

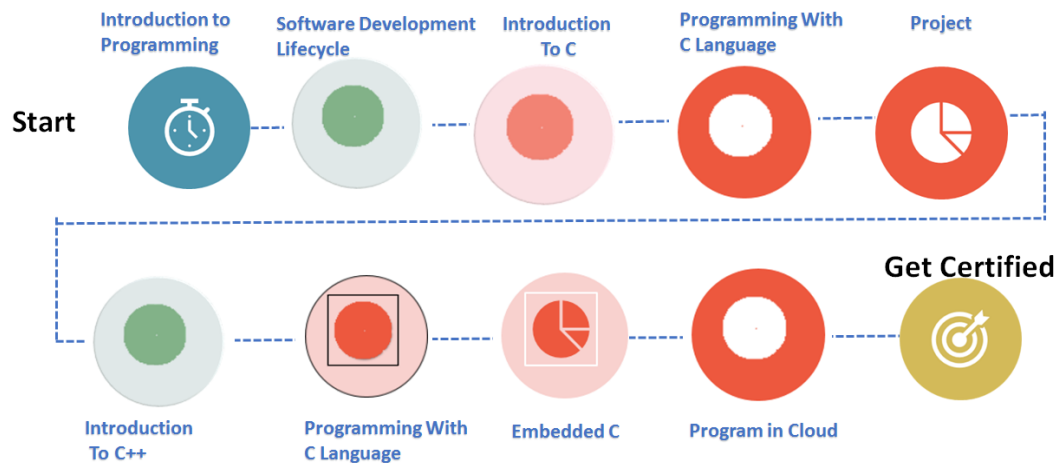


QUOTATION AND COURSE OUTLINE

TECHPLEDGE CERTIFIED C & C++ DEVELOPER

SOFTWARE DEVELOPMENT WITH C AND C++

TechPledge Certified C and C++ Developer Path



Course Materials

TechPledge will provide a customized set of Lecture Notes for each class scheduled along with Recorded video . You will be given a PDF file which you may make copies from, email to your participants, or make available via internal website.

Learning Path for C and C++ Developer

Today's C and C++ Developer need to have a diverse set of skills which include able to write programs that include functions, arrays and pointers, file handling and data structure, etc. which business insights can be derived. At the TechPledge we provide the training which is always updated inline with the C and C++ Development Skills required by the industry and recommended by Industry. Below is the patch for training



Software Development

- *significance of Machine Level Programming in today's digitally-driven world*
- *applications of c and C++*
- *lifecycle of Software development*
- *Decision Making Logics*



Software Development with C

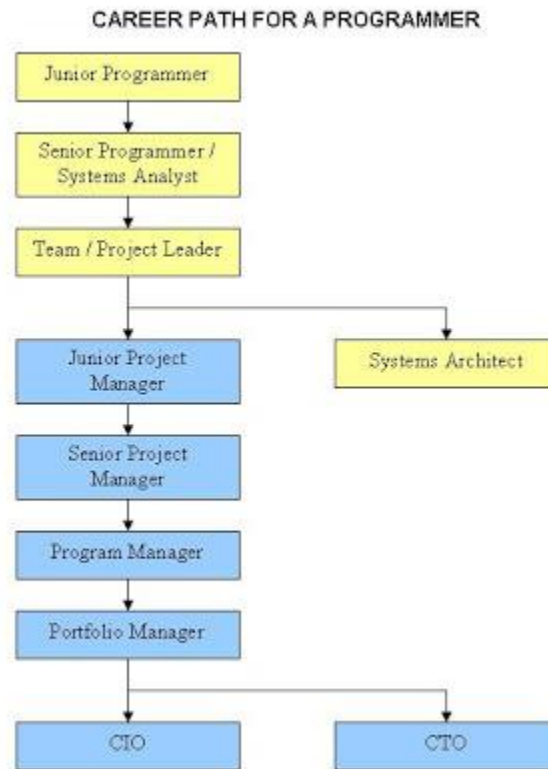
- *low-level programming (BIOS)*
- *embedded programming (devices)*
- *systems programming (operating systems)*
- *performance-oriented programming (e.g. gaming engines, GPU/scientific computations, cryptography).*



