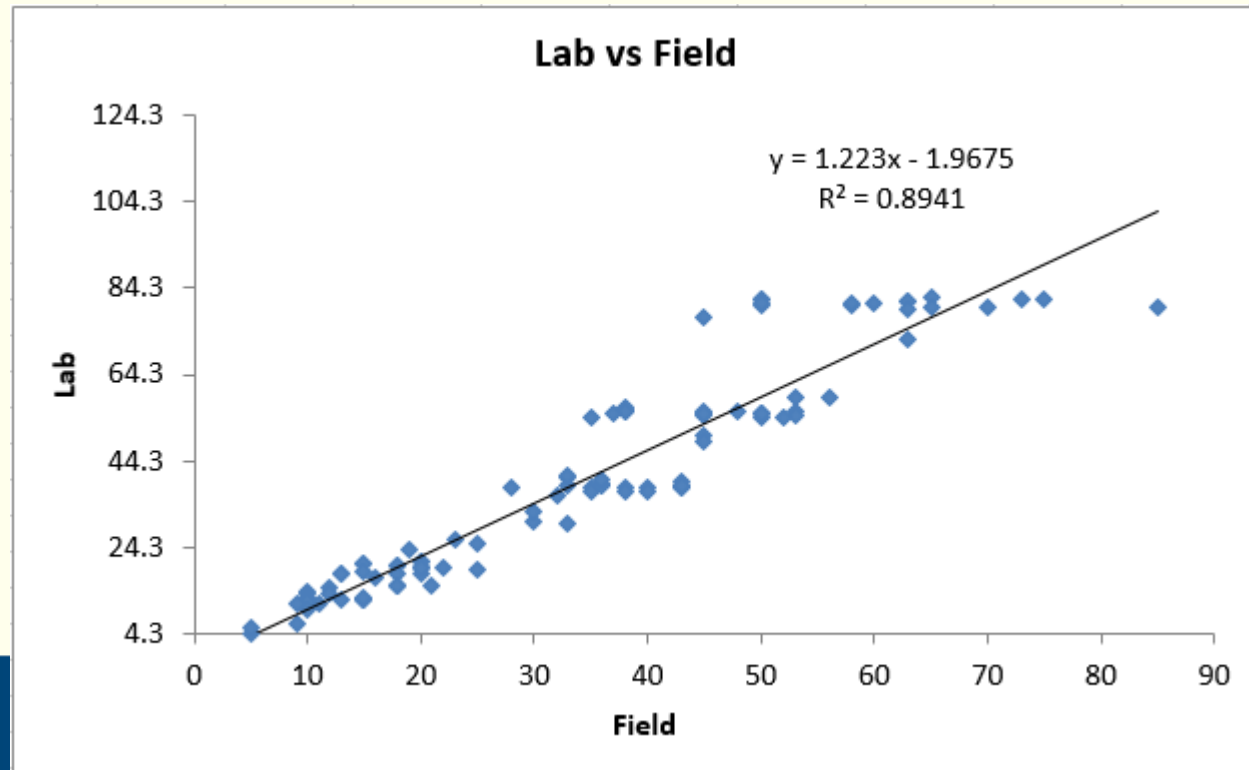
Pie Charts

- Show parts of a whole
- Best for percentages or proportions
- Example: Market share of different brands



