

Module-I (Computerised Accounting)

i. Applications of Computers in Accounting

Computers play a vital role in modern accounting by automating financial processes and improving accuracy. Some key applications include:

- a. **Bookkeeping and Data Entry** – Computers help in recording and maintaining financial transactions systematically.
- b. **Payroll Processing** – Automates salary calculations, deductions, tax computations, and salary slips.
- c. **Financial Reporting** – Generates balance sheets, income statements, and cash flow reports.
- d. **Tax Calculation and Filing** – Assists in computing GST, VAT, and income tax and facilitates e-filing.
- e. **Budgeting and Forecasting** – Helps analyze financial data to predict future trends.
- f. **Inventory Management** – Tracks stock levels, purchases, and sales efficiently.
- g. **Accounts Payable & Receivable** – Automates billing, invoicing, and collections.
- h. **Auditing & Compliance** – Ensures adherence to accounting standards and regulations.
- i. **Bank Reconciliation** – Matches financial records with bank statements to detect errors.
- j. **Accounting Software Usage** – Popular software like Tally, QuickBooks, and SAP simplifies complex accounting functions.

Difference Between Manual and Computerized Accounting Systems

Feature	Manual Accounting	Computerized Accounting
Speed	Slow; requires manual calculations	Fast; automated calculations
Accuracy	Prone to human errors	High accuracy with error detection
Data Storage	Paper-based ledgers and files	Digital records stored electronically
Processing	Sequential processing; time-consuming	Real-time processing
Security	Less secure; physical loss possible	More secure with encryption and backups
Cost	Low initial cost but high labor cost	High initial cost but cost-effective long-term
Reporting	Takes time to prepare financial reports	Generates instant financial reports
Backup & Recovery	Hard to recover lost data	Easy backup and recovery of data
Audit & Compliance	Requires manual verification	Automated audit trails and compliance

ii. a. **Define the various types of accounting vouchers:**

A voucher in Tally is an essential document used to record financial transactions systematically. There are several types of accounting vouchers in Tally, each serving a different purpose in business accounting.

A Sales Voucher is used to record the sale of goods or services to customers. It impacts the sales account and the debtor's account.

A Purchase Voucher is used to record purchases made from suppliers. It affects the purchase account and the creditor's account.

A Payment Voucher is used when a business makes payments in cash, by cheque, or through electronic transfers. It reduces the cash or bank balance and records expenses or liability payments.

A Receipt Voucher is used to record money received from customers, banks, or other sources. It increases the cash or bank balance and records income or settlements from debtors.

A Contra Voucher is used for recording fund transfers within the organization, such as cash deposits into a bank, cash withdrawals, or transfers between bank accounts. This voucher affects only cash and bank accounts.

A Journal Voucher is used for making adjustments in accounts, such as depreciation, outstanding expenses, or provisions. It is used when transactions do not involve cash or bank accounts.

A Credit Note Voucher is used when a customer returns goods, also known as a sales return. It reduces the sales account and the customer's outstanding balance.

A Debit Note Voucher is used when goods are returned to a supplier, also called a purchase return. It reduces the purchase account and the supplier's balance.

b. **How do you create, edit, and delete a voucher in Tally?**

To **create a voucher** in Tally, you need to open the software and go to the **Gateway of Tally**. From there, select **Accounting Vouchers** and choose the appropriate voucher type, such as Sales, Purchase, or Payment. You then enter details like date, ledger accounts, amount, and narration. Once all the information is entered, pressing **Ctrl + A** will save the voucher.

To **edit a voucher**, you need to go to the **Gateway of Tally**, then navigate to **Display** and select **Day Book**. From the list of recorded vouchers, find the one you want to edit and press **Enter** to open it. You can modify the details as required, and after making the necessary changes, press **Ctrl + A** to save the edited voucher.

To **delete a voucher**, you need to open the **Day Book** or the **Accounting Vouchers** section. Locate the voucher you wish to delete, select it, and press **Alt + D**. The system will ask for confirmation, and once confirmed, the voucher will be permanently deleted.

