POSITIVE QUADRANT
TECHNOLOGIES
SERVING INFORMATION WORLDWIDE

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COMPUTER SCIENCE 11TH

Programming & development

Course Curriculum

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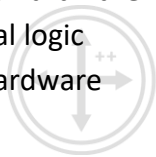Contact: +91 8169150592

COMPUTER SCIENCE 11TH

Section A

Module 1: Basic Computer Hardware and Software

➢ **Number**
- Representation of numbers on different bases
- Operations of numbers on other basis

➢ **Encodings**
- Binary encodings for integers
- Characters and their encodings

➢ **Propositional logic, Hardware implementation, Arithmetic operations**
- Propositional logic
- Logic and Hardware

Section B

Module 2: Programming Language Java

➢ **Introduction to Object-Oriented Programming using Java**
- Introduction
- History

➢ **Objects**
- Objects as data and behavior
- Analysis of real-world programming examples
- The basic concept of a virtual machine
- Compile-time and run-time errors

➢ **Primitive values, Wrapper classes, Types and casting**
- Primitive values and types

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- ➢ **Variables and Expressions**
    - ▪ Variables as names for the value
    - ▪ Assignment operation
    - ▪ Difference between the left-hand side and right-hand side of an assignment

- ➢ **Statements, Scope**
    - ▪ Statements
    - ▪ Grouping statements

- ➢ **Methods and Constructors**
    - ▪ Methods as mechanisms for side effects
    - ▪ Formal arguments and actual arguments in methods

- ➢ **Arrays, string**
    - ▪ Structured data types
    - ▪ Examples of algorithms that use structured data types

Section C

Module 3: Trends and Ethical issues

- ➢ **Basic input/output Data file Handling (Binary and Text)**
    - ▪ Basic input/output using Scanner and Printer
    - ▪ Data File Handling

- ➢ **Recursion**
    - ▪ Concepts and methods of recursion

- ➢ **Implementation of algorithms to solve problems**
    - ▪ Address correctness issues
    - ▪ Implement and execute the algorithm in Java

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T E C H N O L O G I E S
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- ➤ **Packages**
    - Creation of Packages
    - Interaction of objects across packages

- ➤ **Trends in computing and ethical issues**
    - Artificial Intelligence
    - Virtual Reality and Augmented Reality
    - Cyber Security