



## Mini Project

# EXPENSE TRACKER

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**Branch:** UIC

**Section/Group:** 8-B

**Semester:** 6<sup>th</sup>

**Date of Performance:** 13/04/2025

**Subject Name:** Data Interpretation

**Subject Code:** 22CAP-354

### 1. Aim/Overview of the practical:

The Advanced Level :-

Inventory Management System – Track stock levels, reorder alerts, and sales trends.

### 2. Task to be done:

#### 1. Create the Tables:

Each sheet in the workbook represents a structured dataset (table). Below is the breakdown:

#### Customers Table

##### Open Excel:

- Launch Microsoft Excel and navigate to the `Customers` sheet.

##### Insert Table:

- Select the cells starting from row 5 where the actual headers begin: `Cust_ID`, `Name`, `Email`, `Address`.
- Go to `Insert > Table` and click OK after confirming headers.

##### Rename Columns:

- `A1: Cust_ID`
- `B1: Name`
- `C1: Email`
- `D1: Address`

##### Format Columns:



- **Cust\_ID:**
  - Format as "0000" to ensure 4-digit consistency.
  - Caption: "Customer ID".
- **Email, Address:**
  - Set format to "Text".
  - Captions: "Email Address" and "Residential Address".

#### Set Primary Key:

- Select the `Cust_ID` column.
- Use a custom data model (e.g., in Power Pivot or Access integration) to set it as the primary key.

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## Product Table

#### Navigate to the Product sheet.

#### Insert Table:

- Start from row 5: HSN Code, Product Name, Cost, Selling Price.

#### Rename Columns:

- A1: HSN Code
- B1: Product Name
- C1: Cost
- D1: Selling Price

#### Format Columns:

- **HSN Code:** Set as "Text".
- **Cost & Selling Price:**
  - Format as "Currency" with 2 decimal places.
  - Add captions if needed for reports: "Purchase Cost" and "Retail Price".

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## Vendor Table

#### Navigate to the Vendor sheet.

#### Insert Table:

- Start from row 5: HSN Code, Product Name, Vendor Name, Phone, Address.

#### Format Columns:

- **Phone:** Format as custom phone number (e.g., "00000-00000").
- Caption: "Vendor Contact".



- **Address:** Format as text.
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## Purchase Table

**Go to the Purchase sheet.**

**Insert Table:**

- Row 5 contains headers: HSN Code, Product Name, Vendor, Date, Units, Cost, Amount.

**Format Columns:**

- **Date:** Use Date format (dd-mm-yyyy).
  - **Units, Cost, Amount:** Format as numbers with two decimals.
  - Captions for report: "Purchased Units", "Unit Cost", "Total Amount".
- 

## Sales Table

**Navigate to the Sales sheet.**

**Insert Table:**

- Headers in row 5: Cust\_ID, Cust\_Name, HSN Code, Product Name, Date, Stock (Units), Units, Price, Amount.

**Format Columns:**

- **Cust\_ID:** Format as text or 4-digit number.
  - **Date:** Set as date type.
  - **Amount, Price:** Currency format.
  - Add custom captions for reporting as needed.
- 

## Inventory Table

**Go to the Inventory sheet.**

**Insert Table:**

- Use row 5: HSN Code, Product Name, Cost, P Units, S Units, Stock, Stock Amt., Notification.

**Format Columns:**

- **Stock & Stock Amt.:** Number with 2 decimal places.
- **Notification:** Text format for alerts.

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## Detail1 & Detail12 (Customer and Product Summaries)

These appear to be detailed or filtered views:

- **Detail1:** Customer details.
- **Detail12:** Product cost and selling price summary.

Convert to tables and apply text or currency formatting as appropriate.

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## Dashboard & Pivots

These sheets are likely used for visual summaries:

- The `Dashboard` is empty in the preview but likely meant for charts/KPIs.
- `Pivots` contains a summary (e.g., counts of products/customers and sales units).

Use PivotTables and PivotCharts here to dynamically visualize:

- Customer and product distribution.
  - Sales units by product.
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Would you like this report in a downloadable document or to include screenshots/charts in the final version?