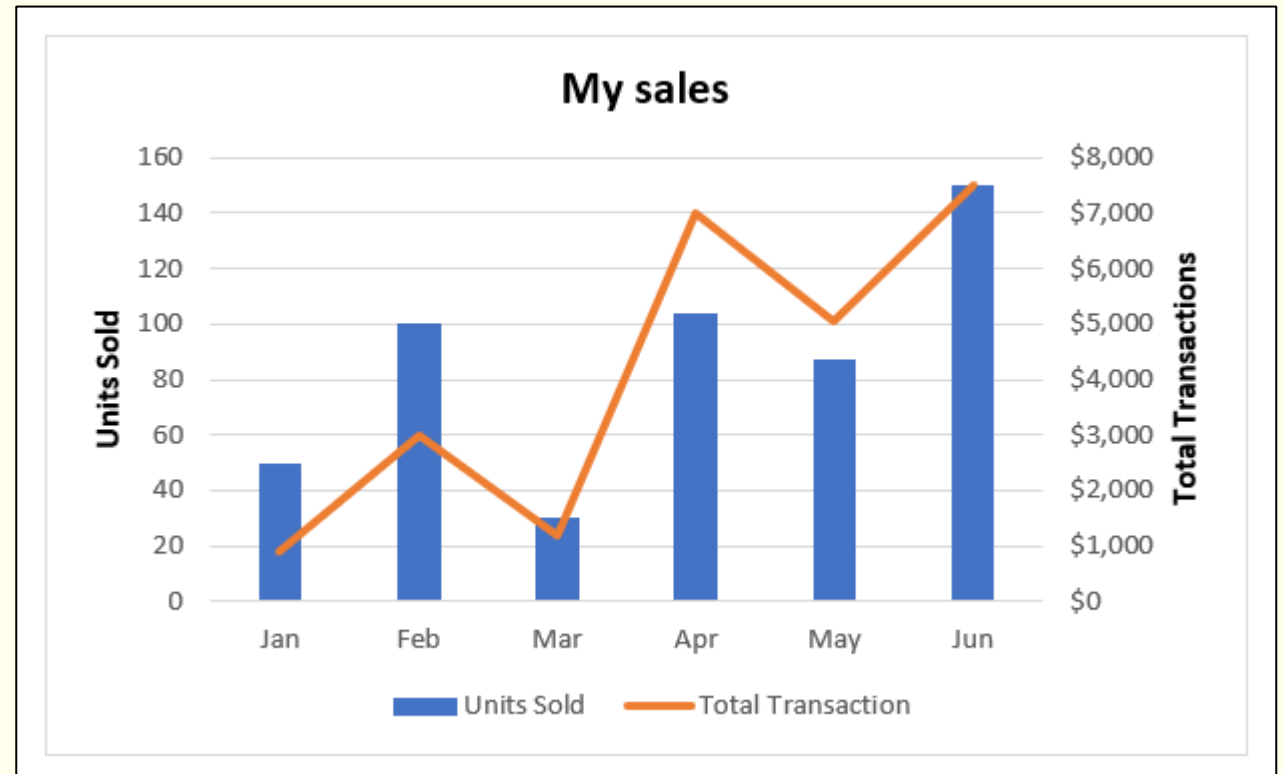
Scatter Plots

- Show relationships or correlations between two variables
- Example: Study hours vs. exam scores
- Helps identify trends or outliers



Combo Charts

- Combine two chart types (e.g. Column + Line)
- Useful for comparing two types of data on one chart
- Example: Sales vs. Profit Margin



Choosing the Right Chart

- Use **Column/Bar** for comparisons
- Use **Line/Area** for trends over time
- Use **Pie** for percentage breakdowns
- Use **Scatter** for correlations

Best Practices for Charts

- ✓ Keep it simple and readable
- ✓ Use appropriate chart types
- ✓ Label axes and provide units
- ✓ Avoid clutter and unnecessary colours
- ✓ Use consistent scales



A city tracks the number of tourists visiting each month over a year.
Which chart type would best show trends over time?

A) Column

B) Line

C) Pie

D) Scatter

A city tracks the number of tourists visiting each month over a year.
Which chart type would best show trends over time?

A) Column

**B) Line -> Shows trends over time
(monthly tourist patterns)**

C) Pie

D) Scatter

Visitors to four attractions (Museum, Beach, Theme Park, Historical Site) are recorded as percentages of total visitors for the year.

Which chart type would best show the proportion of visitors to each attraction?

A) Column

B) Line

C) Pie

D) Scatter

Visitors to four attractions (Museum, Beach, Theme Park, Historical Site) are recorded as percentages of total visitors for the year.

Which chart type would best show the proportion of visitors to each attraction?

A) Column

B) Line

C) Pie -> Shows proportion of total visitors for each attraction.

D) Scatter

Tourists' average daily spending and the number of days they stayed in the city are recorded.

Which chart type would best show the relationship between spending and trip duration?

- A) Column**
- B) Line**
- C) Pie**
- D) Scatter**

Tourists' average daily spending and the number of days they stayed in the city are recorded.

Which chart type would best show the relationship between spending and trip duration?

A) Column

B) Line

C) Pie

D) Scatter -> Displays the relationship between spending and trip duration

A festival's budget is divided among different sections: Venue, Marketing, Entertainment, Logistics.

Which chart type would best compare the budget allocations?

A) Column

B) Line

C) Pie

D) Scatter

A festival's budget is divided among different sections: Venue, Marketing, Entertainment, Logistics.

Which chart type would best compare the budget allocations?

A) Column -> Compares budget across categories clearly

B) Line

C) Pie

D) Scatter

The number of rooms booked each day from Monday to Sunday is recorded.
Which chart type would best show trends in occupancy across the week?

- A) Column**
- B) Line**
- C) Pie**
- D) Scatter**

The number of rooms booked each day from Monday to Sunday is recorded.

Which chart type would best show trends in occupancy across the week?

