FYBCA SEM-2: 2025-26 [SUBJECT: CERTIFICATE COURSE ON ADVANCE DIGITAL SKILLING] MCQ QUESTION BANK

No.	Question	Option1	Option2	Option3	Option4
1	**Which option is used to create a new Google Form?**	Insert → New Form	Tools → Form Builder	Google Drive → New → Google Form	File → Create Form
2	Which of the following is a basic feature of Google Forms?	Auto-grading handwritten responses	Adding questions and sections	Creating video transitions	Running SQL queries
3	“Untitled form” refers to:	A form with hidden title	A form without a saved file name	A form imported from Excel	A form with no questions
4	Which question type allows users to choose multiple answers?	Short answer	Multiple choice	Checkbox	Linear scale
5	Which type is best for long text responses?	Dropdown	Paragraph	Multiple choice grid	Date
6	Which question type supports adding images as options?	File upload	Multiple choice	Time	Dropdown
7	Which question type is used to select only one choice from available choices in Google Form?	Paragraph	Multiple choice	Time	Date
8	Which of the following is/are types of questions in Google Form?	Paragraph	Multiple choice	Time	All of the Mentioned
9	Dynamic pivot helps in:	Adding animations	Auto-generating summary graphs	Creating interactive pivot tables	Improving quiz scores
10	Dynamic pivot helps users analyze:	YouTube videos	Patterns and trends	File types uploaded	Device info
11	Linking responses to a sheet is done using:	Settings → Auto save	Responses → Link to Sheets	Tools → Connect Workbook	Add-ons → Collector
12	“All-in-one book” means:	New sheet for each response	All responses in one sheet	Editing disabled	Read-only mode

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No.	Question	Option1	Option2	Option3	Option4
13	**In Google Sheets, what does the formula =SPLIT(A1, ",") do?**	Converts the text in cell A1 to lowercase	Splits the text in cell A1 into multiple cells based on commas	Joins text values with a comma separator	Converts the text in cell A1 to uppercase
14	Which of the following options is necessary to send a scanned response?	Gmail account	Template	Both a and b	None of the above
15	Title case may be used for what purpose?	To change all letters to Uppercase	To change all first word to Uppercase in a sentence	To change it to a proper case	None of the above
16	What is the syntax for the multiplication function in Google Sheets?	=MULTIPLY(A1, B1)	=A1 * B1	=PRODUCT(A1, B1)	=MULT(A1, B1)
17	What is the purpose of the LOWER function in Google Sheets?	Converts text to uppercase	Converts text to lowercase	Converts text to proper case	Converts text to title case
18	How would you use the SORT function to sort the values in column A in ascending order?	=SORT(A:A, ASCENDING)	=SORT(A:A, 1)	=SORT(A:A, TRUE)	=SORT(A:A)
19	How do you concatenate text values in Google Sheets?	Using the CONCAT function	Using the TEXTJOIN function	Using the SPLIT function	Using the CONCATENATE function
20	Which function would you use to find the highest sales figure from a range of cells in Google Sheets?	MIN	MAX	AVERAGE	SUM
21	What is the syntax for the AVERAGE function in Google Sheets?	=AVG(A1:A10)	=MEAN(A1:A10)	=AVERAGE(A1:A10)	=AVERAGEVALUE(A1:A10)
22	Which function is used to convert text to uppercase in Google Sheets?	UPPER	UCASE	CONVERT_TO_UPPER	TO_UPPER

FYBCA SEM-2: 2025-26 [SUBJECT: CERTIFICATE COURSE ON ADVANCE DIGITAL SKILLING] MCQ QUESTION BANK

No.	Question	Option1	Option2	Option3	Option4
23	What is the syntax for the FILTER function in Google Sheets?	=FILTER(range, condition)	=FILTER(range; condition)	=FILTER(range; condition; [optional arguments])	=FILTER(range, condition, [optional arguments])
24	Which menu in Google Sheets allows you to	Data	Format	Insert	Tools
25	Which function can you use to format a cell to	TIMEFORMAT	DURATION	TIME	TIMEVALUE
26	How do you protect a sheet in Google Sheets?	Right-click on the sheet	Click on "File" > "Protect	Use the "Protect"	Apply a password to
27	How do you unfreeze rows or columns in Google Sheets?	Right-click on the frozen rows or columns and select "Unfreeze"	Click on "View" > "Unfreeze"	Use the "Format" menu to remove the freeze	There's no way to unfreeze rows or columns once they are frozen
28	Which function would you use to count the number of cells in a range that meet specific criteria in Google Sheets?	COUNT	COUNTIF	SUM	AVERAGE
29	How do you add data fields to a pivot table in Google Sheets?	Drag and drop them into the appropriate areas of the pivot table	Click on "Insert" > "Data Field" and select the desired data field	Right-click on the pivot table and select "Add Data Field"	Type the data field names directly into the pivot table cells
30	How do you apply data validation to a range of cells in Google Sheets?	Right-click on the cells and select "Apply data validation"	Click on "Data" > "Data Validation" and define the validation criteria	Use a keyboard shortcut like Ctrl + D	There is no option for data validation in Google Sheets
31	Which of the following is the last step of the mail merge wizard?	Select the document	Edit the document	Personalize document	Save, Print or send

FYBCA SEM-2: 2025-26 [SUBJECT: CERTIFICATE COURSE ON ADVANCE DIGITAL SKILLING] MCQ QUESTION BANK

No.	Question	Option1	Option2	Option3	Option4
32	You can use the _____ option to send email yourself first before sending it to others using mail merge.	Send Test email	Gmail’s draft folder	Send mail	None of the above
33	What is the purpose of the VLOOKUP function in Google Sheets?	To perform arithmetic calculations	To search for a value in the first column of a range and return a value in the same row from a specified column	To filter data based on specific criteria	To concatenate text values
34	You can use the _____ option to send email yourself first before sending it to others using mail merge.	Send Test email	Gmail’s draft folder	Send mail	None of the above
35	After creating the documents via Autocrat we can:	Save them in Google Drive	Opt to send as email	Both	None of the above
36	Canned response is the feature that can be used in which of the following?	GSheet	MS Word	Gmail	GDoc
37	Change case is an add-on found in which of the following?	Gsheet	GDoc	Gmail	All the above
38	Which of the following can be created using the Lucid chart?	Flowcharts and Diagrams	MS Powerpoint presentation	Google Slides	None of the above
39	A diagram created using LucidChart cannot be exported to Google doc	TRUE	FALSE	True and False	Sometimes
40	Which of the following button is used to delete unwanted fields from the address list?	New	Delete	Customize & then Delete	find

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No.	Question	Option1	Option2	Option3	Option4
41	How can you confirm if your screen is being recorded?	A yellow will appear in tab	A green icon will available in screen	A blue icon will appear in tab	None of the above
42	File upload question allows:	Only images	Any Drive-supported file	Only PDFs	Only Docs
43	Requirement for using 'File upload':	Quiz mode enabled	Google Sign-in required	Paid account required	Incognito mode
44	“Limit to 1 response” requires:	Date question	Google Sign-in	Add-on	File permission
45	To convert form into a quiz, enable:	Quiz mode in Tools	Presentation → Quiz panel	Settings → Quiz	Responses → Auto grading
46	Which setting allows respondents to submit another response?	Shuffle question order	Confirmation message	Show progress bar	Show link to submit another response
47	“Shuffle question order” helps to:	Prevent cheating	Add images randomly	Enable file upload	Increase file size
48	SPLIT function is used to:	Join text	Divide text using delimiter	Count characters	Remove spaces
49	CONCAT function is used to:	Add numbers	Join multiple text strings	Find text	Sort text
50	LEFT function extracts characters from:	End of text	Beginning of text	Middle of text	Last word
51	RIGHT("Excel",2) returns:	Ex	El	Cel	Xc
52	Function to separate "A,B,C":	CONCAT	LEFT	SPLIT	PROPER
53	Extract last 3 characters:	LEFT(text,3)	RIGHT(text,3)	MID(text,3)	CONCAT(text,3)
54	CONCAT("Data ","Sheet") gives:	DataSheet	Data Sheet	Data-Sheet	Error
55	SPLIT(text," ") splits by:	Comma	Space	Slash	Number
56	SUM is used to:	Count items	Add numeric values	Multiply numbers	Sort data
57	Multiply values in Excel using:	MULTIPLY(A1,B1)	A1 * B1	PRODUCT(A1,B1)	Both B & C
58	MIN function gives:	Highest value	Lowest value	Average	Count
59	MAX function gives:	Highest value	Lowest value	Middle value	None