4o

You said:

learning outcome in detail

ChatGPT said:

Absolutely! Here's a **detailed "Learning Outcome"** section based on your work in the Excel workbook "anish di.xlsx", covering data modeling, formatting, analysis, and dashboarding skills:

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## Learning Outcomes (In Detail)

Working on this Excel-based project has enabled the development of several practical and technical skills related to database management, business analysis, and spreadsheet automation. The outcomes are categorized as follows:

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### 1. Data Organization and Structuring

- **Table Creation & Standardization:**

- Learned how to properly structure raw data into well-defined tables across different sheets.
  - Ensured consistency in table headers, data alignment, and entry format (e.g., dates, currency, custom IDs).
  - **Use of Primary Keys and Unique Identifiers:**
    - Understood the importance of unique fields like `Cust_ID`, `HSN Code`, and `Vendor Name` in maintaining data integrity.
    - Gained experience in assigning and formatting custom primary keys (e.g., "0000" or "00000" format).
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## 2. Data Formatting & Customization

- **Cell Formatting Techniques:**
    - Applied various Excel formats: text, currency, number, and date formats to improve data readability and usability.
    - Learned how to use custom number formatting for fields such as IDs and phone numbers.
  - **Column Renaming and Captioning:**
    - Practiced enhancing clarity by renaming headers and using captions like "Publisher's Name", "Retail Price", or "Customer ID".
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## 3. Data Entry and Validation

- **Manual and Linked Data Entry:**
    - Learned to input and link product, vendor, and customer information across sheets with consistent reference points.
  - **Preventing Data Errors:**
    - Identified the need for clean, standardized entries to ensure accurate reporting (e.g., duplicate customer names, inconsistent vendor formats).
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## 4. Business Process Modeling

- **Simulation of Real Business Workflows:**
    - Modeled common business functions:
      - Inventory tracking
      - Sales and purchase logging
      - Vendor and customer management
  - **Understanding Relationships:**
    - Understood how different tables interact in a retail business (e.g., sales use data from both products and customers).
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## 5. Pivot Tables & Data Analysis

- **Summary Creation with Pivot Tables:**
  - Learned to create PivotTables for summarizing key metrics (e.g., product counts, sales units).
  - Grouped data efficiently using row labels and value fields.
- **Performance Indicators:**

- Explored KPIs like total stock, purchase cost, and sales amount through summaries in the `Pivots` sheet.

## 6. Inventory Management Logic

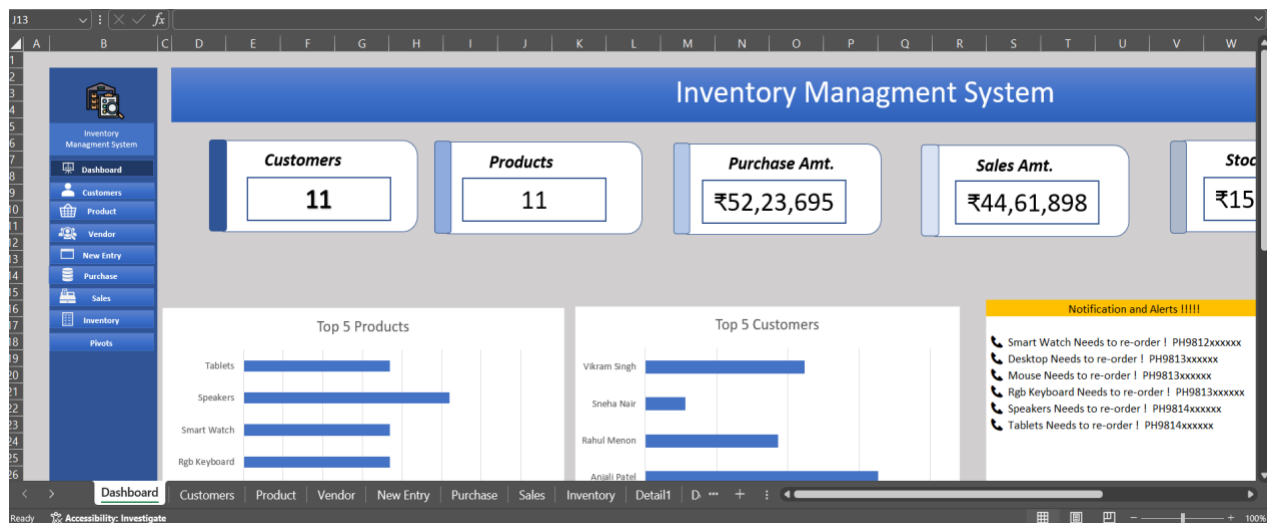
- **Stock Calculation & Costing:**
  - Gained hands-on experience tracking purchases vs. sales using units and cost/price columns.
  - Understood how inventory values (`Stock Amt.`) are calculated and monitored.
- **Low Stock Notifications:**
  - Designed a basic notification mechanism in the `Inventory` sheet for out-of-stock or low-stock alerts.

