

# ITL PUBLIC SCHOOL

## Active Engagement of Young Minds during Summer Vacations 2026-27

Class: XII

Subject :- Business Studies

### COMPUTATIONAL THINKING BASED PROJECT

Students shall prepare a hand written computational thinking research based project on any one of the following topics:-

- (i) Elements of Business Environment
- (ii) Principles of Management
- (iii) Marketing management
- (iv) Stock Exchange

With reference to the above mentioned projects, the students need to do research on any one of the following topics and present the information in a Project file.

**Elements of Business Environment** – The students can do research on any one topic:

- Changes witnessed over the past few years on mode of packaging and its economic impact.
- Changing role of women in the past 25 years relating to joint families, nuclear families, women as bread earner and successful women in various fields.
- **Decomposition**  
Break the topic into sub-problems, e.g.:
  - For “packaging changes”: types of packaging (plastic, paper, glass), cost effect, environment impact, and consumer perception.
  - For “women’s role”: segments (education, workforce, family structure, entrepreneurship) and changes over 25 years.
- **Pattern recognition & data collection**
  - collect data (via survey or secondary sources) on:
    - Usage of eco-packaging vs old-style packaging over years.
    - Number of women working in different sectors, or share of women heads of households.
  - Put that data in a **spreadsheet** (Excel/Sheets) and :
    - Create **bar/pie charts** or **line graphs** showing trends over time.
- **Abstraction**
  - Drop out “noise” (very old, irrelevant data) and keep only the **key variables** (e.g., year, type of packaging, price impact).
- **Algorithmic thinking**
  - Write a **simple algorithm** (as steps) to decide “Is this packaging sustainable?” based on material, cost, and recyclability.  
Example:
    - Identify material.
    - Check if it is recyclable.
    - If “yes”, classify as sustainable; if “no”, classify as non-sustainable.

**Infographic / E-poster:**

- Use a **digital tool** (Canva/PowerPoint) to:
  - Visualize **trends** (bar/line charts).

Show **cause–effect chains** (e.g., “Less plastic → lower cost → more consumer preference”)

**Principles of Management** – For this project, the students are required to observe the application of General principles of Management and conduct a survey with the help of a Questionnaire. The responses need to be collected from different persons (8-10) working in or associated with a particular organization – a departmental store, an industrial unit or a fast food outlet.

- **Decomposition**

Identify which management principles to test (e.g., unity of command, division of work, discipline, equity).

Break the questionnaire into sections:

- Questions about authority, planning, coordination, motivation, etc.

- **Data collection**

- Collect **8–10 responses** from workers in one organisation (departmental store, factory, fast-food outlet).

- Use a **Google Form** or paper form, then record answers in a **spreadsheet**.

- **Pattern recognition & data cleaning**

- Convert qualitative answers into **scores** (e.g., 1 = “No”, 5 = “Always”).

- Students to:

- Spot patterns: “Which principle is most/least followed?”

- **Abstraction**

- Remove irrelevant details (name, exact address) but keep role, department, and scores.

- Decide on **key indicators** (average score per principle).

- **Algorithmic thinking**

- Have them design a **simple scoring rule** (algorithm) like:

- If average score  $\geq 4 \rightarrow$  “Well applied”

- 3–4  $\rightarrow$  “Partially applied”

- $< 3 \rightarrow$  “Poorly applied”

- **Charts & E-poster**

- Create:

- **Bar chart** per principle (average score).

- **Pie chart** showing “% employees” saying each principle is followed. <sup>[4]</sup>

E-poster can show “Before–After” box: “If these principles are followed, profit increases by X%”

**Marketing management** - The students need to select any product and provide a new name, logo and tagline to the product. They need to prepare a market offering with the help of 4 P’s of Marketing Mix.

- **Decomposition**

Break the marketing mix into four parts:

- Product, Price, Place, Promotion.

Students to list:

- 3 features of the product  $\rightarrow$  rank them by importance.

- 3 pricing options  $\rightarrow$  pick one using a simple rule.

- **Pattern recognition**

- Students to search 3–5 similar products online and record:

- Their price range, offers, and target audience.

- Use a **table** to compare features and prices, then look for:

- Common discount strategies, common taglines, or common distribution channels. <sup>[6]</sup>

- **Abstraction**

- Ignore brand names and logos; focus on: product type, price band, target group, and USP.

- Define a **simple formula** for “Best value product”:

- Value = (Features rating)  $\div$  (Price band index).

- **Algorithmic thinking**

- Students to write a **decision rule** (algorithm) to choose:

- Which channel to use (online vs offline) based on target age group and budget.

Example:

- A. If target age < 25 → prefer online/social media.
- B. If budget is low → bootstrapped campaigns (WhatsApp, Instagram).

- **Digital brochure (Google Docs/Canva):**

- Include:
  - Brand name, logo, tagline, 4P mix, features, and USP.
- Use **tables and icons** to show how changes in price-promotion affect customer choice.