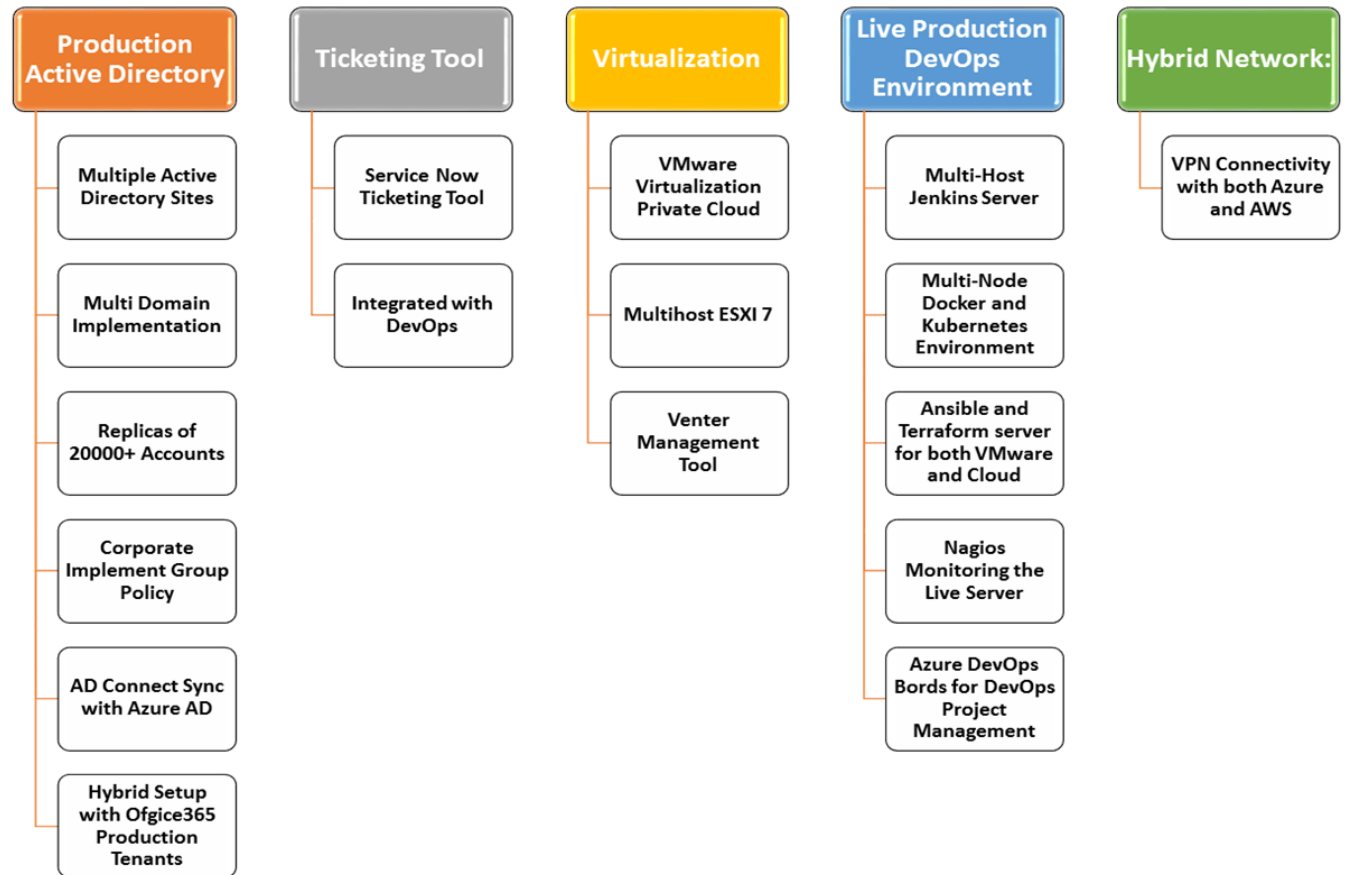
Software Development in C++

- *Understanding of is pointer arithmetic and what constitutes undefined behavior*
- *The go-to GUI framework for C++*
- *Object Oriented Programming*
- *Choose and implement an appropriate deployment pattern to*