A) Column

B) Line -> Shows trends in occupancy across days of the week

C) Pie

D) Scatter

Creating a Chart in Excel

- Select your data
- Go to the **Insert** tab
- Choose a chart type
- Customise the chart (titles, colours, labels)

Customising Charts

- **Chart Title** – Add descriptive titles
- **Axis Labels** – Label x-axis and y-axis
- **Data Labels** – Show exact values on chart
- **Legend** – Explain colours or series
- **Colours & Styles** – Make charts visually appealing



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Gantt Charts

Trawsnewid Addysg, Trawsnewid Bywydau
Transforming Education, Transforming Lives

www.uwtsd.ac.uk

Learning Objectives

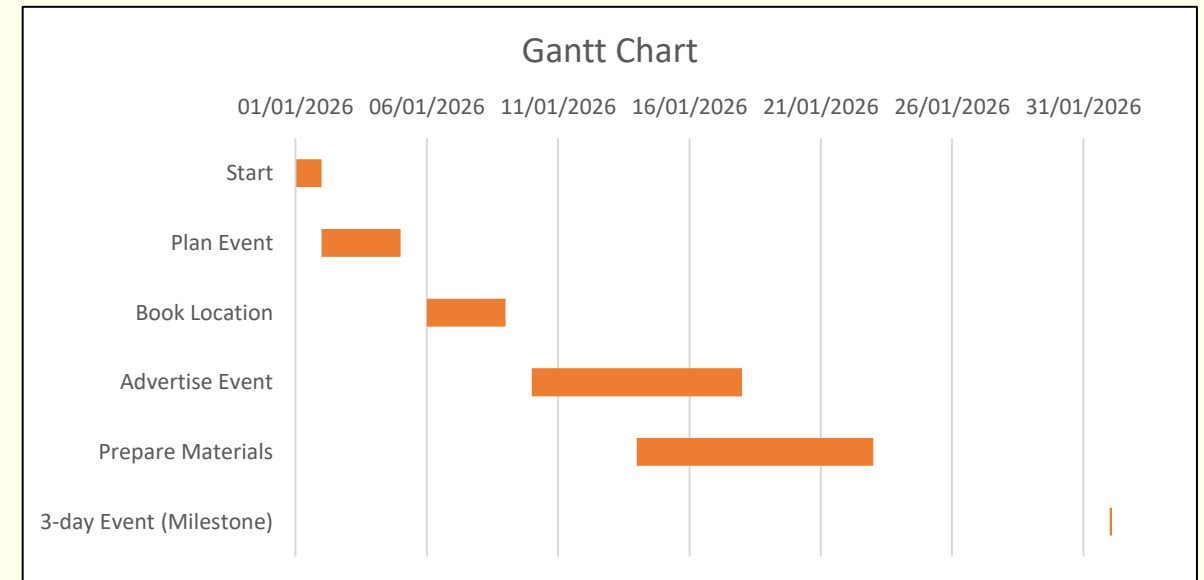
- Understand what a Gantt chart is and why it's useful
- Learn how to create a Gantt chart in Microsoft Excel
- Apply knowledge through a hands-on activity

What is a Gantt Chart?

Definition: A Gantt chart is a visual representation of a project schedule, showing tasks over time.

Key Features:

- Horizontal bars represent tasks
- Timeline across the top
- Helps track progress and dependencies



Why Gantt Charts Matter

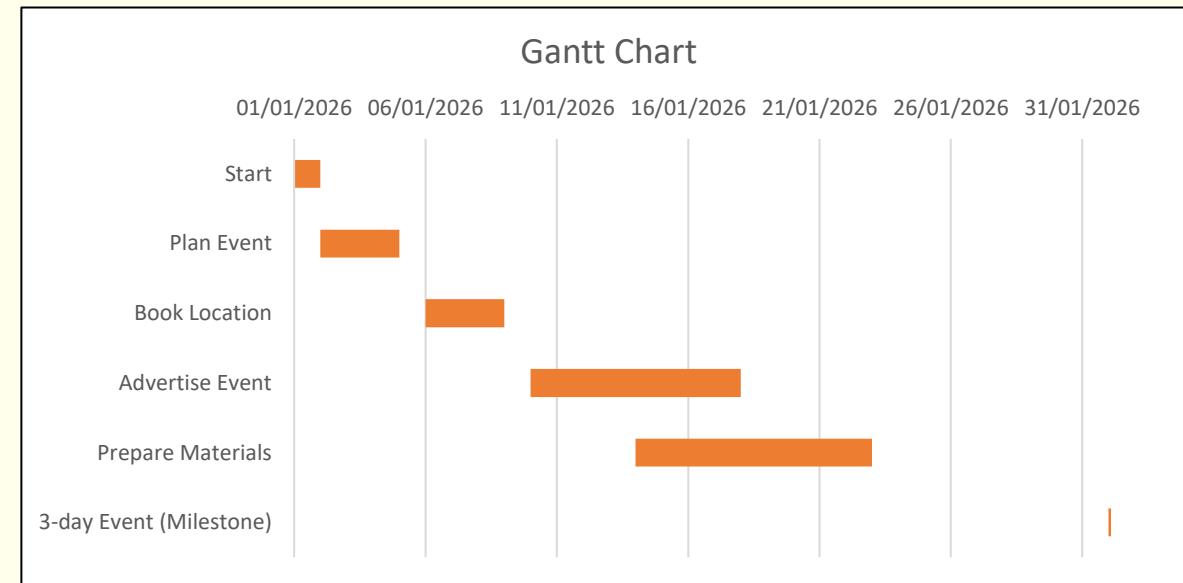
Gantt charts help teams:

