

# Curriculum for Class X

## Annual Plan 2026-27

### Objective:

To introduce students to **fundamental programming concepts in C++**, covering **basic syntax, control structures, functions, and arrays & strings** to develop problem-solving skills.

### Expected Learning Outcomes:

- **Understanding Core Programming Concepts** in C++
- Ability to **write, debug & execute C++ programs**
- Strong foundation in arrays & strings for data handling
- Ability to solve real-world problems using functions & modular programming

### Term 1: Fundamentals of C++ Programming

#### April - May: Introduction to C++ & Basic Syntax

- Overview of Programming & Introduction to C++
- History & Features of C++
- Setting up the Development Environment (Turbo C++)
- Structure of a C++ Program
- Writing, Compiling & Executing a Simple C++ Program
- Comments in C++ (`//` Single-line, `/*` Multi-line `*/`)

#### June: Data Types, Variables & Operators

- Variables & Constants (int, float, char, double, bool)
- Input & Output in C++ (cin, cout)
- Operators in C++
  - Arithmetic Operators (+, -, \*, /, %)
  - Relational Operators (==, !=, <, >, <=, >=)
  - Logical Operators (&&, ||, !)
  - Assignment Operators (=, +=, -=, \*=, /=, %=)

#### July: Control Flow - Conditional Statements

- If-Else Statements
- Nested If-Else
- Switch Case Statement
- **Practice Exercises**

## **August: Practice Exercises:**

- If-else, nested if , if-else-if ladder

## **September: Control Flow - Loops**

- For Loop
- Break & Continue Statements
- Practice Exercises

## **Assessment & Evaluation**

- Periodic Tests & Term Examination (MCQs, Coding Exercises)
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## **Term 2: Arrays & Strings**

### **October & November: Control Flow - Loops**

- While Loop
- Break & Continue Statements
- Practice Exercises

### **December: Introduction to Strings**

- Character Arrays (char array[])
- String Handling using C++ string
- Basic String Operations (strlen, strcpy, strcat, strcmp)
- Practice Exercises:
  - Convert a string to uppercase & lowercase
  - Count the number of vowels and consonants in a string

### **January:**

- Practice Exercises on Strings

## **Assessment & Evaluation**

- Periodic Tests (MCQs, Coding Exercises)