

Google Sheets - Advanced Topics

- Coursera

Module 1 :-

Google Sheets is Google's cloud based spreadsheet software included with Google Workspace. The same "On The Rise" in the Google Sheets course.

Agenda of the Course :-

Module 1: Advanced formatting in a Google Sheet

Module 2: Advanced formulas and functions

Module 3: Analyze and report

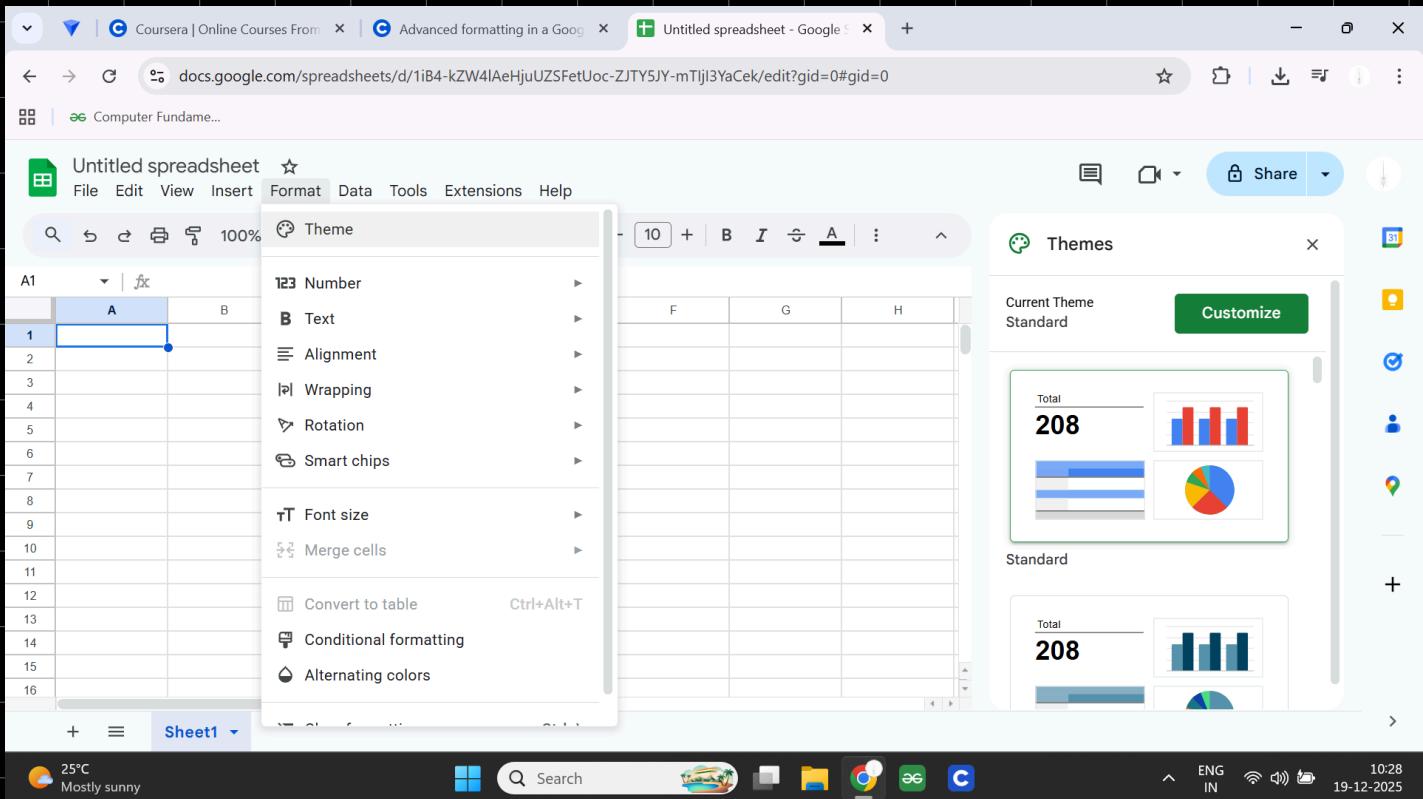
Module 4: Populate data using a Google Form

Business challenge: Formulating forecasts

Advanced formatting in Google Sheet

- Apply a theme
- Customizing themes
- Use conditional formatting

The Themes panel is present in Format → Themes
Themes can also be customized.



Conditional Formatting :- It is a google sheets feature that automatically applies cell formatting if the contents of the cell meets predefined criteria known as format rules.

It is advantageous as the formatting is applied automatically and in real time. The conditional formatting option will be present in Format menu.