- Plan and organise work
- Coordinate between tasks and people
- Monitor progress and deadlines
- Communicate schedules visually
- Identify bottlenecks early



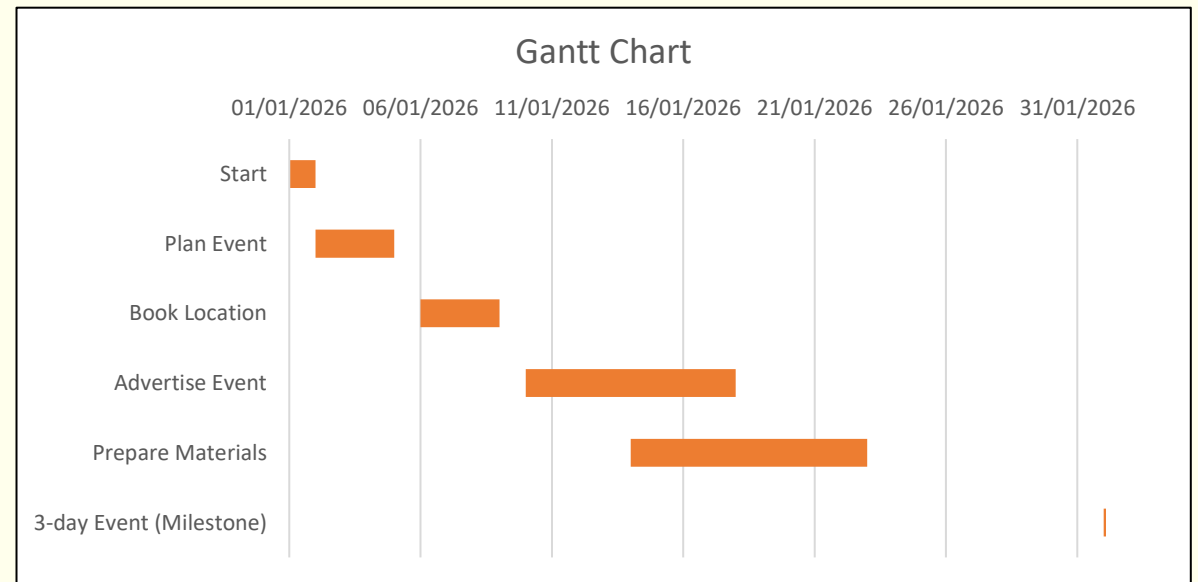
Key Components of a Gantt Chart

- ✓ **Task list** (vertical axis)
- ✓ **Timeline** (horizontal axis)
- ✓ **Bars** showing task duration
- ✓ **Milestones** (important checkpoints)
- ✓ **Dependencies** (relationships between tasks)
- ✓ **Progress indicators** (completion status)