FYBCA SEM-2: 2025-26 [SUBJECT: CERTIFICATE COURSE ON ADVANCE DIGITAL SKILLING] MCQ QUESTION BANK

No.	Question	Option1	Option2	Option3	Option4
60	AVERAGE(10,20,30) equals:	15	20	25	30
61	Multiply entire range A1:A5:	SUM(A1:A5)	MULTIPLY(A1:A5)	PRODUCT(A1:A5)	COUNT(A1:A5)
62	LOWER("HELLO") returns:	HELLO	hello	Hello	HeLLo
63	Filter is used to:	Sort data	Hide non-matching data	Format text	Insert charts
64	Sort A–Z means:	Ascending	Descending	Random	Filtered
65	Remove duplicates found under:	Insert	Data	Tools	View
66	Best chart for percentage distribution:	Bar chart	Pie chart	Line chart	Area chart
67	Line chart is best for:	Trends over time	Category comparison	Proportions	Text formatting
68	Highlighting duplicates uses:	Filters	Conditional formatting	Data validation	Sort
69	Convert text to uppercase function:	LOWER	UPPER	PROPER	FORMAT
70	Currency formatting is available under:	General	Accounting	Date	Wrap
71	Duration between two times:	Subtract end-start	Add times	Multiply times	Average times
72	HH:MM represents:	Days & Years	Hours & Minutes	Months	Currency
73	Applying ₹ INR currency:	Auto	Number → Currency → INR	Wrap text	Merge cells
74	Sheet protection prevents:	Viewing	Editing	Printing	Sorting
75	Freezing row helps to:	Delete row	Keep header visible	Hide header	Duplicate row
76	Wrap text is used to:	Shorten text	Display full text in a cell	Split text	Delete text
77	To merge cells:	Format → Wrap	Data → Merge	Format → Merge cells	Insert → Merge
78	Indentation found under:	Insert	Tools	Format → Alignment	Data → Alignment
79	Justification means:	Merging cells	Aligning left/right/center	Sorting data	Cleaning data
80	COUNT function counts:	Text only	Numbers only	All cell types	Errors

FYBCA SEM-2: 2025-26 [SUBJECT: CERTIFICATE COURSE ON ADVANCE DIGITAL SKILLING] MCQ QUESTION BANK

No.	Question	Option1	Option2	Option3	Option4
81	COUNTIF counts:	Blank cells	Cells meeting a condition	Merged cells	All text cells
82	Pivot table used to:	Create layouts	Analyze and summarize data	Add charts	Delete duplicates
83	VLOOKUP searches:	Horizontally	Vertically	Both directions	Alphabetically
84	Data validation is used to:	Restrict data entry	Add colors	Format charts	Protect sheet
85	Approximate match in VLOOKUP uses:	TRUE	FALSE	BOTH	NONE
86	Most used formula in marksheet totals:	CONCAT	SUM	SPLIT	MAX
87	Salary slip uses which formatting?	Percentage	Currency & Date	Scientific	Wrap text
88	**Nimbus Screenshot tool is mainly used for:**	File compression	Capturing images/screens	Writing code	Audio editing
89	Which Nimbus feature allows capturing long webpages?	Visible part only	Selected area	Scrolling capture	Desktop crop
90	Where can you find the Nimbus option once you have added it to the Chrome browser?	Extension icon	Editor window	Applications	All the above
91	Nimbus allows users to annotate screenshots using:	Antivirus tools	Drawing & shapes tools	Audio mixer	Pivot table
92	How can you confirm if your screen is being recorded?	A yellow will appear in tab	A green icon will available in screen	A blue icon will appear in tab	None of the above
93	Nimbus Screen Recorder can record:	Only audio	Only webcam	Full screen, tab or window	Only PDF pages
94	Nimbus recorded videos are saved in which format?	.mp4	.txt	.jpg	.gif only
95	Nimbus lets you blur sensitive data using:	Crop tool	Blur/highlight tool	Replace tool	Animation tool

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No.	Question	Option1	Option2	Option3	Option4
96	Nimbus videos can include:	3D effects	Webcam overlay	QR scanner	Device manager output
97	Nimbus extension can be installed from:	BIOS settings	Chrome Web Store	VLC Media Player	Android Emulator
98	**Autocrat is primarily used for:**	Sending WhatsApp messages	Automating document generation	Editing images	Running Excel functions
99	Autocrat works as an add-on in:	Google Sheets	Photoshop	MS PowerPoint	VLC Player
100	Autocrat generates output documents mainly in:	.mp3	.pdf	.exe	.wav
101	After creating the documents via Autocrat we can:	Save them in Google Drive	Opt to send as email	Both	None of the above
102	In Autocrat, the template for certificates is usually created in:	Google Docs/Slides	Google Maps	Notepad	Chrome Browser
103	Autocrat uses _____ to fill certificates or bulk emails.	Filters	Merge fields	Formatting tools	Graphics
104	Autocrat saves generated files automatically in:	Recycle Bin	Google Drive	USB Folder	BIOS Memory
105	Autocrat “Job” refers to:	Antivirus process	Automation instruction for merging	Video rendering	Audio mixing
106	Autocrat can run automatically using:	Google Sheets triggers	Windows scheduler	VLC settings	Browser cache
107	**Adobe DocuSign is mainly used for:**	Creating presentations	E-signing documents	Editing videos	Designing logos
108	Which file type is commonly used for e-signing in DocuSign?	.mp3	.pdf	.exe	.wav

FYBCA SEM-2: 2025-26 [SUBJECT: CERTIFICATE COURSE ON ADVANCE DIGITAL SKILLING] MCQ QUESTION BANK

No.	Question	Option1	Option2	Option3	Option4
109	DocuSign sends documents to recipients through:	Bluetooth	Email	USB sharing	QR code
110	DocuSign signatures are considered:	Illegal	Temporary	Legally valid	Not recognized
111	To sign a document in DocuSign, users must:	Upload the document	Install antivirus	Edit using Photoshop	Use a barcode
112	DocuSign allows adding which elements to documents?	Music tracks	Signature fields	Animation effects	Coding scripts
113	Authentication in DocuSign can be done using:	OTP / Email verification	Game login	Network ping	Device BIOS
114	DocuSign dashboard shows:	RAM usage	Signing status & progress	Audio playlist	YouTube history
115	**Google Meet is mainly used for:**	Photo editing	Video conferencing	Coding	File compression
116	Which feature in Google Meet suppresses background noise?	Noise cancellation	Auto text	Screen recorder	Dark mode
117	To share screen in Google Meet, you use:	Present Now	Insert Screen	Upload Window	Share Camera
118	Google Meet sessions require:	Internet connection	Blu-ray disc	Antivirus software	Python installation
119	Which layout shows all participants together?	Spotlight	Auto	Tiled	Mini view
120	Host controls include:	Turning off lights	Removing participants	Editing videos	Programming
121	Attendance in Google Meet can be tracked using:	Add-ons/Extensions	BIOS	Calculator	Task Manager
122	Background change feature in Meet allows:	Adding games	Blurring or replacing background	Rewriting code	Installing apps
123	**Zoom is used primarily for:**	Video conferencing	Car diagnostics	Game development	Audio mixing
124	Zoom feature “Breakout Rooms” is used for:	Background blur	Splitting participants into groups	Increasing bandwidth	Adding music

FYBCA SEM-2: 2025-26 [SUBJECT: CERTIFICATE COURSE ON ADVANCE DIGITAL SKILLING] MCQ QUESTION BANK

No.	Question	Option1	Option2	Option3	Option4
125	Zoom meeting recordings are stored in:	Control Panel	Zoom cloud or local device	YouTube	Paint
126	The security feature to lock a meeting is:	Meeting Guard	Lock Meeting	Close Session	Block Camera
127	Host can mute all participants using:	Mute All	Voice Filter	Audio Cut	Sound Lock
128	Zoom waiting room feature allows:	Editing documents	Approving participants before joining	Installing apps	Changing themes
129	Virtual background in Zoom allows users to:	Change wallpaper	Change or blur their background	Increase volume	Install plugins
130	Zoom chat allows:	Sending files & messages	Editing videos	Making invoices	Designing flowcharts
131	**SMS is transmitted using which protocol?**	SMTP	HTTP/HTTPS	SMPP	POP3
132	SMPP stands for:	Short Message Peer-to-Peer	Simple Messaging Protocol Program	Smart Mobile Protocol Platform	System Message Process Pack
133	Bulk SMS service is mainly used for:	File storage	Mass communication	Antivirus scanning	Video editing
134	Which service allows sending large-volume automated emails?	MS Paint	Customized Email Service	VLC Player	Chrome Extension
135	WhatsApp bulk messaging requires:	Robotics	API-based integration	Offline mode	Calculator
136	SMTP is a protocol used for:	Email communication	SMS delivery	Image compression	Encryption
137	Bulk SMS gateways mainly use:	Manual typing	Automated API requests	USB sharing	Bluetooth connection
138	Customized SMS service allows:	Personalized message templates	Movie editing	Hardware upgrade	Software installation
139	SMS stands for	Same Message Simple	Short Message Service	Simple Message Service	Service Message Short

Unit-1: Data Assemblage Skill - Google Form

Google Forms is a free, web-based tool for creating surveys, quizzes, and data collection forms. It is a part of the Google Workspace suite. Google Forms integrates with Google Sheets for data analysis.

Key Features

- **Question Types**: Supports multiple choice, checkboxes, dropdowns, linear scales, and file uploads.
- **AI Integration**: Features AI to summarize responses and detect data entry errors.
- **Customization**: Users can personalize forms with brand colors, custom fonts, and header images.
- **Quiz Mode**: Allows auto-grading, answer keys, and instant feedback.
- **Logic Branching**: Enables conditional logic to skip sections or show specific questions.
- **Draft Saving**: Form progress is automatically saved for 30 days if respondents are signed into a Google account.

How to Use Google Forms

1. **Access**: Visit forms.google.com or create a new form directly from Google Drive or Google Sheets.
2. **Creation**: Start with a Blank form or choose from the Template Gallery (e.g., RSVP, job application).
3. **Editing**: Click the "+" icon to add questions and the "eye" icon to preview your form's flow.
4. **Sharing**: Click Send to distribute the form via email, a direct link, or by embedding it on a website.
5. **Analyzing**: View responses in the Responses tab or click the Sheets icon to export data to Google Sheets for advanced filtering.

Security and Compliance

Google Forms is secure by default, using encryption in transit and at rest. It supports various regulatory compliance needs and allows owners to restrict access to specific email domains or require sign-ins.