The screenshot shows a Google Sheets interface with a dark theme. The 'Format' menu is open, and the 'Conditional formatting' option is highlighted with a red box. To the right of the menu, there is a 'Themes' sidebar showing two themes: 'Standard' and 'Customize'. The 'Standard' theme is selected, displaying a bar chart and a pie chart with the total value '208'. The status bar at the bottom shows weather information (25°C, Mostly sunny), a search bar, and system status (ENG IN, 10:28, 19-12-2025).

MODULE - 2 Advanced formulas and Functions.

We can use functions predefined in Google Sheets to create formulas to execute all sorts of calculations and manipulation of data.

Functions option is present in the toolkit.

The screenshot shows a Google Sheets document titled "OTR regional sales (Activity 1).xlsx". The spreadsheet contains data for various regions, months, and products, with columns for Sales Forecast and Sales - Actual. The formula toolkit sidebar is open on the right, showing options like SUM, AVERAGE, COUNT, MAX, MIN, All, Array, Database, Date, Engineering, Filter, and Financial.

	A	B	C	D	E	F	G	H	I	J	K	L
1	Region	Month	Product	Sales Forecast	Sales - Actual	Forecast Delta (%)						
2	AsiaPac	April	Cinnamon bun	143013	144357.8	-0.9%						
3	AsiaPac	April	Rye bread	140847	145652.3	-3.4%						
4	AsiaPac	April	Pastries	139319	143920.7	-3.3%						
5	AsiaPac	August	Cinnamon bun	138413								
6	AsiaPac	August	Rye bread	139684								
7	AsiaPac	August	Pastries	139990								
8	AsiaPac	December	Cinnamon bun	145446								
9	AsiaPac	December	Rye bread	142729								
10	AsiaPac	December	Pastries	146589								
11	AsiaPac	February	Cinnamon bun	141175	141251.2	-0.1%						
12	AsiaPac	February	Rye bread	141984	143801.5	-1.3%						
13	AsiaPac	February	Pastries	144355	143149.4	0.8%						
14	AsiaPac	January	Cinnamon bun	138495	137060	1.0%						
15	AsiaPac	January	Rye bread	146234	143013.3	2.2%						
16	AsiaPac	January	Pastries	148307	140143	5.5%						
17	AsiaPac	July	Cinnamon bun	144675								

Relative and absolute references :-

Relative references change when a formula is copied from one cell to another in the spreadsheet.

An absolute reference remain the same when they are copied.

When creating formulas, place a dollar symbol in front of the cell address to make an absolute reference to it.

Conditional Functions :-

Google Sheets supports logical functions based on conditions. Using the "IF" function, a formula can be created using AND, OR and NOT to test the value in a cell and define a result that appears in a cell displaying that result.

Using IF and IFS to analyze data :-

Imagine we have a goal steps to achieve. We go for walking in three timings, 8 AM, 1:30 PM, 6 PM. Our total goal is 8000 steps. The data has step count according to our timings.

		Total	IF	IFS
18 Dec	8 AM	3000	Missed	
	1:30 PM	3000	Missed	
	6 PM	1000	7000	Missed
19 DEC	8 AM	3000	Achieved	
	1:30 PM	4000	Achieved	
	6 PM	3000	10000	Achieved

IF Condition : = IF (Total > 8000, "Achieved", "Missed")

IFS Condition : = IFS(Total="","", Total > 8000, "Achieved", Total <= 8000, "Missed")

Data Validation :-

When entering a data in google sheets manually, especially if there are a lot of entries and collaborators adding data, it's helpful to ensure what is entered into a cell is valid in the context of a sheet.

To create data validation rules, open data → data validation.

We have many options in the data validation panel to customize the data validation one or a range of cells.

Named Ranges : Once a range is named, it can be referenced in a formula.

MODULE - 4 Analyze and Report

Exploring Charts

If you want to show what % of a particular segment comprises of total business, pie chart is used.

If you are showing a trend, use a line chart.

If you want to show relationship between various points of data, use a scatterplot.

To identify regional information, use a map.

Summarizing data with pivot tables : used to

summarize large datasets in Google Sheets.