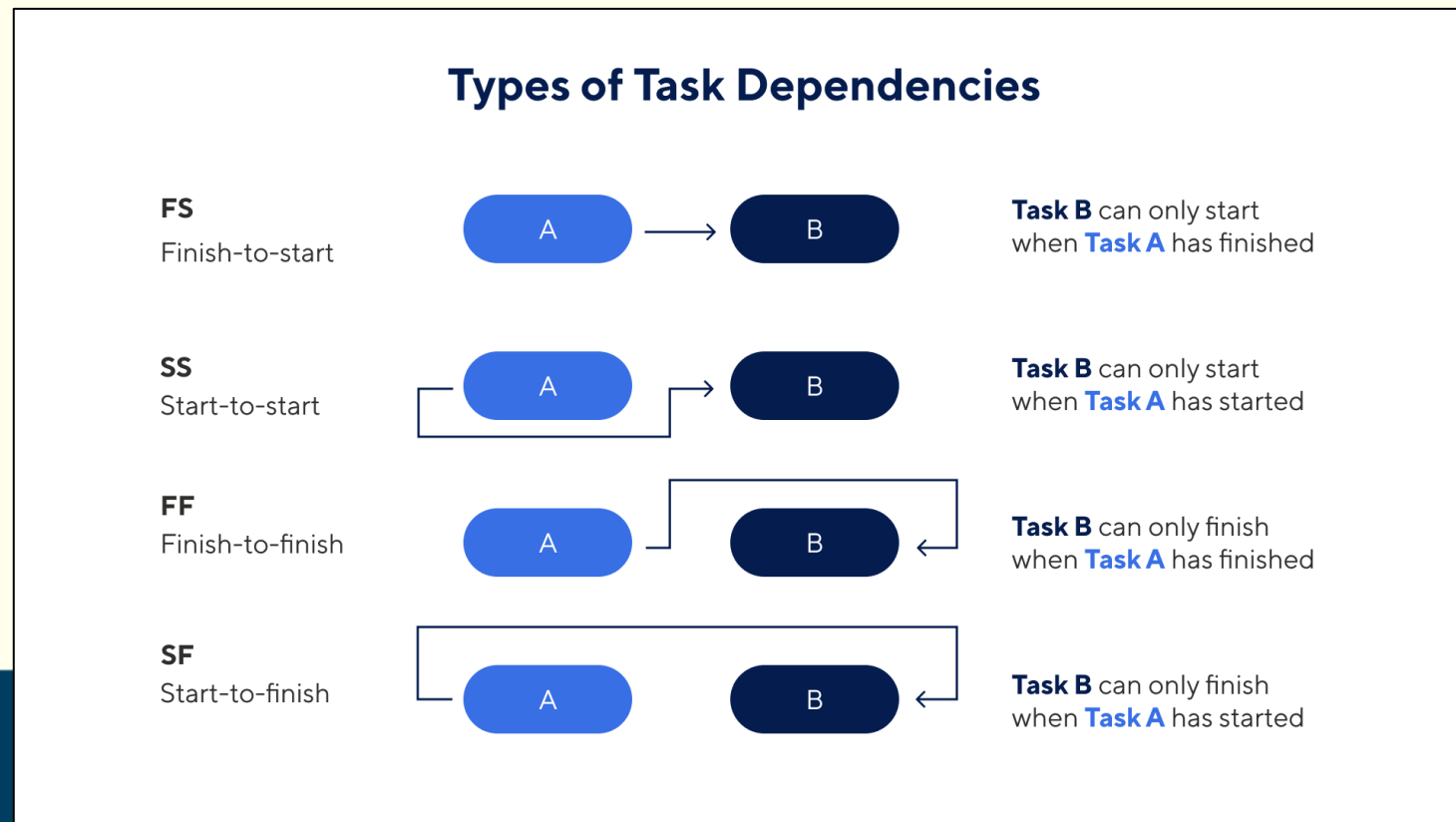
Task Duration

- Each bar's **length** represents time
- Longer bars = longer task durations
- Dates can be shown as:
 - Days
 - Weeks
 - Months