iii. Shortcut Keys in Tally ERP-9

- a. **Settings related to Inventory Masters**
 - To access and configure inventory master settings in Tally, use:
F12 – To open the **Configuration** settings for inventory
- b. **Debit Note and Credit Note Voucher**
 - **Ctrl + F9** – Opens the **Debit Note** voucher
 - **Ctrl + F8** – Opens the **Credit Note** voucher
- c. **Calculator in Tally**
 - **Ctrl + N** – Opens the **Calculator** panel within Tally
 - **Ctrl + M** – Switches back to the **Main** screen from the calculator
- d. **To repeat the narration in the voucher**
 - **Ctrl + R** – Repeats the last **Narration** entered in a voucher
- e. **To save the changes in the alteration mode**
 - **Ctrl + A** – Saves the changes instantly while altering a voucher, ledger, or any master
- f. **Transactions related to deposits and withdrawals**
 - **F4** – Opens the **Contra Voucher**, which is used for recording **cash deposits and withdrawals** between bank and cash accounts
- g. **To view a report in detail**
 - **Shift + Enter** – Expands a summarized report to show detailed transactions
- h. **To toggle between the Invoice and Voucher screens**
 - **Ctrl + V** – Switches between **Invoice Mode** and **Voucher Mode** while recording a transaction
- i. **To delete a voucher type**
 - **Alt + D** – Deletes a selected **Voucher Type** permanently
- j. **For Vertical Balance Sheet**
 - **Ctrl + B** – Displays the **Balance Sheet** in a vertical format

iv. Steps to Generate Financial Reports in Tally ERP-9

1. Balance Sheet

1. Go to **Gateway of Tally** → **Display** → **Financial Statements** → **Balance Sheet**.
2. Press **F12 (Configure)** to customize the view.
3. Press **Ctrl + B** for Vertical Mode.

2. Profit & Loss Account

1. Navigate to **Gateway of Tally** → **Display** → **Financial Statements** → **Profit & Loss A/c**.
2. Press **F12** to adjust settings.
3. View **Net Profit / Loss** at the bottom.

3. Trial Balance

1. Go to **Gateway of Tally** → **Display** → **Trial Balance**.
2. Press **F12** to filter details.
3. Check **Debit & Credit balances** for accuracy.

4. Ratio Analysis

1. Go to **Gateway of Tally** → **Ratio Analysis**.
2. View key ratios like **Current Ratio, ROI, Gross Profit Ratio**.
3. Press **Alt + F1** for details.

v. Tally Operations – Creating, Altering & Deleting

a) Ledger Account

Creating:

1. **Gateway of Tally** → **Accounts Info** → **Ledgers** → **Create**.
2. Enter **Ledger Name**, select **Group**, enter details & **Save (Ctrl + A)**.

Altering:

1. **Accounts Info** → **Ledgers** → **Alter**.
2. Select the ledger, make changes & **Save**.

Deleting:

1. Open **Ledger Alteration** screen.
2. Press **Alt + D** → Confirm with **Yes**.

b) Company

Creating:

1. **Gateway of Tally → Create Company.**
2. Enter **Company Name, Financial Year, Currency** & Save.

Altering:

1. **Gateway of Tally → Alt + F3 (Company Info) → Alter.**
2. Modify details & Save.

Deleting:

1. **Alt + F3 (Company Info) → Select Company → Alt + D → Confirm Yes.**

c) Group

Creating:

1. **Gateway of Tally → Accounts Info → Groups → Create.**
2. Enter **Group Name** and select **Under Group** & Save.

Altering:

1. **Accounts Info → Groups → Alter → Modify details & Save.**

Deleting:

1. **Groups → Alter → Press Alt + D → Confirm Yes.**

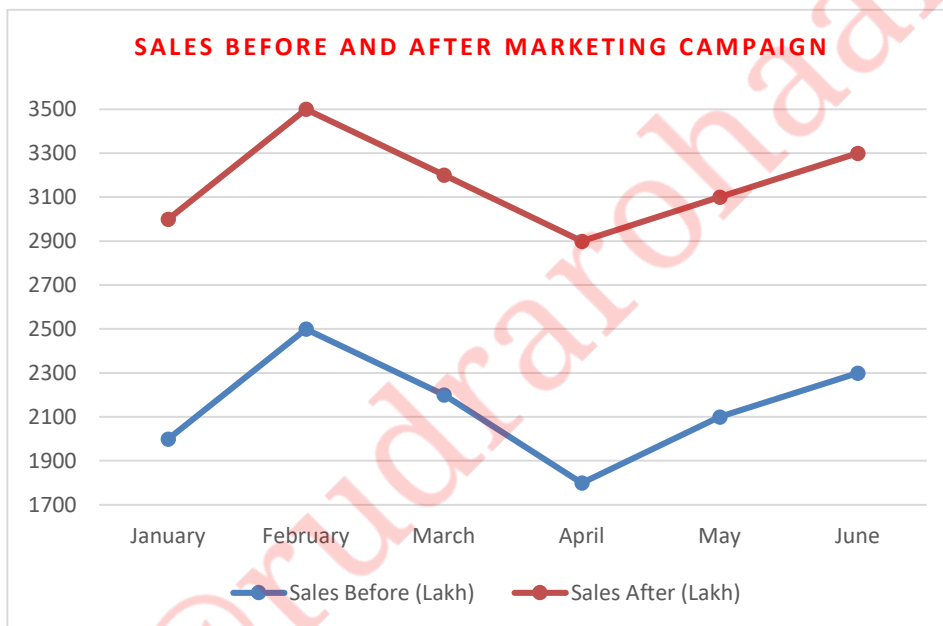
d) Display Financial Reports

1. **Balance Sheet: Gateway of Tally → Display → Financial Statements → Balance Sheet.**
2. **Profit & Loss A/c: Display → Financial Statements → Profit & Loss A/c.**
3. **Ratio Analysis: Gateway of Tally → Ratio Analysis.**
4. **Cash & Fund Flow Statements: Display → Cash/Funds Flow → Select Period.**