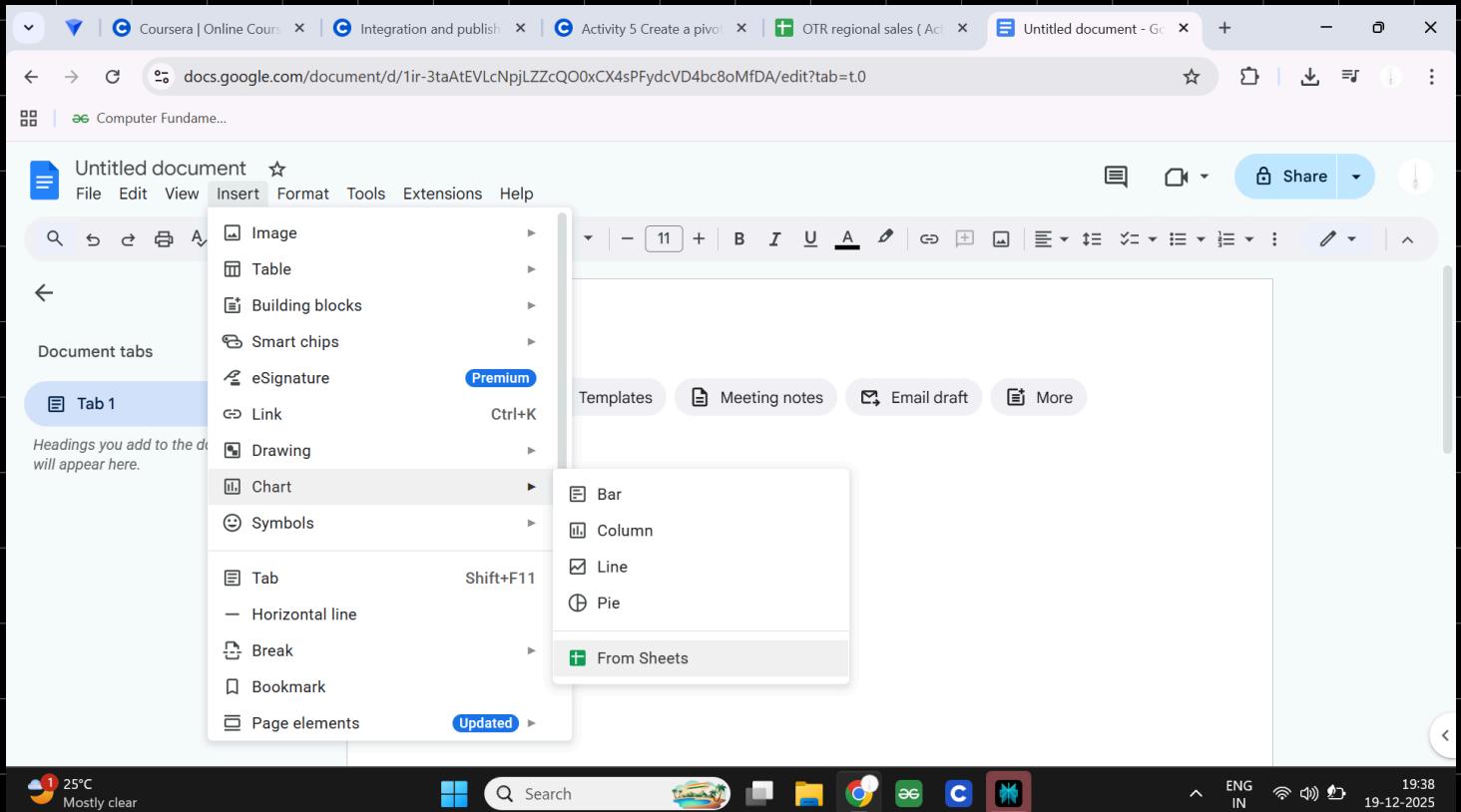
Pivot table aggregates data in rows and columns into a summary table. Using it, data can be re-evaluated without modifying any formulas or to recalculate a large dataset.

Pivot table is present in Insert Menu → Pivot table.

A customization panel for the pivot table will be shown, we will have predefined AI suggested tables and customization options for rows, columns and values.

Integrate charts in Google docs and Slides

In google docs, go to Insert → chart → From Sheets option to import charts from Spreadsheet to Docs.



Once the chart is imported, the text wrap options and image options can be changed. We can open the source & unlink the spreadsheet.

Integrate tables in Google Docs / Sheets

We can copy from the Google Sheets and paste it directly as a table in Google docs.

Work with macros in Google Sheets

Macros in Google Sheets allows you to automate repetitive tasks. A macro is a series of steps that can be applied to a sheet and its contents with a click, saving time & ensuring accuracy.

Present in the Extensions menu → Macro.
Macros are written in Google Apps Script. Name the macro after the action is done & save it. Use it whenever you want by going to Same Extensions → Macros

MODULE 4 - Populate data using Google forms

From the Tools menu, select Create a new form and add questions in Google Form. You can customize themes and have a wide range of options to populate data while publishing the forms.

The data filled in forms and submitted are automatically populated in the Google Sheets.