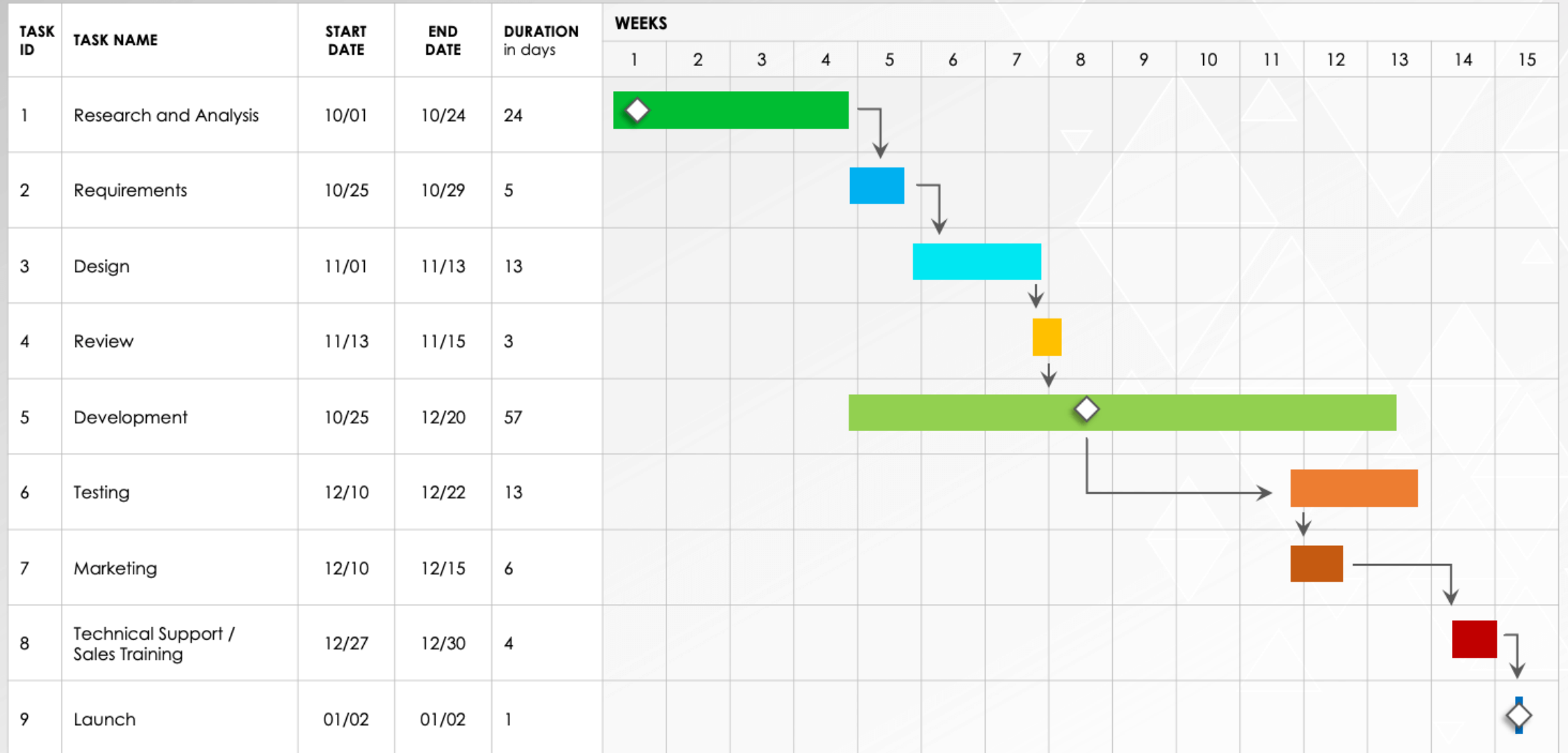


Task Dependencies

- **Task dependencies** mean that **one task cannot start or finish until another task is completed.**
- Dependencies help prevent scheduling conflicts.



PowerPoint Gantt Chart with Dependencies



Task Dependencies – Example 1

Let's say you are organising a **music festival**. These are some of the main tasks:

- ✓ Book the venue
- ✓ Get government/event permits
- ✓ Book artists
- ✓ Set up stage and sound system
- ✓ Sell tickets
- ✓ Run the event

Now let's look at the **dependencies**.

Task Dependencies – Example 1 (contd.)

Task	Can This Start Immediately?	Depends On
1. Book the venue	✓ Yes	No dependency
2. Get event permits	✗ No	Must book venue first
3. Book artists	✗ No	Must confirm event date & venue
4. Set up stage & sound	✗ No	Venue + permits must be approved
5. Sell tickets	✗ No	Venue + artists must be confirmed
6. Run the event	✗ No	All previous tasks must be completed

Task Dependencies – Example 2

A travel agency is creating a **new tour package**. Which tasks depend on another?

Task	Dependency
Design tour itinerary	?
Confirm hotel bookings	?
Arrange transport	?
Set tour price	?
Advertise the tour	?
Accept customer bookings	?

Task Dependencies – Example 2 (contd.)

A travel agency is creating a **new tour package**. Which tasks depend on another?

Task	Dependency
Design tour itinerary	No dependency
Confirm hotel bookings	Depends on itinerary
Arrange transport	Depends on itinerary
Set tour price	Depends on hotel + transport costs
Advertise the tour	Depends on final price
Accept customer bookings	Depends on advertising

