

COMPUTATIONAL THINKING BASED PROJECT

The project focuses on key concepts like accounting terms (assets, liabilities, capital, revenues, expenses), simple profit calculation, and basic accounting principles (e.g., dual aspect, going concern).

Topic:- "Balance the Café's Books"

Objective: Use computational thinking to analyze a small business's transactions, apply the accounting equation, and calculate profit.

Scenario: You are helping "Quick Brew Café" track its first fortnight finances (April 1-15, 2026). The owner listed transactions, but you must **decompose** them, spot **patterns**, **abstract** rules, and create a simple **algorithm** to verify the accounting equation (Assets = Liabilities + Capital) and compute profit.

Sample Transactions for one week (April 1-7, 2026):

Date	Particulars	Amount (₹)	Type (Cash/Credit)
Apr 1	Owner invests cash as capital	1,00,000	Cash
Apr 2	Buys coffee beans for cash	20,000	Cash
Apr 3	Sells coffee for cash	35,000	Cash
Apr 4	Pays rent for the month (cash)	10,000	Cash
Apr 5	Buys cups on credit (to be paid later)	5,000	Credit (not paid yet)
Apr 6	Sells coffee (customer pays later)	15,000	Credit(not received)
Apr 7	Pays insurance premium (for next month)	2,000	Cash

Key Terms to Use: Assets (e.g., cash, stock), Liabilities (e.g., creditor), Capital, Revenue (sales), Expenses (purchases, rent).

Students to prepare transactions based on above sample transactions for a fortnight (April 1-15, 2026)

Tasks (Apply Computational Thinking):

- Decomposition:** Break transactions into Assets, Liabilities, Capital, Revenue, Expenses. Make a table.
- Pattern Recognition:** Spot 2 patterns (e.g., "Cash sales increase assets immediately; accrual sales create trade receivables").
- Abstraction:** State 2 accounting principles in simple terms (e.g., "Dual aspect: Every transaction affects two accounts").
- Algorithmic Thinking:** Create a 5-step process to:
 - List effects on Accounting Equation after each day.
 - Calculate **Cash Basis Profit** (Cash revenues - Cash expenses).
 - Calculate **Accrual Basis Profit** (Total revenues - Total expenses).
 - Verify final equation: Assets = Liabilities + Capital.
 - Explain one difference between cash and accrual profit.

Example for Apr 1:

Assets (Cash) +1,00,000 = Capital +1,00,000 → Balanced!

- Presentation Format:**
- Cover Page: Student name, roll number, class, project title
- Neatly hand written with tables, steps, and calculations.
- 100-word reflection: "How did computational thinking help balance the equation?"

Project Evaluation Criteria:-The project will be evaluated on the basis of Decomposition , Patterns , Abstraction , Calculations/Algorithm , Reflection .