Creating a Google Form is a straightforward process that allows you to collect data, conduct surveys, or build quizzes for free. Below is a step-by-step guide for 2025.

1. Create a New Form

There are several ways to start a new form from your browser:

- **Direct Link:** Go to forms.google.com and click **Blank form**.
- **Google Drive:** Open Google Drive, click **+ New**, and select **Google Forms**.

- **Quick Shortcut:** Type forms.new into your browser's address bar to instantly create a new blank form.
- **Templates:** Use the **Template Gallery** on the Forms homepage to choose pre-designed layouts like event registrations, party invites, or job applications.

2. Design and Add Questions

Once your form is open, you can begin structuring your content:

- **Title and Description:** Click on **Untitled Form** to give it a name and add a description for your respondents.
- **Add Questions:** Click the **(+) Add question** icon in the floating toolbar on the right.
- **Question Types:** Choose the response format from the dropdown menu (e.g., Short answer, Multiple choice, Checkboxes, Dropdown, Linear scale, or File upload).
- **Mandatory Fields:** Toggle the **Required** switch at the bottom of a question to ensure respondents don't skip it.
- **Sections:** Use the **(=) Add section** icon to break longer forms into multiple pages.

3. Customize the Look

Make your form match your brand or style:

- **Themes:** Click the **Customize Theme** (palette) icon at the top right to change fonts, text sizes, and theme colors.
- **Header Image:** Under the theme settings, click **Choose image** to upload your own logo or pick a header from Google’s library.
- **Media:** You can add standalone images or YouTube videos to your form by clicking the **Add image** or **Add video** icons in the right-hand toolbar.

4. Adjust Settings and Preview

Before sending, check your configuration:

- **Preview:** Click the **Eye icon** at the top right to see how the form will look to respondents.
- **Quizzes:** In the **Settings** tab, toggle **Make this a quiz** to assign point values and correct answers.
- **Access Control:** Under Settings > Responses, you can choose to collect email addresses, limit users to one response, or allow them to edit after submitting.

5. Send and Analyze Responses

- **Distribute:** Click the **Send** button to share the form via email, a direct link, or by embedding it into a website.

- **View Results:** Click the **Responses** tab to see real-time charts and summaries of your data.
- **Export to Sheets:** Click the **Link to Sheets** icon (green spreadsheet logo) to automatically send all responses to a Google Sheet for deeper analysis

6. Dynamic pivot enabling

To enable dynamic pivoting for Google Form data, link the form to Google Sheets, then create a pivot table in a new sheet using the entire data range (e.g., A:C or A:Z), not just specific rows, so it automatically updates as new responses come in, providing a real-time summary. For true *in-form* dynamic fields (like conditional questions), you'll need Google Apps Script or add-ons, as standard forms lack this built-in logic, but the Sheet pivot is the most common "dynamic pivot" solution

Step 1: Link Form to Google Sheets (If not already linked)

1. Open your Google Form, go to the **Responses** tab.
2. Click the **Google Sheets icon** (View in Sheets) to link or create a spreadsheet.

Step 2: Create the Dynamic Pivot Table in Google Sheets

1. In the linked Google Sheet, click on the **Insert** menu, then select **Pivot table**.
2. In the "Create pivot table" dialog, ensure the **Data range** covers all columns (e.g., Sheet1!A:C or Sheet1!A:Z) and select **New sheet**, then click **Create**.
3. **Crucially**, in the Pivot table editor (right sidebar), set your Rows, Columns, Values, and Filters. For example, use Timestamp for Rows, a specific question's column for Values (e.g., "What's your favorite color?"), and set the Summarize by to COUNTA to see counts.

Step 3: How it becomes dynamic

- When new form responses arrive, they are added to the bottom of the source data sheet.
- Because your pivot table's data range is set to the entire column (e.g., A:C), it automatically includes the new data, and the pivot table refreshes to show the updated totals, counts, or summaries.

7. Document Upload

To add document uploads in Google Forms, create a new question, select the **File upload** option from the dropdown, click **Continue**, and then customize settings like file types, number, and size, remembering that respondents must sign in to a Google account to upload files, with files automatically saved to your Google Drive.

8. Other Setting

The settings for managing responses, converting a form to a quiz, and presentation options, are found under the **"Settings" tab** in Google Forms.

The term you are using, "**Reposes Setting**," appears to be a slight misspelling; the correct term in Google Forms is the "**Responses**" section.

Here is how to access and manage those settings:

Accessing the Settings Tab

1. Open your form in Google Forms.
2. At the top of the form editor, you will see three main tabs: **Questions**, **Responses**, and **Settings**. Click on the **Settings** tab.

Responses Settings

Within the "Settings" tab, the **"Responses"** section (sometimes an independent tab in the older UI, but now a section under "Settings" in the new UI) allows you to control how responses are collected and managed.

- **Collect email addresses:** You can choose to automatically collect respondents' email addresses.
- **Limit to 1 response:** This prevents users from submitting the form more than once (requires respondents to sign in to a Google account).
- **Allow response editing:** You can decide if respondents can change their answers after submitting the form.
- **Response receipts:** Send a copy of their responses to the people who fill out the form.

Convert to Quiz (Quizzes Setting)

To convert your form into a self-grading quiz:

1. Navigate to the **Settings** tab.
2. Find the **"Quizzes"** section and turn on the toggle for **"Make this a quiz"**.
3. Once enabled, you can configure options such as:
    - **Release grades:** Choose to release scores immediately after submission or after manual review.
    - **Respondent settings:** Control what respondents can see after they submit (e.g., missed questions, correct answers, point values).
    - **Point values:** Set a default point value for new questions.

Presentation Setting

The **"Presentation"** section controls the experience for the person filling out the form.

- **Show progress bar:** Displays a bar at the bottom of the form to indicate how close the respondent is to finishing.
- **Shuffle question order:** Randomizes the order of questions for each person filling out the form, which can help prevent cheating in quizzes.
- **Confirmation message:** Customize the message users see after they submit their form.
- **Show link to submit another response:** Allows users to fill out the form multiple times if "Limit to 1 response" is disabled

Unit-2: Worksheet Management Skill – Google Sheet / Adv. Excel

SUM

In Google Sheets, you can use the SUM formula to add up a range of cells. The syntax is simple: = SUM(range).
For example, if you want to sum up the values in cells A1 to A10, you would use =SUM(A1:A10)

Multiply

To multiply values in Google Sheets, you can use the PRODUCT formula.
The syntax is similar to SUM: =PRODUCT(range) or =PRODUCT(value1, value2, ...).
For instance, to multiply the values in cells A1 and B1, you would use =PRODUCT(A1, B1)

SPLIT function

In Google Sheets, you can use the SPLIT function to split text into separate cells based on a delimiter. The syntax is:
=SPLIT(text, delimiter, [split_by_each], [remove_empty_text])

- text: The text you want to split.
- delimiter: The character or string that separates each part of the text.
- [split_by_each] (optional): If set to TRUE, it splits the text by each character. If set to FALSE or omitted, it splits by the entire delimiter.
- [remove_empty_text] (optional): If set to TRUE, it removes empty text entries from the result. If set to FALSE or omitted, it includes empty text entries.

For example, if you have the text "apple,banana,orange" in cell A1 and you want to split it by commas, you would use =SPLIT(A1, ","). This would separate "apple", "banana", and "orange" into three adjacent cells.

SPLIT function:

Type	Name	Syntax	Description
Text	SPLIT	`SPLIT(text, delimiter, [split_by_each], [remove_empty_text])`	Divides text around a specified character or string, and puts each fragment into a separate cell in the row. Learn more

Divides text around a specified character or string, and puts each fragment into a separate cell in the row.

Examples:

cell_context	delimiter				Result	Formula
Google	o	G	gle			=SPLIT(A2, "o")
Google	oo	G	gle			=SPLIT(A3, "oo")
DmOnCmSn	mn	D	O	C	S	=SPLIT(A4, "mn")
DmOnCmSn	mn	D	O	C	S	=SPLIT(A5, "mn", TRUE)
DmOnCmSn	mn	DmOnCmSn				=SPLIT(A6, "mn", FALSE)

Sample Usage:

SPLIT("1,2,3", ",")

SPLIT("Alas, poor Yorick"," ") SPLIT(A1, ",")

Syntax:

SPLIT(text, delimiter, [split_by_each], [remove_empty_text])

- text - The text to divide.
- delimiter - The character or characters to use to split text.
- By default, each character in delimiter is considered individually, e.g. if delimiter is "the", then text is divided around the characters "t", "h", and "e". Set split_by_each to FALSE to turn off this behavior.
- split_by_each - **[** OPTIONAL - TRUE by default **]** - Whether or not to divide text around each character contained in delimiter.
- remove_empty_text - [OPTIONAL - TRUE by default] - Whether or not to remove empty text messages from the split results. The default behavior is to treat consecutive delimiters as one (if TRUE). If FALSE, empty cells values are added between consecutive delimiters.

RIGHT function

In Google Sheets, the RIGHT function extracts a specified number of characters from the end (right side) of a text string. The syntax for the RIGHT function is:

=RIGHT(text, [num_chars])

- text: The text string from which you want to extract characters.
- [num_chars]: The number of characters you want to extract from the end of the text string. If omitted, it defaults to 1.

For example, if you have the text "Hello" in cell A1 and you want to extract the last three characters, you would use =RIGHT(A1, 3), which would result in "llo".

RIGHT

Text	RIGHT	RIGHT(string, [number_of_characters])	Returns a substring from the end of a specified string. Learn more

Returns a substring from the end of a specified string.

