

**Duration: 18 Months** 

Smart IT Professional (SIP) program is scientifically designed for B.Sc. (IT), Engineering and BCA students who want to make a professional career in software development. SIP has three levels, mainly system programming, database management, website development with Java and .Net technology. The individual can start its own operations in software development after successful completion of the said course. SIP is having modular training and examination pattern which would help the student to gain maximum knowledge. After successful completion of the program the student has an option to get job assistance from Raj if required.

**Career Opportunities:** Programmer, Trainers, Desktop Application Developer, Web Application Developer, Database Administrator, Project manager, System Analyst, Work as a Freelancer. SIP gives career readiness in IT Industry.



## **Program Contents**

## Module -1 Certificate Program in Desktop Application Development

C Programming
Introduction to C
Data Types
<b>Expressions and Operators</b>
Control Statements
Switch
Loops
Arrays
Strings and Integer
Functions
Pointers
Data Structures

C++ Programming
Introduction to C++
OOPS Concepts
Constructor
Functions
Operators
Classes
Conversion Types
Abstract Class
File Input / Output
Class Templates
Exception Handling
Data Structures

Visual Basic Programming
Introduction to Visual Basic
Windows Event
Controls and Properties
Visual Basic Data Types
GUI Controls
Interacting with Files
OOPS with Class Modules
Interacting with Data
Understanding ADO
Multi Dimensional Arrays
Creating ActiveX Controls
Creating DLLs and EXEs

SQL Server
Introduction to SQL Server
Databases and types
Using DDL / DML
Simple Queries
Sub-Queries
Queries using Joins
Using Aggregate Functions
Constraints
Working with Views
Stored Procedures
Triggers
Import / Export

Python Programming
Basic Python Syntax
Data Types & Operators
Decision Making & Looping
List / Tuples / Dictionary
Functions and Modules
Files Input / Output
Exceptional Handling
Class and Object
GUI Programming
Database Access
Multithreading

## **Module -2 Certificate Program in Web Technology**

<u>HTML</u>
Elements, Attributes
Fonts / Styles
Links / Images
Tables / Borders
Lists / Forms
Events / Frameset
Embedded Audio / Video
Image Mapping
Cross Browser Testing
Introduction to HTML 5

File Handling

Dreamweaver
Introduction
Setting up a site
Working With Images
Cascading Style Sheet(CSS)
Using Hyperlinks
Using Tables
Using Forms
Using Frames
Publishing a Site
Web Hosting

Java Script
HTML with Java Script
Operator / Control Statement
Functions / Events / Cookies
Validation / Error Handling
jQuery
jQuery Concept
Library / Selector
Events / Effects
Dimensions

PHP
Configuring PHP
Using PHP Code in Web Pages
Data Types / Identifiers /
Variables
Constants / Expressions
Control Structure
Functions / Array
OOPS in PHP
Error and Exception Handling

Authenticating Users
HTML Forms in PHP
My SQL
Configuring PHP with My SQL
Storage Engine and Data Types
Database and Tables
Stored Routines
Triggers / Views / Queries
Import and Export
SQL Injection

Working with File

## Module -3 Certificate Program in Web Application Development

Traversing Method

Core Java
Introduction to Java
Java Basic Syntax
Data Types and Variables
Expressions / Operators
Functions / Classes
Exception Handling
Loops / Strings / Arrays
Interfaces and Packages
Threading
Files Input / Output
Inheritance / Polymorphism

Advance Java
Java Applets / Event Handling
JDBC / Swings / Components
Menu and Image
JSP Architecture
Working with tags
Implicit Objects
Working with Forms
Introduction to Servlet
Processing HTML Form
HTTP Request / Responses
Cookies / Session Tracking

C# Programming
Introduction to C#
Variables and Data Types
Operators and Expressions
Methods in C#
Arrays and Strings
Structures and Enumerations
Classes and Objects
Input / Output Operations
Errors and Exception
Multithreading
Properties

ASP.Net
Introduction to ASP
Event Handling
Server Side / Controls
Client Side / Controls
Directives / Validators
Database Access
ADO.Net
File Uploading
Add Rotators/ Calendar
Multi Views
Panel Controls

String and Expression

VB.Net
Introduction to VB .Net
Data Types / Variables
Constants / Statements
Operators / Decision Making
Loops / Strings / Arrays
Date and Time
Collections and Functions
Classes & Objects
Exception / File Handling
Dialog Boxes / Forms
ADO .Net