## 7. Dashboard & Reporting Design (Foundational)

- **Conceptual Understanding of Dashboards:**
  - Explored the idea of a centralized `Dashboard` for visual representation, even though it was mostly a placeholder.
  - Understood how to use charts, KPIs, and pivot summaries to create managerial reports.

## 8. Practical Skill Development in Excel

- **Navigation & Tool Usage:**
  - Enhanced comfort with Excel features: Insert Table, Format Cells, PivotTable, Sheet Management.
- **Professional Workflow Building:**
  - Practiced designing a workflow that mimics professional ERP-like solutions using Excel only.



Format Painter

Clipboard

Font

Alignment

Number

Formatting

Table

Styles

SECURITY WARNING

Automatic update of links has been disabled

Enable Content

A1									
	C	D	E	F	G	H	I	J	
2		1006	Anjali Patel	anjali.patel987@example.com	33, Shivranjani Society, Satellite, Ahmedabad, Gujarat				
3		1007	Rahul Menon	rahul.menon234@example.com	9, Garden View, T. Nagar, Chennai, Tamil Nadu				
4		1008	Meera Reddy	meera.reddy567@example.com	56, Jubilee Hills, Hyderabad, Telangana				
5		1009	Sandeep Joshi	sandeep.joshi890@example.com	18, Deccan Towers, FC Road, Pune, Maharashtra				
6		1010	Kavita Desai	kavita.desai112@example.com	42, South City, Salt Lake, Kolkata, West Bengal				
7		1011	anish raina	anishraina1833@example.com	24,south City Salt lake ,kolkata westbengal				
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J16

Products				
HSN Code	Product Name	Cost	Selling Price	
N1001	Smart Watch	₹ 980	₹	1,176
N1002	Laptop HP xyz i5	₹ 34,500	₹	41,400
N1003	Wireless Printer	₹ 4,600	₹	5,520
N1004	Desktop	₹ 21,000	₹	25,200
N1005	Mouse	₹ 200	₹	240
N1006	Rgb Keyboard	₹ 340	₹	408
N1007	Camera	₹ 52,000	₹	62,400
N1008	Headphones	₹ 799	₹	959
N1009	Speakers	₹ 670	₹	804
N1010	Tablets	₹ 23,500	₹	28,200
N1011	EarPods	₹ 5,000	₹	10,000



Vendor									
HSN Code	Product Name	Vendor Name	Phone	Address					
N1001	Smart Watch	Tech99	9812xxxxxx	Faridabad, 121101					
N1002	Laptop HP xyz i5	Tech99	9812xxxxxx	Faridabad, 121102					
N1003	Wireless Printer	Tech99	9812xxxxxx	Faridabad, 121103					
N1004	Desktop	GG Traders	9813xxxxxx	Gurgaon, Sec-15					
N1005	Mouse	GG Traders	9813xxxxxx	Gurgaon, Sec-16					
N1006	Rgb Keyboard	GG Traders	9813xxxxxx	Gurgaon, Sec-17					
N1007	Camera	GG Traders	9813xxxxxx	Gurgaon, Sec-18					
N1008	Headphones	Compac	9814xxxxxx	New Delhi, 110012					
N1009	Speakers	Compac	9814xxxxxx	New Delhi, 110013					
N1010	Tablets	Compac	9814xxxxxx	New Delhi, 110014					

