1. E-Commerce Sales Dataset

(Concepts: Data Cleaning, Sorting & Filtering, IF/IFS, Text, Dates)
Dataset: Online Retail – Kaggle - https://www.kaggle.com/datasets/carrie1/ecommerce-data
Fields: InvoiceNo, StockCode, Description, Quantity, InvoiceDate, UnitPrice, CustomerID, Country

Data Cleaning

1. Remove duplicate *InvoiceNo* values.
2. Identify and delete rows with blank *CustomerID*.
3. Use `TRIM` and `CLEAN` to remove extra spaces in *Description*.
4. Replace all "?" or "NULL" entries in *Country* with "Unknown".

Sorting & Filtering

1. Sort orders by *Country* alphabetically, then by *InvoiceDate* descending.
2. Filter only *United Kingdom* and *Germany* orders.
3. Show only orders where *Quantity* > *10* and *UnitPrice* > *50*.
4. Filter by *Description* containing "BAG".
5. Clear all filters and check total sales rows before and after.

Logical (IF, IFS, AND, OR, NOT)

1. Create "Bulk Order?" = IF(Quantity > 10, "Yes", "No").
2. Use `IFS` to classify sales: <₹500 → "Small", ₹500–₹1000 → "Medium", >₹1000 → "Large".
3. Use `AND` to find orders with Quantity > 5 and UnitPrice > 100.

4. Use `OR` to tag *International Orders* if *Country ≠ UK OR Ireland*.
5. Use `NOT` to exclude all orders with “Gift” in Description.

Text Functions

1. Extract first 3 characters of *StockCode* using `LEFT`.
2. Get length of *Description* using `LEN` to identify long names.
3. Combine *InvoiceNo* and *Country* using `CONCAT`.
4. Use `UPPER` to standardize all *Country* names.
5. Use `TEXTJOIN(" - ", TRUE, StockCode, Description)` for quick labeling.

Date Functions

1. Extract *Month* and *Year* from *InvoiceDate*.
2. Calculate *Days since Order* using `=TODAY() - InvoiceDate`.
3. Add 7 days to *InvoiceDate* to get *Expected Delivery Date*.
4. Calculate total working days between *InvoiceDate* and *DeliveryDate* using `NETWORKDAYS`.

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2. Credit Card Default Dataset

(Concepts: Logical, Lookup, Formatting, Conditional Formatting, Charts)
Dataset: UCI Default of Credit Card Clients - https://archive.ics.uci.edu/dataset/350/default+of+credit+card+clients
Fields: ID, LIMIT_BAL, SEX, EDUCATION, MARRIAGE, AGE, PAY_1, BILL_AMT1, PAY_AMT1, DEFAULT

Logical

1. Flag customers as “High Risk” if PAY_1 ≥ 2.
2. Use `IFS` to grade risk level: PAY_1=0 → “Good”, 1–2 → “Medium”, ≥3 → “Bad”.
3. Use `AND` to tag *Young High Spenders* if (AGE < 30 AND LIMIT_BAL > 200000).
4. Create “Has Defaulted?” = IF(DEFAULT=1, “Yes”, “No”).
5. Use `OR` to flag clients with either Low Education or High PAY_1.

Lookup

1. Create mapping table for *EDUCATION code → Label* and use `VLOOKUP`.
2. Fetch *Marital Status Name* from separate sheet using `XLOOKUP`.
3. Handle missing lookup with `IFERROR`.
4. Compare `VLOOKUP` vs `XLOOKUP` performance.
5. Two-way lookup: Return *LIMIT_BAL* using ID (row) and column (variable).

Formatting

1. Format *LIMIT_BAL* as currency.
2. Format *AGE* as number with no decimals.
3. Apply custom cell style for column headers.
4. Align numeric and text columns appropriately.
5. Use bold + border for summary rows.

Conditional Formatting

1. Highlight customers with *PAY_1 > 2* in red.

2. Highlight *top 10%* credit limits.
3. Add 3-color scale for *BILL_AMT1*.
4. Mark *duplicate IDs* (if any).
5. Add data bars to *PAY_AMT1*.

Charts

1. Create column chart: *Count of Clients by Education Level*.
2. Create bar chart: *Average Limit by Age Group*.
3. Create pie chart: *Defaulted vs Non-Defaulted customers*.
4. Build line chart for *Average Payment Amount by Month*.
5. Add combo chart (bars = Limit, line = Default Rate).

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3. Netflix Titles Dataset

(Concepts: Text, Date, Filtering, Pivot, Visualization)
Dataset: Netflix Movies & Shows - https://www.kaggle.com/datasets/shivamb/netflix-shows
Fields: Title, Director, Cast, Country, Date Added, Release Year, Rating, Duration, Type

Text Functions

1. Use `LEFT` to extract the first 4 characters of *Rating* (e.g. “TV-MA” → “TV-M”).
2. Use `LEN` to find the longest *Title*.
3. Extract *Primary Actor* from *Cast* using `TEXTBEFORE(, ",")`.
4. Combine *Title* and *Release Year* using `CONCAT`.
5. Clean *Country* values with `TRIM` and `UPPER`.

Date Functions

1. Extract month from *Date Added*.
2. Calculate years since release = `YEAR(TODAY()) - Release Year`.
3. Filter all shows added after 2020.
4. Use conditional formatting to highlight recent additions.
5. Count how many titles were added per year using Pivot.

Sorting & Filtering

1. Filter *Type* = *Movie* and *Country* = *India*.
2. Sort by *Release Year* descending.
3. Filter all titles containing “Love” in Title.
4. Filter *Director* = “Christopher Nolan”.
5. Clear filters and verify total row count.

Pivot Tables

1. Create Pivot Table showing count of *Movies vs TV Shows*.
2. Add *Average Duration* by *Rating*.
3. Group *Release Year* into decades.
4. Add slicer for *Country*.
5. Create Pivot Chart showing *Titles added per Year*.

Visualization

1. Bar chart: *Top 10 Countries by Number of Titles*.

2. Pie chart: *Distribution of Ratings*.
3. Line chart: *Trend of Titles Added per Year*.
4. Combo chart: *Movies vs TV Shows over Time*.
5. Conditional formatting for top 5 prolific directors.

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4. Indian Startup Funding Dataset

(Concepts: Pivot, Lookup)
Dataset: Indian Startup Funding - https://www.kaggle.com/datasets/sudalairajkumar/indian-startup-funding
Fields: StartupName, IndustryVertical, SubVertical, CityLocation, InvestorsName, InvestmentType, AmountUSD, Date

Pivot Tables

1. Total funding by *IndustryVertical*.
2. Top 10 *Investors* by amount.
3. Group *Funding Amount* into bins (<1M, 1–10M, >10M).
4. Show *Funding by Year*.
5. Add slicer for *City*.

Lookup

1. Use `XLOOKUP` to map *StartupName → City*.
2. Create reference table: *Investor → Type (Angel, VC, Corporate)* using `VLOOKUP`.
3. Handle missing data with `IFERROR`.
4. Combine lookup + Pivot to show *Total VC vs Angel Funding*.

5. Fetch average funding by industry from summary sheet.

Dashboard

1. Create KPI cards for *Total Funding*, *Top Investor*, *Top City*.
2. Add slicers for *Year* and *Industry*.
3. Use donut chart for *Industry Share*.
4. Create line chart for *Funding Trend*.
5. Add dynamic title: “Indian Startup Funding Trends (2015–2020)”.