**Stock Exchange** – The students need to prepare a brief report on the history of Stock exchanges in India. They need to select any 5 companies listed on Stock Exchange and invest an imaginary amount in its stock. They need to closely monitor the opening and closing prices of stock of these companies and monitor stock market trends.

The project to be presented in the form of an Infographic of the 5 selected companies or any one company.

### **Decomposition**

Break the project into:

- i. History of Indian stock exchanges (BSE/NSE).
- ii. Selection of 5 companies (e.g., Tata Motors, Reliance, HDFC Bank, Infosys, ITC).
- iii. Data recording (opening/closing price) over at least 10 days.

- **Data collection & charts**

- Take a **fixed imaginary amount** (e.g., ₹1,00,000).
- For investment
  - i. Choose 5 companies.
  - ii. Record **opening and closing prices daily** on a **spreadsheet**.
- Then create:
  - i. **Line graphs** for each company.
  - ii. **Simple bar chart** of total value of the portfolio each day.

- **Pattern recognition**

- Look for:
  - i. Which stock is most volatile?
  - ii. Which consistently goes up/down?
  - iii. Any **correlation** (e.g., when one stock falls, does the whole market fall?).

- **Abstraction**

- Ignore short-term noisy spikes; focus on **weekly trend** (up/down/sideways).
- Define a **simple rule** for “watch” or “sell”:
  - i. If price falls below 5-day average by 3% → “Caution”.

- **Algorithmic thinking**

- Write a **trading rule set** (algorithm) like:
  - i. Start with equal amount in each company.
  - ii. If a stock drops by 5% in 3 days, shift 20% of that stock’s money to the most stable one.
  - iii. After 10 days, calculate total profit/loss.

- **Infographic:**

- Shows:
  - i. Timeline of Indian stock exchanges.
  - ii. 5-day or 10-day price movement of the 5 companies.
  - iii. A **small flowchart** describing their “buy/sell” logic.

## **PRACTICE ASSIGNMENT**

### **Chapter 1: Nature and significance of Management**

1. What is meant by Management? Explain its characteristics.
2. What do you mean by the following terms?
 

a. Management ‘as a process’	b. Effectiveness	c. Efficiency
------------------------------	------------------	---------------
3. State the organizational objectives of management.

4. Management is considered to be both an art and a science. Explain
5. "Success of an organization largely depends upon its management". Explain any five reasons to justify the above statement.
6. "It is the orderly arrangement of individual and group efforts to ensure unity of action in the realization of common objectives".

Identify the concept of management involved in the above lines. Explain the importance of the concept identified.

### **Chapter 2: Principles of Management:**

1. What do you mean by principles of management? Explain briefly the significance of principles of management.
2. Distinguish between:
  - (i) 'Management principles' and 'Pure science' principles
  - (ii) 'Principles of Management' and 'Techniques of Management'.
  - (iii) 'Management principles' and 'Values'
3. Explain Method study, Motion study and Functional Foremanship as technique of scientific management.
4. Name and explain the technique of Scientific Management which distinguishes the efficient and inefficient workers. Illustrate with the help of an example.
5. Distinguish between Fayol's principles and Taylor's principles on the basis of:
  - i. Perspective;
  - ii. Basis of formation; and
  - iii. Expression
6. Explain the following principles of management:
  - i. Scalar Chain (with diagram)
  - ii. Order
  - iii. Initiative
  - iv. Discipline

### **Chapter 3. Business Environment:**

1. Define environment. Explain the importance of environment to the business.
2. Explain with examples, the various dimensions of business environment.
3. The court passed an order that all the schools must have water purifiers for the school children as:
  - (i) Society in general is more concerned about quality of life;
  - (ii) Innovative techniques are being developed to manufacture water purifiers at competitive rates;
  - (iii) Incomes are rising and children at home are also drinking purified water. The Government is also showing positive attitude towards the water purifier business.
 Identify the different dimensions of business environment by quoting the above details.
4. What do you understand by the term 'demonetization'? State the objectives of demonetization.

### **Chapter 4 - Planning:**

1. Define planning. Why planning is an important function of management? Discuss
- 2 Explain the limitations of planning.
3. Explain the process of planning.
4. Explain 'Objectives', 'policies' procedure', and 'Rule' as types of plans.

### **Chapter 11 - Marketing**

1. What is marketing? What functions does it perform in the process of exchange of goods and services? Explain.
2. Differentiate between 'Production concept' and 'Product concept' of marketing management philosophies on the basis of: (a) Meaning (b) Main focus (c) Means and (d) Ends.
3. Explain the following functions of Marketing:
  - (i) Product designing and Development. (ii) Standardisation and Grading
4. What is marketing mix? What are the main elements of marketing mix? Explain
- 5 Describe the functions of labelling in the marketing of products.
6. Name the element of marketing mix which affects the revenue and profits of a firm. Explain the factors affecting the element identified.