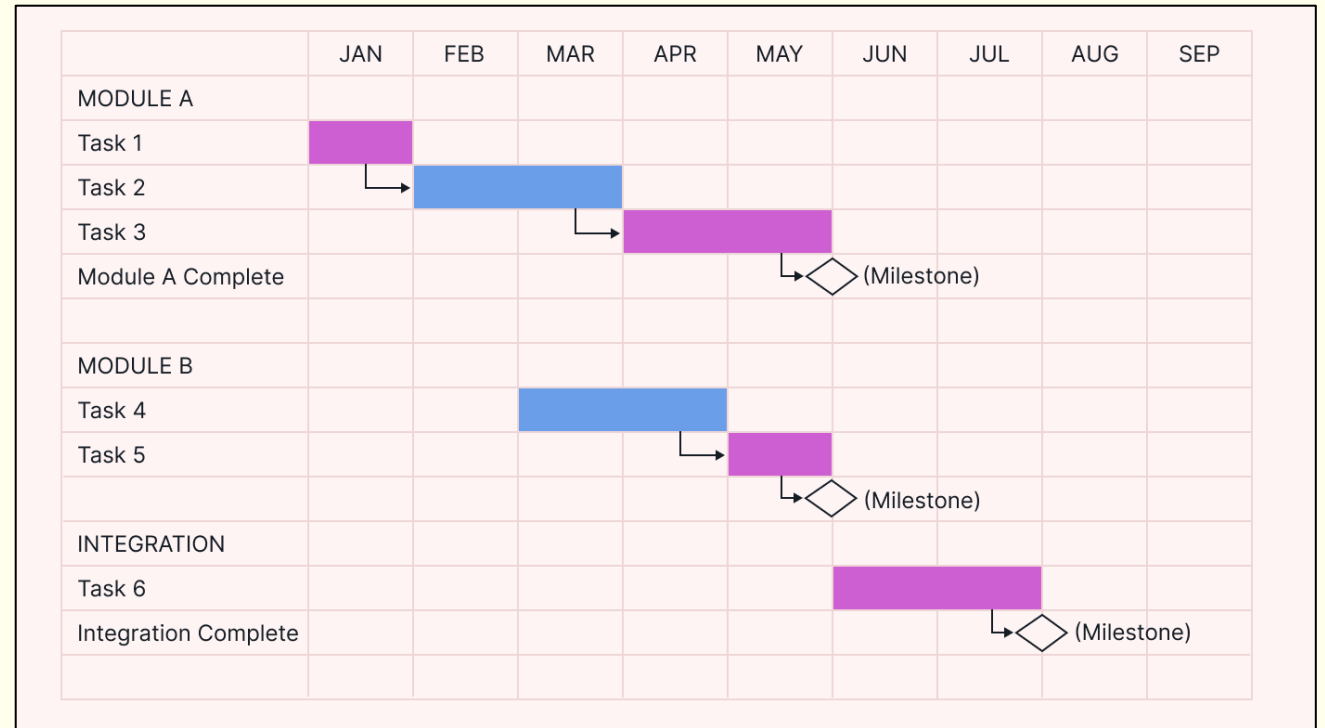
Milestones

Milestones:

- Represent major achievements
- Have **zero duration**
- Shown as diamonds or markers

Examples:

- Project approval
- Product launch
- Final presentation



Progress Tracking

Gantt charts allow you to:

- Compare planned vs. actual progress
- Spot tasks that are behind schedule
- Adjust future task timing
- Improve accountability

Advantages & Limitations

Advantages

- ✓ Easy to understand
- ✓ Excellent visual communication
- ✓ Improves planning accuracy
- ✓ Helps manage deadlines
- ✓ Shows task relationships clearly

Limitations

- ✗ Can become cluttered for large projects
- ✗ Requires regular updates
- ✗ Not ideal for highly flexible projects
- ✗ Does not show resource workload clearly

Steps to Create a Gantt Chart

- ☐ List all project tasks
- ☐ Estimate task durations
- ☐ Identify dependencies
- ☐ Set start and end dates
- ☐ Draw bars on the timeline
- ☐ Add milestones and progress

Common Mistakes to Avoid:

- ❖ Forgetting task dependencies
- ❖ Underestimating time
- ❖ Not updating progress
- ❖ Overloading timelines with too many details

Demo: Gantt Chart

1. Log into Moodle.
2. Download the Excel document on Moodle (Week 9).
3. Follow along, creating a basic Gantt Chart.

Asynchronous Learning: UWTSD Careers Service

Short Course: Presenting Data

<https://uwtsd.careercentre.me/elearning/scorm.aspx?CourseId=vc2uuk+yVzKtob5TdvduCw==>

Asynchronous Learning: LinkedIn Learning

Recommended courses on LinkedIn Learning:

- [Excel Quick Tips](#)
- [Excel Essential Training \(Microsoft 365\)](#)
- [Learning Excel Desktop \(Microsoft 365\)](#)
- [Excel: Introduction to Formulas and Functions 2023\)](#)
- [Practical Excel for the Intrepid Beginner](#)



Course Popular

Excel Essential Training (Microsoft 365)

2h 56m • Beginner • Feb 2025

 LinkedIn • By: Dennis Taylor

4.7 ★★★★★ (3,699) • 270,025 learners •  Certificate Eligible





Video

Using simple formulas in Excel

9m 20s • Updated 2 months ago

 LinkedIn • From the course: Excel Essential Training (Microsoft 365)

122,326 learners

Asynchronous Learning: LinkedIn Learning

To sign up for **LinkedIn Learning**, please follow these steps:

1. Visit the **UWTSD DigiCentre** website.
2. Click on the “**Training**” tab at the top of the page.
3. Select “**LinkedIn Learning**”.
4. Follow the on-screen instructions to **register for free** using your university details.