Module-II (Introduction to Data Science)

Problem 1: Marketing Campaign Analysis

Month	Sales Before (Lakh)	Sales After (Lakh)	Percentage Change
January	2000	3000	50%
February	2500	3500	40%
March	2200	3200	45%
April	1800	2900	61.10%
May	2100	3100	47.61%
June	2300	3300	43.47%
Average Sales	2150	3166.666667	
T-test	1.1204E-08		

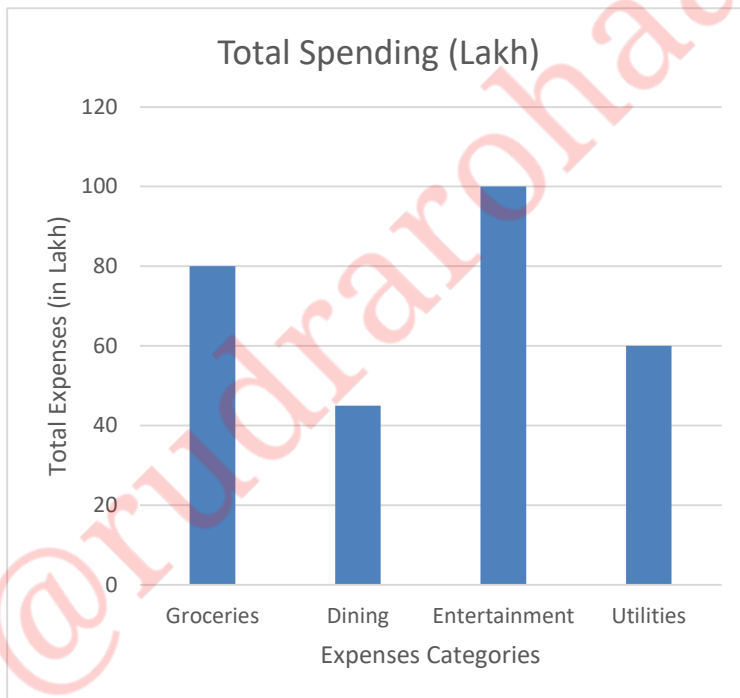


Problem 2: Daily Expenses Tracking

Date	Category	Amount (Lakh)
2024-01-01	Groceries	50
2024-01-02	Dining	20
2024-01-03	Entertainment	100
2024-01-04	Groceries	30
2024-01-05	Utilities	60
2024-01-06	Dining	25

Category	Total Spending (Lakh)
Groceries	80
Dining	45
Entertainment	100
Utilities	60

Entertainment (100 Lakh) has the highest spending.

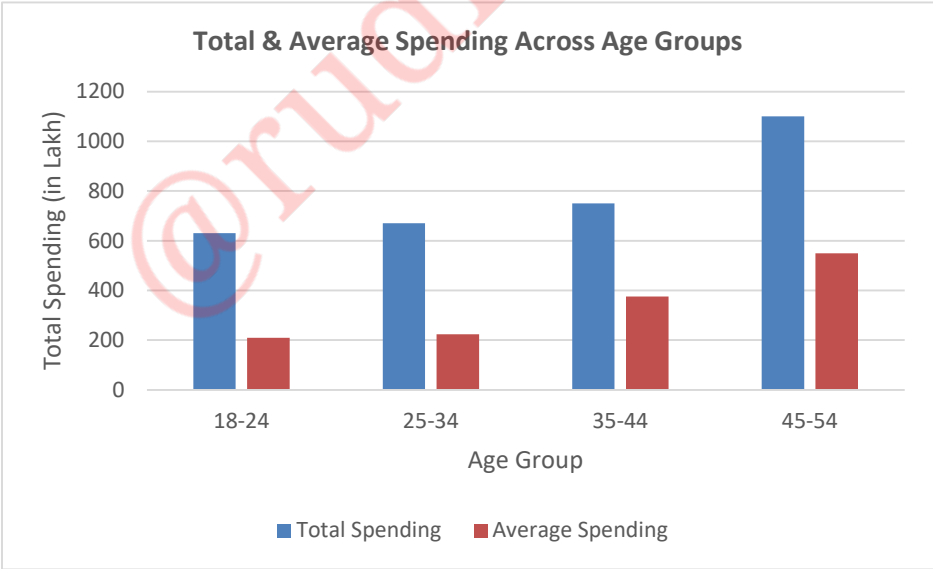


Problem 3: Customer Demographic Analysis

Customer ID	Age Group	Total Spend (Lakh)
001	18-24	200
002	25-34	300
003	35-44	400
004	25-34	150
005	45-54	500
006	18-24	250
007	35-44	350
008	25-34	220
009	45-54	600
010	18-24	180