Sample Usage

RIGHT(A2,2)

RIGHT("lorem ipsum")

Syntax

RIGHT(string, [number_of_characters])

- string - The string from which the right portion will be returned.
- number_of_characters - **[** OPTIONAL - 1 by default **]** - The number of characters to return from the right side of string.

Examples

Result	Formula
ocs	=RIGHT("Google Docs", 3)
e	=RIGHT("Google")

LEFT function

In Google Sheets, the LEFT function extracts a specified number of characters from the beginning (left side) of a text string. The syntax for the LEFT function is:
=LEFT(text, [num_chars])

- text: The text string from which you want to extract characters.
- [num_chars]: The number of characters you want to extract from the beginning of the text string. If omitted, it defaults to 1.

For example, if you have the text "Hello" in cell A1 and you want to extract the first three characters, you would use =LEFT(A1, 3), which would result in "Hel".

LEFT

Returns a substring from the beginning of a specified string.

Sample Usage

LEFT(A2,2)
LEFT("lorem ipsum")

Syntax

LEFT(string, [number_of_characters])

- string - The string from which the left portion will be returned.
- number_of_characters - **[** OPTIONAL - 1 by default **]** - The number of characters to return from the left side of string.

Text	LEFT	LEFT(string, [number_of_characters])	Returns a substring from the beginning of a specified string. Learn more
Text	LEFTB	LEFTB(string, num_of_bytes)	Returns the left portion of a string up to a certain number of bytes. Learn more .

Result	Formula
Goo	=LEFT("Google Docs", 3)
G	=LEFT("Google")

Min Function

In Google Sheets, the MIN function is used to find the minimum value in a range of cells or a list of values. The syntax for the MIN function is:

=MIN(value1, [value2, ...])
You can provide multiple values or cell references as arguments, and the function will return the smallest value among them.

For example, if you want to find the minimum value among the numbers in cells A1 to A10, you would use =MIN(A1:A10). If you want to find the minimum value among specific numbers, you would use =MIN(5, 10, 15) which would return 5.

MAX function

In Google Sheets, the MAX function is used to find the maximum value in a range of cells or a list of values. The syntax for the MAX function is:

=MAX(value1, [value2, …])

You can provide multiple values or cell references as arguments, and the function will return the largest value among them.

For example, if you want to find the maximum value among the numbers in cells A1 to A10, you would use =MAX(A1:A10). If you want to find the maximum value among specific numbers, you would use =MAX(5, 10, 15) which would return 15.

AVERAGE function

In Google Sheets, the AVERAGE function calculates the average (arithmetic mean) of a range of cells or a list of values. The syntax for the AVERAGE function is:

=AVERAGE(value1, [value2, ...])

You can provide multiple values or cell references as arguments, and the function will return the average value.

For example, if you want to find the average of the numbers in cells A1 to A10, you would use =AVERAGE(A1:A10). If you want to find the average of specific numbers, you would use =AVERAGE(5, 10, 15) which would return 10.

Change the case

In Google Sheets, you can change the case of text using three different functions: UPPER, LOWER, and PROPER.

1. UPPER: Converts all letters in a text string to uppercase.
   Example: =UPPER("hello") would return "HELLO".

2. LOWER: Converts all letters in a text string to lowercase.
   Example: =LOWER("Hello") would return "hello".

3. PROPER: Capitalizes the first letter of each word in a text string and converts all other letters to lowercase.

Example: =PROPER("hello world") would return "Hello World".

These functions are useful when you need to standardize the case of text data in your Google Sheets.

FILTER

In Google Sheets, the FILTER function is used to retrieve rows or columns that meet specified criteria from a range. Here are the steps to use the FILTER function along with examples:

Steps to use the FILTER function:

1. *Select a cell where you want the filtered results to appear*: Choose a cell where you want the filtered data to be displayed.

2. *Enter the FILTER function*: Type =FILTER(into the selected cell to start the function.

3. *Specify the range*: Enter the range of data from which you want to filter rows or columns.

4. *Define the condition(s)*: Specify the condition(s) that the rows or columns must meet to be included in the filtered results.

5. *Close the function and press Enter*: Close the parentheses and press Enter to apply the filter and display the results.

Example 1: Filter rows based on a single condition

Let's say you have a dataset in cells A1:B10 containing names and corresponding ages. You want to filter out the rows where the age is greater than or equal to 30.

1. Select a cell where you want the filtered results to appear, for example, cell D1.
2. Enter the following FILTER function: =FILTER(A1:B10, B1:B10 >= 30).
3. Press Enter.

This will display only the rows where the age is greater than or equal to 30.

Example 2: Filter rows based on multiple conditions

Let's say you have a dataset in cells A1:C10 containing names, ages, and genders. You want to filter out the rows where the age is greater than or equal to 30 and the gender is "Male".

1. Select a cell where you want the filtered results to appear, for example, cell E1.
2. Enter the following FILTER function: =FILTER(A1:C10, (B1:B10 >= 30) * (C1:C10 = "Male")).
3. Press Enter.

This will display only the rows where the age is greater than or equal to 30 and the gender is "Male".

Using the FILTER function, you can dynamically extract data from a range based on specified criteria, making it a powerful tool for data analysis and manipulation in Google Sheets.

In Google Sheets, you can sort data in ascending or descending order using the SORT function or the built-in sorting feature.

SORT function:

The SORT function allows you to sort a range of data based on one or more columns. The syntax for the SORT function is as follows:

=SORT(range, sort_column, is_ascending, [sort_column2, is_ascending2, ...])

- range: The range of data you want to sort.
- sort_column: The column number (or array of column numbers) by which to sort.
- is_ascending: TRUE for ascending order, FALSE for descending order.
- [sort_column2, is_ascending2, ...] (optional): Additional columns and sorting directions.

Using the built-in sorting feature:

1. Select the range of data you want to sort.
2. Go to the "Data" menu.
3. Click on "Sort range..."
4. Choose the column you want to sort by and the sorting order (ascending or descending).
5. Click "Sort".

Example:

Let's say you have a dataset in cells A1:C10 containing names, ages, and salaries, and you want to sort the data based on the ages in ascending order:

Using SORT function:

=SORT(A1:C10, 2, TRUE)

Using built-in sorting feature:
1. Select the range A1:C10.
2. Go to the "Data" menu.
3. Click on "Sort range..."
4. Choose column B (ages) and select "Ascending".
5. Click "Sort".

Both methods will sort the data based on the ages in ascending order, arranging the rows accordingly.
To find and remove duplicates in Google Sheets, you can use the built-in features or formulas.

Find Duplicates:

1. *Using Conditional Formatting*:
   - Select the range of cells where you want to find duplicates.
   - Go to the "Format" menu.
   - Choose "Conditional formatting."
   - Under the "Format cells if" dropdown, select "Custom formula is."
   - Enter the formula =COUNTIF(A:A, A1)>1 (replace A:A with your actual range).
   - Set the format to highlight the duplicates.
   - Click "Done."

2. *Using the COUNTIF Function*:
   - Insert a new column next to your data.
   - In the first cell of the new column, enter the formula =COUNTIF(A:A, A1) (replace A:A with your actual range).

- Drag the formula down to apply it to all cells in the column.
- Filter the column by values greater than 1 to display duplicates.

Remove Duplicates:

1. *Using the Built-in Feature*:
   - Select the range of cells containing your data.
   - Go to the "Data" menu.
   - Click on "Remove duplicates."
   - Choose the columns you want to check for duplicates.
   - Click "Remove duplicates."

2. *Using Formulas*:
   - Insert a new column next to your data.
   - In the first cell of the new column, enter the formula =UNIQUE(A:A) (replace A:A with your actual range).
   - Drag the formula down to apply it to all cells in the column.
   - This will create a new column with unique values.
   - You can copy these values and paste them over your original data if needed.

Charts

These methods allow you to easily identify and manage duplicates in your Google Sheets data.
In Google Sheets, you can create various types of charts and graphs to visualize your data. Here's how to create a chart:

1. *Select Data*: Highlight the data range you want to include in your chart.

2. *Insert Chart*:
   - Go to the "Insert" menu.
   - Click on "Chart."
   - Alternatively, you can also click on the chart icon in the toolbar.

3. *Choose Chart Type*:
   - In the Chart Editor that appears on the right, choose the type of chart you want to create (e.g., Column chart, Line chart, Pie chart, etc.).

4. *Customize Chart*:
   - Customize the chart style, colors, and other settings as needed.
   - You can also adjust the chart title, axis labels, and legend.

5. *Preview and Insert*:
   - Once you're satisfied with the chart settings, click "Insert" to add…

Graph

To create a graph in Google Sheets, you can follow these steps:

1. *Select Data*: Highlight the data range you want to include in your graph, including the column or row headers.

2. *Insert Chart*:
   - Go to the "Insert" menu.
   - Click on "Chart."
   - Alternatively, you can also click on the chart icon in the toolbar.

3. *Choose Chart Type*:
   - In the Chart Editor that appears on the right, choose the type of graph you want to create (e.g., Line graph, Bar graph, Scatter plot, etc.).

4. *Customize Graph*:
   - Customize the graph style, colors, and other settings as needed.
   - You can adjust the graph title, axis labels, legend, and data series.

5. *Preview and Insert*:
   - Once you're satisfied with the graph settings, click "Insert" to add the graph to your Google Sheets.

Example Graph Types:

1. *Line Graph*: Suitable for showing trends or changes over time.