The screenshot displays the UWTSD DigiCentre website. The header includes the university logo (Prifysgol Cymru Y Drindod Dewi Sant / University of Wales Trinity Saint David) and navigation links: Staff, Students, Badges, Training, Resource Finder, and Cymraeg. The main content area features the text "DigiCentre" and "Improve your digital skills". A blue arrow points to the "Training" tab in the header. A second blue arrow points to the "LinkedIn Learning" option in the dropdown menu that appears when the "Training" tab is selected. The dropdown menu also lists "Events for Staff", "Events for Students", "Microsoft Office Specialist", and "Microsoft Certified Educator".

Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

CanolfanDigidol
DigiCentre

Staff ▾ Students Badges Training ▾ Resource Finder Cymraeg

DigiCentre

Improve your digital skills

We are committed to helping our staff and students

Training ▾ Resource Finder

- Events for Staff
- Events for Students
- LinkedIn Learning**
- Microsoft Office Specialist
- Microsoft Certified Educator

HOSPITALITY
AND
TOURISM
MANAGEMENT

St BRIDES
spa hotel

Man Geni Addysg Uwch yng Nghymru
Where Higher Education Began in Wales

WHITBR

Y Drindod Dewi Sant
University of Wales
Trinity Saint David



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Using AI for Proofreading

Trawsnewid Addysg, Trawsnewid Bywydau
Transforming Education, Transforming Lives

www.uwtsd.ac.uk

3. (Advanced) Proofreading with AI

You can ask a Generative AI tool, such as **ChatGPT**, the Generative AI bot in **Grammarly**, or **Microsoft Copilot**, to **check a text you have written yourself for readability, grammar and syntax**, using the following prompt:

PROMPT: Please check and correct the following text for readability, grammar and syntax, giving me a list of changes made: YOUR TEXT.

You will then **need to decide** whether you want to implement the changes suggested by the GAI tool.

Activity: Using AI Tools for Advanced Proofreading

1. Open your most recent assignment and copy one full paragraph of your choice.
2. Open Microsoft Copilot.
3. Use the given prompt to carry out advanced proofreading.

Please check and correct the following text for readability, grammar and syntax, giving me a list of changes made: YOUR TEXT.

4. Paste your paragraph into YOUR TEXT.
5. Review the suggested changes carefully.
6. Write your AI Acknowledgement Statement.

AI Acknowledgement Statement

I acknowledge the use of [AI Tool] [(AI Tool url)] on [Date] to [Purpose my work]. I used the prompt(s):

1. [Prompt]
2. [Prompt]
3. [Prompt]

I confirm that I have not presented any AI generated text as my own work. I confirm I have copies of my drafts, notes, and other resources I used before, and after the use of AI tools which I may be asked to provide in evidence.

AI Acknowledgement Statement

I acknowledge the use of Microsoft Copilot (<https://copilot.microsoft.com/>) on 4th December 2025 to check a text I have written myself for readability, grammar and syntax. I used the prompt(s):

- 1. Please check and correct the following text for readability, grammar and syntax, giving me a list of changes made: YOUR TEXT.**

I confirm that I have not presented any AI generated text as my own work. I confirm I have copies of my drafts, notes, and other resources I used before, and after the use of AI tools which I may be asked to provide in evidence.

3. Proofreading with AI (contd.)

You cannot ask a GAI tool to create text for you or allow it to completely rewrite, expand or change beyond recognition your own text.

So, you **cannot** use prompts like:

- Tell me why [...]
- Continue this text [...]

You also cannot ask a GAI tool to rephrase text that you did not write yourself, such as from a book, article, internet source, or indeed AI-generated text, and then submit it as if it were your own creation.

Further, you cannot ask a GAI tool to rephrase or paraphrase text that another person has written.

Mock Presentations!

Choose a Topic: Pick a topic you are passionate about, something you can talk about comfortably for 4 minutes. This could be a hobby, interest or anything you enjoy talking about.

Outline Your Structure:

1. Introduction (~30 seconds):

- Introduce your topic and explain why it's important or interesting to you.

2. Body (~2.5-3 minutes):

- Break your topic into 2-3 key points. Each should be around 1 minute.
- Provide examples that make your points engaging and relatable.

3. Conclusion (~45 seconds):

- Summarise your key points.
- End with a call to action, a memorable quote, or a closing thought.