Age Group	Total Spending	Average Spending
18-24	630	210
25-34	670	223
35-44	750	375
45-54	1100	550

Row Labels	Total Spend (Lakh)
18-24	630
25-34	670
35-44	750
45-54	1100
Grand Total	3150

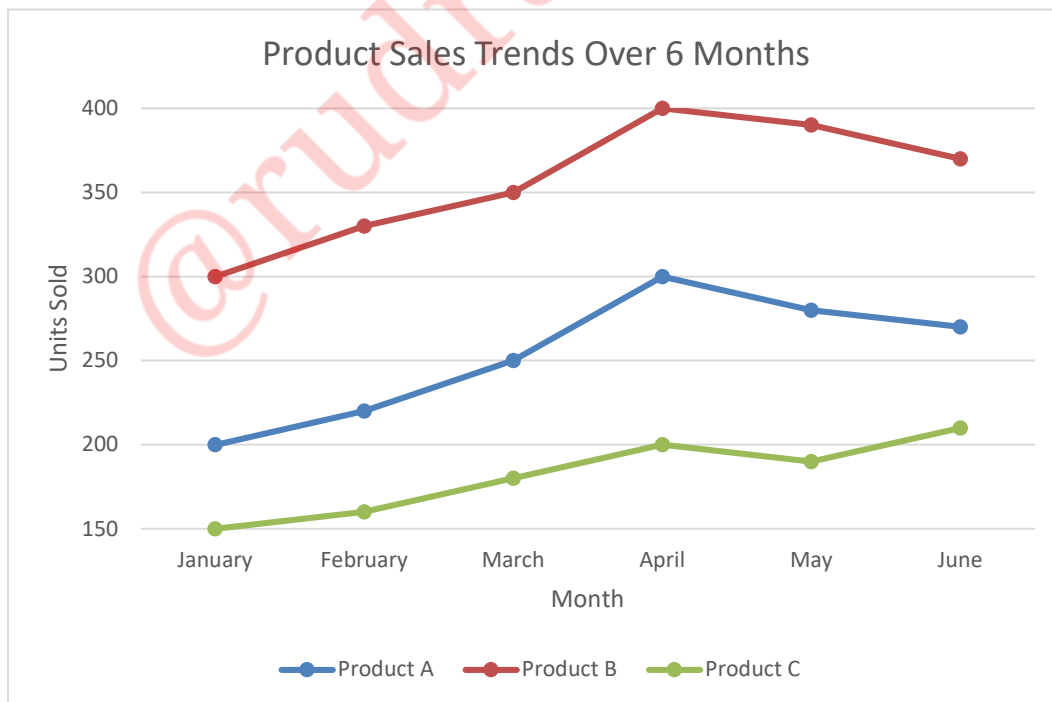


Problem 4: Exam Scores Analysis

Student ID	Subject 1	Subject 2	Subject 3	Subject 4	Average Score
001	85	78	92	88	85.75
002	90	80	85	91	86.5
003	75	85	90	78	82
004	80	82	88	84	83.5
005	88	90	93	86	89.25
Overall Class Average	83.6	83	89.6	85.4	
Highest	90	90	93	91	
Lowest	75	78	85	78	

Problem 5: Product Sales Analysis

Month	Product A	Product B	Product C
January	200	300	150
February	220	330	160
March	250	350	180
April	300	400	200
May	280	390	190
June	270	370	210
Total units sold	1520	2140	1090
Average units sold	253	357	182
Percentage Change	35%	23.33%	40%



Problem 6: Stock Price and Volume Analysis

Date	Stock Price (Lakh)	Volume Traded
2024-01-01	100	150000
2024-01-02	102	120000
2024-01-03	105	130000
2024-01-04	110	140000
2024-01-05	108	135000
Average	105	135000
Percentage Change	8	-10
Correlation		-0.027116307

The correlation coefficient $r = -0.0271$ indicates a **very weak** negative correlation between stock price and trading volume.



Problem 7: Budget vs. Actual Expense Analysis

Month	Budgeted (Lakh)	Actual Spending	Variance	Percentage Variance
January	5000	5200	↑ 200	4.00%
February	4800	4600	↓ -200	-4.17%
March	5100	4950	-150	-2.94%
April	5400	5300	-100	-1.85%
May	5000	4800	↓ -200	-4.00%
June	5500	5450	-50	-0.91%
Total Variance			-500	