2. *Bar Graph*: Ideal for comparing values across different categories.

3. *Scatter Plot*: Displays individual data points as dots, useful for showing relationships between two variables.

4. *Histogram*: Represents the distribution of numerical data.

5. *Pie Chart*: Displays parts of a whole, suitable for showing percentages.

Calculate time durations

In Google Sheets, you can calculate time durations using a combination of formulas and formatting. Here are the steps to calculate and display time durations:

1. *Enter Start and End Times*: In two separate cells, enter the start time and end time. For example, in cell A1, you might enter the start time as "9:00 AM" and in cell B1, you might enter the end time as "10:30 AM".

2. *Calculate Duration*: In another cell, you can subtract the start time from the end time to calculate the duration. For example, if the start time is in cell A1 and the end time is in cell B1, you can use the formula =B1-A1.

3. *Format as Duration*: After calculating the duration, you can format the cell to display the result as a duration. Right-click on the cell with the duration, select "Format cells...", then choose "Duration" under the "Category" section. You can also specify the desired time units (hours, minutes, seconds) and the display format.

4. *Custom Formatting (Optional)*: You can further customize the formatting of the duration by right-clicking on the cell, selecting "Format cells...", and choosing "Custom" under the "Category" section. From there, you can enter a custom format code to display the duration in a specific format.

Currency:

In Google Sheets, you can easily format numbers as currency using the built-in formatting options. Here's how to do it:

Formatting as Currency:

1. *Select the Cell(s)*: Highlight the cells or range of cells that you want to format as currency.

2. *Go to Format Options*:
   - You can either right-click and select "Format cells..." or go to the "Format" menu and choose "Number" > "More formats" > "Number" > "Currency".

3. *Choose Currency Format*:
   - In the Format sidebar that appears, click on the dropdown menu next to "Currency".
   - Select the desired currency symbol from the list (e.g., Dollar, Euro, Pound, etc.).

4. *Set Additional Options (Optional)*:
   - You can adjust the number of decimal places, choose a different currency symbol position, or apply custom formatting if needed.

5. *Apply the Formatting*:
   - Click "Apply" or simply close the Format sidebar to apply the currency formatting to the selected cells.

Example:

Let's say you have a column of numbers representing prices or amounts, and you want to format them as currency.

1. *Select the Cell(s)*: Highlight the column of numbers you want to format as currency.

2. *Go to Format Options*:
   - Right-click and select "Format cells..." or go to the "Format" menu and choose "Number" > "More formats" > "Number" > "Currency".

3. *Choose Currency Format*:
   - In the Format sidebar, select the desired currency symbol from the dropdown menu (e.g., Dollar symbol "$").

4. *Set Additional Options (Optional)*:
   - Adjust the decimal places or choose a different currency symbol position if needed.

5. *Apply the Formatting*:
   - Click "Apply" or close the Format sidebar to apply the currency formatting to the selected column of numbers.

After applying the currency formatting, the numbers will be displayed with the chosen currency symbol and format, making it easier to read and understand the monetary values in your Google Sheets.
In Google Sheets, you can protect sheets to prevent accidental or unauthorized changes to the content, formatting, and structure of your spreadsheet. Here's how to protect sheets:

Protecting Sheets:

1. *Open Google Sheets*: Open the Google Sheets spreadsheet that you want to protect.

2. *Select the Sheet(s)*: Click on the sheet tab at the bottom to select the sheet(s) you want to protect. You can select multiple sheets by holding down the Ctrl (Cmd on Mac) key while clicking on the sheet tabs.

3. *Go to the "Data" Menu*: Once you've selected the sheet(s), go to the "Data" menu at the top.

4. *Choose "Protect Sheet..."*: In the "Data" menu, hover over "Protected sheets and ranges" and select "Protect sheet...".

5. *Set Permissions*: In the "Protect sheet" dialog box that appears, you can set permissions for the protected sheet. You can choose who can edit the protected range and who can view it. You can also add a description for the protected range.

6. *Optional: Add a Warning*: You can add a warning message that will be displayed to users who try to edit the protected range.

7. *Click "Set Permissions"*: After setting the permissions and optional warning message, click "Set Permissions" to protect the sheet.

Freezing Rows:

1. *Open Google Sheets*: Open the Google Sheets spreadsheet where you want to freeze rows or columns.

2. *Select Row(s) to Freeze*: Click on the row number(s) below the row(s) you want to freeze. For example, if you want to freeze the first two rows, click on the number "3" (indicating row 3).

3. *Go to the "View" Menu*: Once you've selected the row(s), go to the "View" menu at the top.

4. *Choose "Freeze"*: In the "View" menu, hover over "Freeze" and select "Up to current row" to freeze the selected row(s). Alternatively, you can choose "1 row" to freeze just the top row.

Freezing Columns:

1. *Open Google Sheets*: Open the Google Sheets spreadsheet where you want to freeze rows or columns.

2. *Select Column(s) to Freeze*: Click on the column letter(s) to the right of the column(s) you want to freeze. For example, if you want to freeze the first two columns, click on the letter "C" (indicating column C).

3. *Go to the "View" Menu*: Once you've selected the column(s), go to the "View" menu at the top.

4. *Choose "Freeze"*: In the "View" menu, hover over "Freeze" and select "Up to current column" to freeze the selected column(s). Alternatively, you can choose "1 column" to freeze just the leftmost column.

Example:

Let's say you have a spreadsheet with a large dataset, and you want to freeze the first row and the first two columns to keep them visible while scrolling through the rest of the data.

1. Click on the row number "2" to select the first row.
2. Go to the "View" menu and choose "Freeze" > "1 row" to freeze the first row.
3. Click on the column letter "C" to select the first two columns.
4. Go to the "View" menu and choose "Freeze" > "1 column" to freeze the first two columns.

Now, as you scroll through your spreadsheet, the first row and the first two columns will remain visible, making it easier to reference headers or other important information while navigating through your data.

Text Wrapping

To wrap text within a cell in Google Sheets, you can follow these steps:

1. *Select Cell(s)*: Click on the cell(s) containing the text you want to wrap.

2. *Go to the "Format" Menu*: Once you've selected the cell(s), navigate to the "Format" menu at the top of the Google Sheets interface.

3. *Choose "Text Wrapping"*: In the "Format" menu, hover over "Text wrapping" and select "Wrap."

Example:
Let's say you have a long text string in cell A1 that you want to wrap:

1. Click on cell A1 to select it.
2. Go to the "Format" menu.
3. Choose "Text wrapping" and select "Wrap."

Now, if the text in cell A1 is longer than the width of the cell, it will automatically wrap to fit within the cell boundaries. This makes it easier to read long text strings without adjusting column widths or losing any content.

Wrapping text within cells is particularly useful when dealing with descriptions, notes, or any other text content that may be longer than the width of a cell.

Merging Cells:

In Google Sheets, you can merge cells to combine multiple adjacent cells into a single larger cell. Here's how to merge cells:

1. *Select Cells*: Click and drag to select the range of cells you want to merge. Note that you can only merge adjacent cells in the same row or column.

2. *Go to the "Format" Menu*: Once you've selected the cells, go to the "Format" menu at the top.

3. *Choose "Merge Cells"*: In the "Format" menu, hover over "Merge cells" and select either "Merge all" to merge the selected cells into a single larger cell, or "Merge horizontally" or "Merge vertically" to merge the cells in the selected direction.

Example:

Let's say you have data in cells A1:B1 that you want to merge into a single cell:

1. Click and drag to select cells A1:B1.
2. Go to the "Format" menu.
3. Choose "Merge cells" and select "Merge horizontally" to merge cells A1 and B1 into a single larger cell.

Now, the content from both cells A1 and B1 will be combined into a single larger cell spanning across both columns. You'll notice that the cell border will disappear to indicate that the cells have been merged.

Merging cells can be useful for creating headings, labels, or titles that span multiple columns or rows, enhancing the visual appearance and organization of your Google Sheets.

Justification/Alignment :

In Google Sheets, you can adjust the horizontal and vertical alignment of cell content using the justification options. Here's how to do it:

Horizontal Alignment:

1. *Select Cell(s)*: Click on the cell(s) whose content alignment you want to adjust.

2. *Go to the "Format" Menu*: Once you've selected the cell(s), go to the "Format" menu at the top.

3. *Choose "Text Alignment"*: In the "Format" menu, hover over "Text alignment" to reveal the horizontal alignment options: Left, Center, Right, and Justify.

4. *Select Alignment Option*: Choose the desired horizontal alignment option based on how you want the content to be aligned within the cell(s).

Vertical Alignment:

1. *Select Cell(s)*: Click on the cell(s) whose content alignment you want to adjust.

2. *Go to the "Format" Menu*: Once you've selected the cell(s), go to the "Format" menu at the top.

3. *Choose "Text Alignment"*: In the "Format" menu, hover over "Text alignment" to reveal the vertical alignment options: Top, Middle, and Bottom.

4. *Select Alignment Option*: Choose the desired vertical alignment option based on how you want the content to be aligned within the cell(s).

Example:

Let's say you want to horizontally align the content of cell A1 to the center and vertically align it to the middle:

1. Click on cell A1 to select it.
2. Go to the "Format" menu.
3. Choose "Text alignment" and select "Center" for horizontal alignment and "Middle" for vertical alignment.

Now, the content of cell A1 will be horizontally centered and vertically aligned to the middle within the cell.

Adjusting text alignment helps improve the readability and presentation of your Google Sheets, especially when working with large amounts of data or creating formatted reports and documents.