Career Path for C and C++ Developer



Customer Immersion – Live Production Walkthrough



6 Hours Live walkthrough the complete DevOps Process in production environment with full setup of Infrastructure Like **AD**, DevOps Tool Like **Jenkins** , **Ansible** , **Docker** , **AWS Code Deploy** , **AWS Code Pipeline** , **Azure Pipeline** and **Azure ARM** and Development Environment with Maven, Visual Studio and Python. **Data Scient and Data Factory with R Programming and Python**

The Complete Setups is using **100** of **PowerShell**, Linux **Script** , **C** and **C++ Script** and **Applications** with **237 CI/CD scripts** (Jason, Yamal).

Below is the High-Level Setup Outline of our Customer Immersion Production Replicas. Student will get the access of this setup at end of the course for 6 hours with AD ID and Organization Email.

Learn while doing with our Sandbox Environment



Azure Sandbox

- Connect with Azure Portal through the TechPledge Provide sandbox environment and play with it will all labs which you want to try.
- Create, destroy, and build Practical, scenario-based applications with ease. Our pre-configured, auto-provisioned servers allow you to try new skills, risk-free.



AWS Sandbox

- Connect with AWS Console through the TechPledge Provide sandbox environment and play with it will all labs which you want to try.
- Create, destroy, and build Practical, scenario-based applications with ease. Our pre-configured, auto-provisioned servers allow you to try new skills, risk-free.

Course Outline

Part 1: Introduction to C

- The C Language and its Advantages
- The Structure of a C Program
- Writing C Programs
- Building an Executable Version of a C Program
- Debugging a C Program

- Examining and Running a C Application Program

Data Types and Variables

- Data Types
- Operands, Operators, and Arithmetic Expressions

Input/Output Management

- The Input/Output Concept
- Formatted Input Function

Control-Flow Statements

- The Control-Flow Program Statements
- Looping Statements
- The Data-checking process

Modular Programming with Functions

- The C Function
- Passing Data to Functions
- Passing an Address to Modify a Value in Memory
- Using Functions in the Checkbook Program
- C Standard Library Functions

Arrays, Pointers, and Strings

- Arrays, Pointers, Strings
- Using Arrays, Strings, and Pointers in the Checkbook Program

Structures

- Structures
- Arrays of Structures
- Passing Structures to Functions
- Nesting Structures

File Input/Output

- Command-line Arguments
- Combining Command-line

Part 2: Introduction to C++

- Creating a project
- Writing, compiling and running a program

Variables and data types

- Expressions
- Constants
- Operators
- Type conversions

Looping constructs: while, do...while for loops

- If...else statements
- Switch/case construct

Functions

- Passing arguments
- Function prototyping
- Default argument initializers
- Inline functions

Arrays

- Array initialization
- Multi-dimensional arrays
- Character arrays
- Working with character strings

Storage Classes

- Global variables

Pointers

- Pointer and arrays
- Pointers to character strings
- Arrays of pointers
- Memory slicing
- Pointers to functions

C++ classes

- Data members and member functions
- Creating objects
- The new and delete operators
- Friends to a class
- Class initialization

Reference types

- Reference type arguments

Function overloading

- Operator overloading

Copy constructor

- Assignment operator

Template classes

- Static class members
- File streams

Inheritance

- Base classes and derived classes
- Inherited member access
- Base class initialization
- Protected members of a class

Virtual functions

- Virtual destructors

Virtual base classes

- Virtual base class member access
- Constructor and destructor ordering

Exception handling

- try...throw...catch block
- Nested catch handlers

C and C++ Project – Banking Records System Project .

Project :

This banking record system project in C++ is a simple console application developed without the use of graphics component. It is more of a database project in C++, and is built using the language's file handling mechanism. It is suitable for beginners who want to learn how to add, edit, search, delete or modify records in a file, and how to use file as database overall.

- **Add Record:.**
- **Show/List Data:**
- **Search Record:**
- **Edit Record:**
- **Delete Record:**

Course Fee

Price: INR 21,700 for Individuals