# Topic reduced

## Unit I: Computer Systems and Organisation
- **Encoding Schemes**: UTF8, UTF32
- **Concept of cloud computing and cloud services**: (SaaS, IaaS, PaaS), cloud (public/private), Blockchain technology

## Unit II: Computational Thinking and Programming - 1
**Decomposition** – concept, need for decomposing a problem, examples of problem solving using decomposition.
- **Sorting algorithm**: bubble and insertion sort; count the number of operations while sorting.

**Suggested Practical List** Input a list of elements, sort in ascending/ descending order using Bubble/ Insertion sort.

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## CLASS XII

## Unit I: Computational Thinking and Programming - 2
- **Recursion** – simple algorithms with recursion: print a message forever, sum of first n natural numbers, factorial, Fibonacci numbers, recursion on arrays: binary search
- **Idea of efficiency**: performance measurement in terms of the number of operations.
- **Data-structures**: Lists as covered in Class XI, Stacks – Push, Pop using a list, Queues – Insert, Delete using a list. (One of the data structure Stack or Queue. Note: While setting the question paper a students will have an option between Stack and Queue.)

## Unit II: Computer Networks
- **Web Scripting Client side** (VB Script, Java Script, PHP) and **Server side** (ASP, JSP, PHP), Web 2.0 (for social networking)
- **E-commerce payment transactions** using online banking, mobile banking, payment apps and services.

## Unit III: Database Management
**CREATE TABLE, DROP TABLE, ALTER TABLE, UPDATE ....SET, INSERT, DELETE**

1. **Suggested Practical List: Python Programming**
   - Recursively find the factorial of a natural number
   - Write a recursive code to find the sum of all elements of a list.
   - Write a recursive code to compute the nth Fibonacci number