Indention:

In Google Sheets, you can indent cell content to create visual hierarchy and organization within your spreadsheet. Here's how to indent cell content:

Indenting Cell Content:

1. *Select Cell(s)*: Click on the cell(s) whose content you want to indent.

2. *Go to the "Format" Menu*: Once you've selected the cell(s), go to the "Format" menu at the top.

3. *Choose "Text Wrapping"*: In the "Format" menu, hover over "Text wrapping" and select "Wrap."

4. *Indent the Content*: After enabling text wrapping, place the cursor at the beginning of the text you want to indent and press the Tab key on your keyboard. Each press of the Tab key will increase the level of indentation.

Example:
Let's say you have text in cell A1 that you want to indent:

1. Click on cell A1 to select it.
2. Go to the "Format" menu.
3. Choose "Text wrapping" and select "Wrap."
4. Place the cursor at the beginning of the text in cell A1 and press the Tab key to indent the content.

Now, the text in cell A1 will be indented to create visual hierarchy or alignment within the cell.

Indenting cell content can be useful for creating nested lists, outlining information, or organizing text in a structured manner within your Google Sheets.

COUNT function

In Google Sheets, the COUNT function is used to count the number of cells that contain numbers within a specified range. Here's how to use it:

Syntax:
=COUNT(value1, [value2, ...])

- value1: The first value or range of cells to count.
- [value2, ...]: Additional values or ranges of cells to count (optional).

Example:
Let's say you have a range of cells A1:A10 containing numeric values, and you want to count how many cells contain numbers:

1. Select the cell where you want the count result to appear.
2. Enter the formula =COUNT(A1:A10).

This will count the number of cells in the range A1:A10 that contain numbers and display the result in the selected cell.

You can also use COUNT function to count specific numbers or conditions by providing multiple arguments. For example, =COUNT(A1:A10, ">5") will count the number of cells in the range A1:A10 that contain values greater than 5.

CONCAT :

Returns the concatenation of two values. Equivalent to the `&` operator.

Sample Usage CONCAT("de","mystify")
CONCAT(17,76)

Syntax
CONCAT(value1, value2)

- value1 - The value to which value2 will be appended.
- value2 - The value to append to value1.

Type	Name	Syntax	Description
Operator	CONCAT	`CONCAT(value1, value2)`	Returns the concatenation of two values. Equivalent to the `&` operator. Learn more
Text	CONCATENATE	`CONCATENATE(string1, [string2, ...])`	Appends strings to one another. Learn more
Text	JOIN	`JOIN(delimiter, value_or_array1, [value_or_array2, ...])`	Concatenates the elements of one or more one-dimensional arrays using a specified delimiter. Learn more

Result	**Formula**
GoogleDocs	=CONCAT("Google", "Docs")
36	=CONCAT(3,6)
Spreadsheet77	=CONCAT("Spreadsheet", 77)

COUNTIF function

In Google Sheets, the COUNTIF function is used to count the number of cells within a specified range that meet a certain condition. Here's how to use it:

Syntax:
=COUNTIF(range, criterion)
- range: The range of cells you want to evaluate.
- criterion: The condition that cells must meet to be counted.

Example:
Let's say you have a range of cells A1:A10 containing numbers, and you want to count how many of them are greater than 5:

1. Select the cell where you want the count result to appear.
2. Enter the formula =COUNTIF(A1:A10, ">5").

This will count the number of cells in the range A1:A10 that contain values greater than 5 and display the result in the selected cell.

You can use various criteria with COUNTIF, such as equals to, not equal to, greater than, less than, etc., to count cells based on specific conditions. For example, =COUNTIF(B1:B10, "Apple") will count the number of cells in the range B1:B10 that contain the text "Apple".

Pivot tables

In Google Sheets, you can create pivot tables to summarize and analyze large datasets easily. Here's how to create a pivot table with an example:

Example Dataset:
Let's say you have a dataset containing sales data with columns for "Product", "Region", "Salesperson", and "Sales Amount".

Product	Region	Salesperson	Sales Amount
A	North	Alice	1000
B	South	Bob	1500
C	North	Alice	1200
A	South	Bob	800
B	North	Alice	2000

Steps to Create a Pivot Table:

1. *Select Data*: Highlight the entire dataset, including column headers.
2. *Go to the "Data" Menu*: Click on the "Data" menu at the top.
3. *Choose "Pivot table"*: Select "Pivot table" from the dropdown menu.
4. *Configure Pivot Table*:
   - In the Pivot table editor on the right, drag and drop the fields you want to summarize into the "Rows", "Columns", and "Values" sections.
   - For example, you can drag "Region" into Rows, "Product" into Columns, and "Sales Amount" into Values.
5. *Customize*: You can further customize the pivot table by changing aggregation methods (e.g., sum, average), sorting, formatting, and more.

Example Pivot Table:

	Product A	Product B	Product C
North	3000	2000	0
South	800	1500	0
*Total	**3800*	*3500*	*0*

In this example, the pivot table summarizes sales amounts by product and region. You can see the total sales amounts for each product in each region, as well as the grand totals for each product across all regions. This provides a quick overview of sales performance across different regions and products.

Add or edit pivot tables

1. On your computer, open a spreadsheet in Google Sheets.
2. Select the cells with source data you want to use. **Important:** Each column needs a header.
3. In the menu at the top, click **Insert** > **Pivot table**. Click the pivot table sheet, if it's not already open.
4. In the side panel, next to "Rows" or "Columns," click **Add**, then choose a value.

Calculated fields with SUM or a custom formula

1. On your computer, open a spreadsheet in Google Sheets.
2. Click the pop-up **Edit** button underneath the pivot table.
3. In the side panel, next to "Values," click **Add** > click **Calculated field**.

- **Calculate a value with SUM:** Next to “Summarize by,” click **SUM**.
- **Calculate a value with a custom formula:** In the field that appears, enter a formula. Then, next to "Summarize by," click **Custom**.

4. On the bottom right, click **Add** and the new column will appear.

Pivot Table

	A	B	C	D	E
1	**division**	**subdivision**	**product numbe**	**number of units**	**price per unit**
2	east	1	$1	14	$10
3	east	2	$1	15	$11
4	west	1	$1	11	$10
5	west	2	$1	21	$9
6	east	3	$1	16	$8
7	west	3	$1	18	$12
8	east	4	$1	11	$9
9	east	1	$2	10	$9
10	east	2	$2	9	$13
11	west	1	$2	12	$10

Dataset | Pivot Table | Pivot Table with Calculated field

Pivot Table

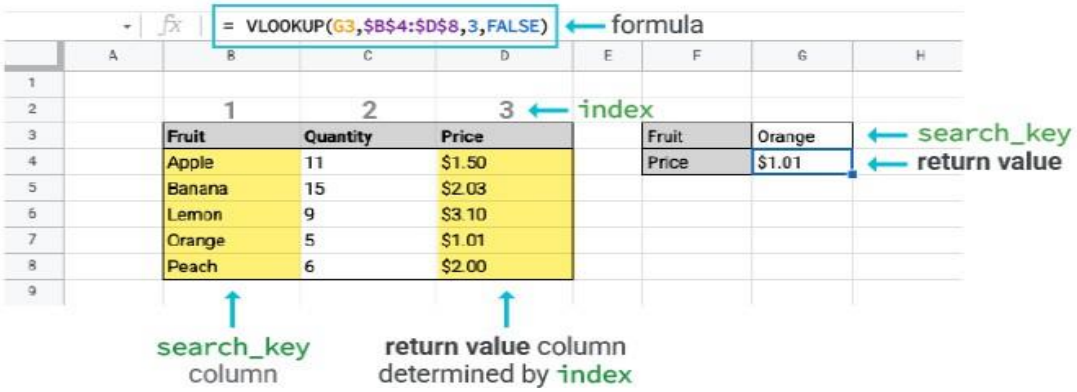
1	*division*	*subdivision*	SUM of number of units	AVERAGE of price per unit
2	east	1	24	$9.50
3		2	24	$12.00
4		3	28	$8.50
5		4	23	$9.00
6	east Total		99	$9.75
7	west	1	23	$10.00
8		2	36	$9.50
9		3	34	$12.00
10	west Total		93	$10.50
11	**Grand Total**		**192**	**$10.07**

Dataset | Pivot Table | Pivot Table with Calculated field

	A	B	C	D
1	*subdivision*	SUM of number of units	AVERAGE of price per unit	Calculated Field: Weighted Average
2	1	47	$9.75	$9.79
3	2	60	$10.75	$10.35
4	3	62	$10.25	$10.39
5	4	23	$9.00	$9.00
6	**Grand Total**	**192**	**$10.07**	**$10.06**

Vlookup :

If you have known information on your spreadsheet, you can use VLOOKUP to search for related information by row. For example, if you want to buy an orange, you can use VLOOKUP to search for the price.



Vertical lookup. Returns the values in a data column at the position where a match was found in the search column.

Sample Usage: **VLOOKUP("Apple",table_name!fruit,table_name!price)**

VLOOKUP function

In Google Sheets, the VLOOKUP function is used to search for a value in the first column of a range and return a value in the same row from a specified column. Here's how to use it:

Syntax:
=VLOOKUP(search_key, range, index, [is_sorted])

- search_key: The value to search for.
- range: The range of cells where the search should be performed. The first column of the range should contain the search key, and the value to be returned should be in a column to the right.
- index: The column index (starting from 1) of the value to be returned, relative to the first column in the range.
- [is_sorted]: Optional. Set to TRUE if the first column in the range is sorted in ascending order, or FALSE if not. Defaults to TRUE if omitted.