Purchase									
HSN Code	Product Name	Vendor	Date	Units	Cost	Amount			
N1002	Laptop HP xyz i5	Tech99	#####	20	₹ 34,500	₹ 6,90,000			
N1008	Headphones	Compac	#####	10	₹ 799	₹ 7,990			
N1003	Wireless Printer	Tech99	#####	50	₹ 4,600	₹ 2,30,000			
N1008	Headphones	Compac	#####	100	₹ 799	₹ 79,900			
N1007	Camera	GG Traders	#####	20	₹ 52,000	₹ 10,40,000			
N1004	Desktop	GG Traders	#####	40	₹ 21,000	₹ 8,40,000			
N1002	Laptop HP xyz i5	Tech99	#####	30	₹ 34,500	₹ 10,35,000			
N1003	Wireless Printer	Tech99	#####	40	₹ 4,600	₹ 1,84,000			
N1009	Speakers	Compac	#####	55	₹ 670	₹ 36,850			
N1010	Tablets	Compac	#####	40	₹ 23,500	₹ 9,40,000			
N1008	Headphones	Compac	#####	35	₹ 799	₹ 27,965			
N1007	Camera	GG Traders	#####	2	₹ 52,000	₹ 1,04,000			
N1008	Headphones	Compac	#####	10	₹ 799	₹ 7,990			



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Sales												
Cust_ID	Cust_Name	HSN Code	Product Name	Date	Stock(Units)	Units	Price	Amount				
1001	Rajesh Verma	N1005	Mouse	#####	-20	20	₹ 240	₹ 4,800				
1002	Priya Iyer	N1006	Rgb Keyboard	#####	-37	37	₹ 408	₹ 15,096				
1003	Amit Sharma	N1004	Desktop	#####	-25	10	₹ 25,200	₹ 2,52,000				
1004	Sneha Nair	N1008	Headphones	#####	123	32	₹ 959	₹ 30,682				
1005	Vikram Singh	N1002	Laptop HP xyz i5	#####	23	27	₹ 41,400	₹ 11,17,800				
1006	Anjali Patel	N1004	Desktop	#####	-25	55	₹ 25,200	₹ 13,86,000				
1007	Rahul Menon	N1010	Tablets	#####	3	33	₹ 28,200	₹ 9,30,600				
1008	Meera Reddy	N1009	Speakers	#####	3	52	₹ 804	₹ 41,808				
1009	Sandeep Joshi	N1010	Tablets	#####	3	4	₹ 28,200	₹ 1,12,800				
1010	Kavita Desai	N1001	Smart Watch	#####	-37	37	₹ 1,176	₹ 43,512				
1006	Anjali Patel	N1007	Camera	#####	14	4	₹ 62,400	₹ 2,49,600				
1004	Sneha Nair	N1007	Camera	#####	14	4	₹ 62,400	₹ 2,49,600				
1002	Priya Iyer	N1003	Wireless Printer	#####	85	5	₹ 5,520	₹ 27,600				



	A	B	C	D	E	F	G	H	I	J	K
2	Count of Name		Customers		Row Labels	Sum of S Units					
3	11		11		Desktop	65					
4					Rgb Keyboard	37					
5	Count of Product Name		Products		Smart Watch	37					
6	11		11		Speakers	52					
7					Tablets	37					
8	Sum of Amount		Purchase Amt		Grand Total	228					
9	5223695		₹52,23,695								
10											
11	Sum of Amount		Sales Amount		Row Labels	Sum of Amount					
12	4461897.6		₹44,61,898		Amit Sharma	252000					
13					Anjali Patel	1635600					
14	Sum of Stock Amt.		Stock Amount		Rahul Menon	930600					
15	1505447		₹15,05,447		Sneha Nair	280281.6					
16					Vikram Singh	1117800					
17	Profit/Loss				Grand Total	4216281.6					