

# Kore Infotech Learning Centre

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## C++ Programming

### 1. Introduction

What is a Programming Language?  
A Simple C++ Program

### 2. Primitive Data Types and Operations

Variables  
Identifiers  
Keywords  
Operators  
Character Data Type and Operations

### 3. Loops

If statement  
If.. else statement  
Switch statement  
For statement  
While statement  
Do while statement  
Nested loops statement

### 4. Functions

Creating a Function  
Calling a Function  
Passing Parameters by Values  
Passing Parameters by References  
Overloading Functions  
Function Prototypes  
Inline Functions

### 5. Arrays

Array Basics  
Passing Arrays to Functions  
Sorting Arrays  
Two Dimensional Array

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## 6. Pointers and C Strings

Pointers and References

Passing Arguments by References with Pointers

Arrays and Pointers

Returning pointers from Functions

Dynamic Memory Allocation

## 7. Recursion

Recursive Helper Functions

Recursion versus Iteration

## 8. Object Oriented Programming

Defining Classes for Objects

Constructors

Destructors

Passing Objects to Functions

Array of Objects

Class Abstraction and Encapsulation

friend Functions and friend Classes

## 9. Inheritance and Polymorphism

Base Classes and Derived Classes

Constructors and Destructors

Polymorphism and Virtual Functions

The protected Keyword

Abstract Classes and Pure Virtual Functions

Dynamic Casting

## 10. File Input and Output

Text I/O

Formatting Output

Random Access Files

Updating Files

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## **11.Operator Overloading**

**Operator Functions**

**Overloading**

**Object Conversion**

## **12.Exception Handling**

**Exception Classes**

**Exception Handling**

**Custom Exception Handling**

**When to use Exceptions**