Example: Let's say you have a table with employee names in column A and their corresponding salaries in column B. You want to find the salary of an employee named "John".

1. *Enter the Formula*: In a cell where you want the result to appear, enter the following formula: =VLOOKUP("John", A:B, 2, FALSE)

- search_key: "John" is the name of the employee you are searching for.
- range: A:B specifies the range of cells where the search should be performed, with column A containing employee names and column B containing salaries.
- index: 2 indicates that the function should return the value from the second column of the range (salary), which corresponds to the salary of the employee.
- is_sorted: FALSE indicates that the data in the first column of the range is not sorted.

2. *Press Enter*: Press Enter to execute the formula. The cell will display the salary of the employee named "John" if found.

The VLOOKUP function is useful for quickly retrieving information from a table based on a lookup value, such as employee names, product IDs, or customer numbers.

Data validation

In Google Sheets, you can use data validation to set criteria for what can be entered into a cell. This ensures data integrity and consistency. Here's how to set up data validation with an example:

Example Scenario:
Let's say you have a column where users should enter numerical values representing product quantities. You want to ensure that users only enter values greater than or equal to 0.

Steps to Set Up Data Validation:

1. *Select Cells*: Click on the cell or range of cells where you want to apply data validation. For example, select the cells in column A where users will enter product quantities.

2. *Go to the "Data" Menu*: Click on the "Data" menu at the top.

3. *Choose "Data validation"*: In the "Data" menu, select "Data validation."

4. *Configure Validation Criteria*:
- In the "Data validation" dialog box, under the "Criteria" dropdown, choose "Number."
- Select the desired condition from the "Criteria" dropdown (e.g., "Greater than or equal to").
- Enter the minimum value allowed (e.g., 0) in the field next to the dropdown.

5. *Set Up Custom Error Message (Optional)*:
- Optionally, you can enter a custom error message that will be displayed if users enter invalid data. This helps provide guidance on the expected input.

6. *Apply Data Validation*:
- Click "Save" to apply the data validation rules to the selected cells.

Example:

1. Select the cells in column A where users will enter product quantities.
2. Go to the "Data" menu.
3. Choose "Data validation."
4. In the "Data validation" dialog box:
   - Under the "Criteria" dropdown, choose "Number."
   - Select "Greater than or equal to" from the dropdown.
   - Enter "0" as the minimum value allowed.
   - Optionally, enter a custom error message such as "Please enter a number greater than or equal to 0."
5. Click "Save" to apply the data validation rules.

Setting up Data Validation:

1. *Select Cells*: First, select the cell or range of cells where you want to apply data validation. For our example, let's select cells A1:A10 where users will enter product quantities.

2. *Open Data Validation*: Go to the "Data" menu at the top of Google Sheets, then click on "Data validation."

3. *Configure Criteria*:
   - Under the "Criteria" dropdown, select "Number" since we want to validate numerical values.
   - Choose the condition from the next dropdown. For our example, we'll choose "Greater than or equal to" to ensure values are 0 or higher.
   - Enter the minimum value allowed in the field next to the dropdown. In this case, it's 0.

4. *Customize Error Message* (Optional):
   - If you want to provide a custom error message when users enter invalid data, check the "Show validation help text" box.
   - Enter your custom error message in the "Help text" field. For example, "Please enter a number greater than or equal to 0."

5. *Save Validation*:
   - Click on "Save" to apply the data validation rules to the

selected cells. Example:

Let's use the steps above to set up data validation for product quantities in cells A1:A10. We want to ensure that users only enter values greater than or equal to 0.

1. Select cells A1:A10.
2. Go to the "Data" menu and choose "Data validation."
3. Under "Criteria," choose "Number" and "Greater than or equal to."

4. Enter "0" as the minimum value.
5. Optionally, enter a custom error message like "Please enter a number greater than or equal to 0."
6. Click "Save" to apply the data validation.

UNIT-3: Multimedia Skill – Nimbus, Autocrat, Adobe Docu-sign

Nimbus

1. Introduction to Nimbus

Nimbus is a powerful **screen capturing and screen recording tool** available as:

- Browser extension (Chrome, Firefox, Edge)
- Desktop application

It is widely used for:

- Taking screenshots
- Recording screens
- Creating tutorials and demonstrations
- Online teaching and assignments
- Technical documentation

2. Features of Nimbus

Nimbus provides the following major features:

🔷 **Screenshot Capture**

- Full page screenshot
- Visible part of screen
- Selected area
- Specific window

🔷 **Screen Recording**

- Entire screen
- Browser tab
- Application window
- Webcam + screen recording

🔷 **Editing Tools**

- Crop, resize
- Draw shapes
- Add arrows, text, blur
- Highlight important areas

🔷 **Cloud Storage**

- Save files to Nimbus cloud
- Share links easily
- Organize screenshots into folders

3. Installing Nimbus

Steps to Install Nimbus Extension

1. Open **Chrome Web Store**
2. Search **Nimbus Screenshot & Screen Recorder**
3. Click **Add to Chrome**
4. Grant required permissions

Nimbus icon will appear near the address bar.

4. Taking Screenshots Using Nimbus

A. Capture Full Page

1. Click Nimbus icon
2. Select **Entire Page**
3. Scrolls automatically and captures full webpage
4. Opens editor for editing

B. Capture Selected Area

1. Click Nimbus icon
2. Select **Selected Area**
3. Drag mouse to select region
4. Screenshot opens in editor

C. Capture Visible Screen

- Captures only the visible portion of the webpage

5. Editing Screenshots

Nimbus provides an in-built editor:

- ✏️ Draw shapes and lines
- 🔤 Add text annotations
- 🔒 Blur sensitive information
- 🔍 Highlight important sections

After editing:

- Save locally
- Upload to Nimbus cloud
- Share via link

6. Screen Recording with Nimbus

Steps to Record Screen

1. Click Nimbus icon
2. Choose **Record Screen**
3. Select:
    - Entire Screen
    - Browser Tab
    - Application Window
4. Enable microphone or webcam (optional)
5. Click **Start Recording**

Stop Recording

- Click **Stop** button
- Video opens in editor
- Save or share

7. Saving & Sharing Files

Nimbus allows:

- Save as **PNG, JPG, MP4**
- Upload to Nimbus Cloud
- Generate shareable links
- Download to local system

8. Uses of Nimbus

- Online teaching & e-learning
- Software tutorials
- Assignment explanation
- Bug reporting
- Presentation preparation
- Digital documentation

9. Advantages of Nimbus

✓ Easy to use
✓ Powerful editing tools
✓ Cloud sharing support
✓ Free version available
✓ Works directly in browser

10. Limitations

❌ Some features require paid version
❌ Free version has recording time limits

11. Conclusion

Nimbus is an **all-in-one screen capture and recording tool** that helps users create **professional screenshots and video tutorials** with minimal effort. It is especially useful for **students, educators, and IT professionals**.

Autocrat

1. Introduction to Autocrat

Autocrat is a **Google Workspace add-on** used to **automate document creation** using data from **Google Sheets**.

It is mainly used for:

- Certificate generation
- Bulk email sending
- Report card generation
- Invoice creation
- Letter and notice distribution

2. Features of Autocrat

Autocrat provides the following key features:

- Mail merge from Google Sheets
- Automatic document generation
- PDF or Google Doc output
- Bulk email sending with attachments
- Dynamic file naming
- Folder organization in Google Drive
- Scheduling and re-running jobs

3. Installing Autocrat

Steps to Install

1. Open **Google Sheets**
2. Click **Extensions → Add-ons → Get add-ons**
3. Search **Autocrat**
4. Click **Install**
5. Grant permissions

Autocrat will now appear under **Extensions**.

4. Preparing Data in Google Sheets

Create a spreadsheet with column headers such as:

- Name
- Email
- Course
- Certificate ID
- Date

Each row represents **one recipient**.

5. Creating a Template in Google Docs

1. Open **Google Docs**
2. Create a certificate or document
3. Insert placeholders using **<< >>**

Example Placeholders

<<Name>>

<<Course>>

<<Date>>

These placeholders must **exactly match** column headers in Google Sheets.

6. Using Autocrat (Step-by-Step)

Step 1: Launch Autocrat

- Open Google Sheet
- Click **Extensions → Autocrat → Launch**

Step 2: Select Template

- Choose your Google Docs template

Step 3: Map Template Fields

- Autocrat automatically maps placeholders to sheet columns

Step 4: Output Settings

- Choose output type:
    - Google Doc
    - PDF
- Choose destination folder

Step 5: File Naming

Example:

Certificate_<<Name>>_<<Course>>

Step 6: Email Settings

- Enable email sending
- Select email column
- Write subject and message
- Attach generated file

Step 7: Run Job

- Click **Run Job**
- Documents are generated automatically

7. Scheduling & Re-Running Jobs

- Run on form submit
- Re-run for new rows only
- Manually re-run entire sheet

8. Applications of Autocrat

- Certificate distribution
- Bulk email sending
- Student progress reports
- Appointment letters

- Offer letters
- Event participation certificates

9. Advantages of Autocrat

✓ Saves time
✓ No coding required
✓ Easy integration with Google Workspace
✓ Accurate bulk document creation
✓ Free to use

10. Limitations

❌ Requires Google account
❌ Depends on internet
❌ Formatting errors if placeholders mismatch

11. Conclusion

Autocrat is a **powerful automation tool** that simplifies **document generation and bulk emailing**. It is widely used in **educational institutions and organizations** for managing large-scale documentation efficiently

Adobe DocuSign

Adobe DocuSign (commonly referred to as **Adobe Acrobat Sign / DocuSign e-Signature**) is a **digital signing tool** used to **electronically sign documents** and send them for signatures securely.

It eliminates the need for:

- Printing documents
- Physical signatures
- Scanning and emailing

2. Key Features of Adobe DocuSign

- Electronic signatures (legally valid)
- Multi-recipient signing workflow
- Secure document tracking
- Audit trail and timestamps

- Cloud storage integration
- Mobile and web access
- PDF document support

3. Where Adobe DocuSign Is Used

- Educational institutions
- Government offices
- Corporate organizations
- Banks and legal firms
- HR departments
- Online approvals

4. Creating an Adobe DocuSign Account

Steps

1. Visit Adobe Acrobat Sign / DocuSign website
2. Click **Sign Up**
3. Register using email or Google account
4. Verify email

5. Signing a Document Yourself

Steps

1. Open Adobe DocuSign
2. Click **Upload Document**
3. Select PDF/Word file
4. Click **Sign**
5. Draw / Type / Upload signature
6. Place signature in document
7. Click **Finish**

The signed document can be:

- Downloaded

- Shared via email
- Stored in cloud

6. Sending Documents for Signature

Steps

1. Click **Send for Signature**
2. Upload document
3. Add recipient email addresses
4. Set signing order (if required)
5. Add signature fields
6. Click **Send**

Recipients receive an email link to sign.

7. Tracking Document Status

You can track:

- Sent
- Viewed
- Signed
- Pending
- Completed

Notifications are sent at every stage.

8. Security & Legal Validity

Adobe DocuSign provides:

- Encrypted data transfer
- Tamper-proof documents
- Audit trail
- Timestamped signatures

E-signatures are legally valid under:

- **IT Act, 2000 (India)**

- **ESIGN Act**
- **eIDAS Regulation**

9. Advantages of Adobe DocuSign

✓ Fast and paperless
✓ Secure and legally valid
✓ Easy to use
✓ Saves time and cost
✓ Environment-friendly

10. Limitations

❌ Advanced features require paid plan
❌ Internet connection required
❌ Limited free signatures per month

11. Comparison: Manual vs Adobe DocuSign

Feature	Manual Signing	Adobe DocuSign
Time	Slow	Instant
Cost	High	Low
Security	Low	High
Tracking	No	Yes
Storage	Physical	Digital

12. Conclusion

Adobe DocuSign is a **reliable and secure e-signature solution** that simplifies document signing workflows. It is highly useful in **education, corporate, and government sectors**

UNIT-4: Web Conferencing Skills – Google Meet & Zoom

1. Introduction

Web conferencing tools enable people to **communicate, collaborate, and conduct meetings online** using audio, video, and screen sharing. These tools are widely used for **online classes, webinars, meetings, and training programs**.

Two popular web conferencing platforms are:

- **Google Meet**
- **Zoom**

2. Objectives of Web Conferencing

The main objectives are:

- To enable real-time online communication
- To conduct virtual classes and meetings
- To share screens, presentations, and documents
- To collaborate remotely
- To reduce travel time and cost

3. Google Meet

3.1 Introduction to Google Meet

Google Meet is a video conferencing service developed by Google. It integrates with **Gmail, Google Calendar, and Google Classroom**.

3.2 Features of Google Meet

- Video and audio conferencing
- Screen sharing
- Chat messaging
- Meeting recording (paid accounts)
- Google Calendar integration
- Live captions
- Participant controls

3.3 Google Meet – Demo (Step-by-Step)

A. Starting a Meeting

1. Open **meet.google.com**
2. Click **New Meeting**
3. Choose:
    - Create instant meeting
    - Schedule in Google Calendar
4. Copy meeting link and share

B. Joining a Meeting

1. Open meeting link
2. Enter meeting code
3. Click **Join Now**

C. Screen Sharing

1. Click **Present Now**
2. Choose:
    - Entire Screen
    - Window
    - Chrome Tab

D. Chat & Controls

- Use **Chat** for messages
- Turn **Mic/Camera ON/OFF**
- Remove or mute participants (host)

4. Zoom

4.1 Introduction to Zoom

Zoom is a widely used cloud-based video conferencing platform known for its **advanced meeting controls** and **large participant capacity**.

4.2 Functionality of Zoom

Zoom offers the following core functionalities:

- HD video and audio
- Screen sharing
- Meeting recording
- Chat (private & group)
- Virtual backgrounds
- Host and co-host controls
- Polling and reactions

4.3 Breakout Rooms in Zoom

Breakout Rooms allow hosts to divide participants into **smaller groups** for discussions or activities.

Steps to Create Breakout Rooms

1. Start Zoom meeting
2. Click **Breakout Rooms**
3. Choose number of rooms
4. Assign participants automatically or manually
5. Click **Open Rooms**

Uses of Breakout Rooms

- Group discussions
- Team activities
- Classroom assignments
- Brainstorming sessions

4.4 Live Streaming in Zoom

Zoom supports **live streaming to platforms** such as:

- YouTube
- Facebook Live
- Custom RTMP servers

Steps for Live Streaming

1. Start Zoom meeting
2. Click **More (⋯)**
3. Select **Live on YouTube / Facebook**
4. Sign in to streaming platform
5. Start live broadcast

5. Comparison: Google Meet vs Zoom

Feature	**Google Meet**	**Zoom**
Ease of use	Very easy	Easy
Breakout rooms	Limited	Advanced
Live streaming	Limited	Supported
Integration	Google Workspace	Multiple platforms
Free plan limit	60 minutes	40 minutes

6. Advantages of Web Conferencing

✓ Remote learning and meetings
✓ Time and cost saving
✓ Global connectivity
✓ Easy collaboration
✓ Environment friendly

7. Conclusion

Web conferencing tools like **Google Meet and Zoom** play a vital role in **online education, corporate meetings, and virtual events**. Mastering these tools enhances **digital communication and collaboration skills**.

UNIT-5: Sending Bulk SMS

1. Introduction

Bulk messaging refers to the process of **sending a single message to a large number of recipients simultaneously**. It is widely used by **educational institutions, businesses, and organizations** for alerts, promotions, notifications, and communication.

Bulk communication can be done through:

- **SMS**
- **Email**
- **WhatsApp**

2. Introduction to SMS Protocol

2.1 What is SMS?

SMS (Short Message Service) is a communication protocol that allows the exchange of **short text messages (up to 160 characters)** between mobile devices over cellular networks.

2.2 How SMS Protocol Works

1. Message is composed by sender
2. Message is sent to **SMS Center (SMSC)**
3. SMSC forwards the message to recipient's mobile network
4. Message is delivered to recipient device

2.3 Types of SMS

- **Transactional SMS** – OTPs, alerts, confirmations
- **Promotional SMS** – advertisements, offers
- **Service SMS** – notifications, updates

2.4 Advantages of SMS Protocol

✓ Works without internet
✓ High open rate
✓ Fast delivery
✓ Supported by all mobile phones

3. Customized Service to Send Out Email

3.1 What is Bulk Emailing?

Bulk emailing is the process of sending **customized emails to multiple recipients** using automated tools.

3.2 Features of Customized Email Services

- Personalization using recipient name
- Email templates
- Mail merge functionality
- Attachments support
- Scheduled delivery
- Tracking (open/click reports)

3.3 Tools Used for Bulk Email

- Gmail Mail Merge
- Google Sheets + Autocrat
- Mailchimp
- SendGrid

3.4 Steps for Sending Customized Bulk Email

1. Prepare email list in spreadsheet
2. Create email template
3. Insert dynamic fields (Name, ID, etc.)
4. Use mail merge tool
5. Send emails in bulk

4. Customized Service to Send SMS in Bulk

4.1 Bulk SMS Services

Bulk SMS services use **API gateways** to send messages to thousands of numbers at once.

4.2 Features of Bulk SMS

- Sender ID customization
- Message templates
- Contact grouping
- Scheduling
- Delivery reports

4.3 Steps to Send Bulk SMS

1. Register with bulk SMS service provider
2. Upload contact list
3. Compose message
4. Select SMS type (Transactional/Promotional)
5. Send or schedule message

5. Customized Service to Send WhatsApp Messages in Bulk

5.1 WhatsApp Bulk Messaging

WhatsApp bulk messaging uses **WhatsApp Business API** to send messages legally and securely.

5.2 Features of WhatsApp Bulk Messaging

- Rich media (images, videos, PDFs)
- Personalization
- High engagement
- Automated replies
- Message templates approval

5.3 Steps to Send Bulk WhatsApp Messages

1. Register for WhatsApp Business API
2. Get message templates approved
3. Upload contact list
4. Customize message fields
5. Send messages

6. Comparison: Email vs SMS vs WhatsApp

Feature	Email	SMS	WhatsApp
Internet Required	Yes	No	Yes
Message Length	Long	Short	Medium
Open Rate	Medium	High	Very High
Media Support	Yes	No	Yes

7. Applications of Bulk Messaging

- Educational notifications
- Exam alerts
- Event promotions
- Marketing campaigns
- OTP verification
- Emergency alerts

8. Advantages of Bulk Messaging

✓ Fast communication
✓ Cost-effective
✓ Personalized messaging
✓ Wide reach
✓ Automation support

9. Limitations

❌ Message spam restrictions
❌ Regulatory compliance required
❌ Internet dependency (Email/WhatsApp)

10. Conclusion

Sending bulk SMS, Email, and WhatsApp messages is an **effective digital communication strategy** that enables organizations to reach a large audience quickly and efficiently while maintaining personalization.