

DeskWeb Applications (One Year Program)

Desktop Application

- C Programming
- C++
- C#
- SQL
- Crystal Report

Web Application

- ASP.NET
- Web Forms
- MVC
- SQL Server
- Project

C Language

Main Contents:

- Language Fundamentals
- Operators
- Variable & Data Types
- Loops
- Strings
- Arrays
- Pointers
- Structures
- User Define Functions
- File Management
- Final Project

Course Outline:

- Introduction to C Programming
- Overview to C Programming
- A Brief History of C
- Running C Programs
- The Edit-Compile-Link-Execute Process
- Structure of C Programs
- Pre-processor Directives
- Your First Program
- Add Comments to a Program
- Variable & Data Types
- Operators & its types
- Input and Output Functions(Scanf, getche,getch,getchar)

- The % Format Specifiers
- Conditional statements(if, if else, if else if, nested if)
- Looping & its types(For, while, do while, nested loop)
- Using break and continue Within Loops
- Switch case
- User defined Functions
- Arrays(single dimensional, two dimensional, multidimensional)
- Strings & String Functions
- Structure
- Pointers
- Header Files
- File Handling

C++ Language

Main Contents:

- Object Oriented
- Programming In C++
- Programming Concepts
- Variable & Operations
- Control Structure & Loops
- Functions, Arrays & Strings
- Pointers & Dynamic Memory
- Data Structures
- Exception Handling
- Filling In C++

Course Outline:

- Introduction to Programming
- What is compiler?
- Fundamentals of C++
- Structure of a program
- Variables and types
- Constants
- Operators
- Basic Input/ Output
- Program structure
- Control Structures
- Functions
- Overloads and templates
- Name visibility
- Arrays
- Character sequences
- String
- Pointers
- Dynamic Memory
- Data structures
- Type conversions
- Exceptions
- Preprocessor directives
- Input/ Output with files
- C++ Object Oriented

- Class & Object
- Inheritance
- Polymorphism
- Encapsulation

C# Language

Main Contents:

- Fundamentals Of Oops & C#
- Using C# In Console & Form
- Applications
- Integrated Development
- Environment C#
- Data Types & Decision Statements & Loops
- Usage Of .NET Libraries
- Benefits Of Oops Techniques
- (Data Base) SQL Server
- SQL Queries
- ADO.NET & Crystal Reports
- Application Deployment
- Final Project

Course Outline:

- Introduction
 - What is Software and its types
 - Basic Programming Concepts
 - Levels of Languages
 - Translators
 - Steps of Programming
 - Types of Errors
 - Programming Methodology
- Getting Started with the Visual Studio Environment IDE
 - Basic IDE of Visual Studio
 - Concept of Programming in Console Application
 - Getting Started with Forms and Controls
 - Creating the GUI for Your First Visual C# Application
 - Introduction to C# Code
 - Comments, Blank Lines, and Indentation
 - Dealing with Syntax Error
 - Writing Code for the Hello World Application
 - Label Control
 - Making Sense of IntelliSense
- Basic Controls in VB.net
 - Label
 - TextBox
 - RadioButton
 - CheckBox
 - ListBox
 - ComboBox
 - CheckedListBox
 - DateTimePicker
 - GroupBox

- Panel
 - ProgressBar
 - PictureBox
 - RichTextBox
 - Timer
 - DataGridView
 - Dialog Controls
- Variable & Data types in C#
- Operators
 - Assignment Operator
 - Mathematical Operators
- Looping and Its types
 - For
 - While
 - Do while
 - Nested Loop
- Arrays & types of arrays in C#
- Array list / List<T>
- String and String Functions
- Class & Object/Structure
- Methods in C#
- Polymorphism
 - Overloading
 - Overriding
- Inheritance
- Properties & Encapsulation
- Arithmetical Assignment Operators
 - Increment Operator/ decrement Operator
 - Relational Operators
 - Logical Operators
 - Bitwise Operators
- Decision Structures and the if Statement
 - If, if else, if elseif, nested if, switch case
- Inheritance & its types
- Exception handling
- Filing in C#
- Enum
- Interfaces & its significance
- Namespaces
- Preprocessor | Directives
- Abstraction in C#
- Introduction to database/SQL server Intro
- Basic Queries in SQL server
- Joining tables in SQL server
- ADO.net Technology
- Manipulating Database in C#
- Using Crystal Report

ASP.NET Web Forms

Course Outline:

- Introduction to Web Development and Web Application
 - Introduction to ASP.NET
 - From ASP to ASP.NET
 - Web Forms
 - ASP.NET Working Environment
- Web Forms Architecture
 - Page Class
 - Web Forms Life Cycle
 - Web Forms Event Model
 - Code-Behind
- ASP.NET and HTTP
 - Request/Response Programming
 - HttpRequest Class
 - HttpResponse Class
 - RedirectionHttpUtility Class
- State Management and Web Applications
 - Session State
 - Application State
 - Cookies
- Server Controls
 - HTML Server Controls
 - Web Forms Server Controls
 - Validation Controls
 - User Controls
- Caching in ASP.NET
 - What Is Caching
 - Page-Level Caching
 - Page Fragment Caching
- ASP.NET Configuration and Security Fundamentals
 - Configuration Overview
 - Authentication and Authorization
 - Forms Authentication
 - Windows Authentication
- Debugging, Diagnostics and Error Handling
 - Debugging
 - Application Tracing
 - Page Tracing
 - Error Handling
- More Server Controls
 - Most recent ASP.NET Controls
 - Menus
 - Master Pages
- SQL Server Queries revision
- ADO.NET
 - ADO.NET Overview
 - Connections
 - Commands

- DataReaders and Connected Access
 - Data Sets and Disconnected Access
 - Language Integrated Query
- Data Access in ASP.NET
 - Data Source Controls
 - Connection String Storage
 - GridView
 - DetailsView
 - FormView
 - Object Data Sources
 - ListView
 - DataPager
 - LinqDataSource
- Personalization and Security
 - Configuration Overview
 - Themes
 - Skins
 - Security in ASP.NET
 - Membership and Roles
- Introduction to ASP.NET AJAX
 - Rich Client Applications
 - AJAX
 - ScriptManager
 - UpdatePanel
 - AJAX Client Library
 - Remote Method Calls
 - AJAX Control Toolkit
- Web site Hosting/web application deployment Concept

MVC

Main Contents:

- MVC Concept
- MVC Controls (UI Design)
- Layout File & Partial View
- Entity Framework (Using DF First Approach)
- Data Annotation
- Authentication, Authorization & State Management
- Web API
 - JSON
 - JQUERY AJAX
- Project

Course Outline:

- MVC Concept
 - What is MVC?
 - Significance & Benefits
 - Difference between MVC & Window Forms
 - Understanding how MVC Works
 - ◆ What is model in MVC

- ◆ What is View in MVC
 - ◆ What is Controller in MVC
 - ◆ What is Routing in MVC
 - Data states (Viewdata , Viewbag)
- Introduction to MVC Controller
 - Traditional HTML form elements
 - HTML Helper
 - Benefits of HTML helper over HTML form elements
 - View Templates
 - Editor Templates
 - Displaying list in a Grid
 - ◆ Grid Functionalities
 - Paging
 - Sorting
 - Searching
- Layout & Partial (Master page & User Control)
 - Concepts of Database, DBMS, RDBMS
 - Introduction to MSSQL Server Management Studio 2012
 - Creating Database & Database Tables
- Entity Framework
 - Introduction
 - LINQ to Entities
 - CRUD Operation
 - Data Binding with MVC Controls
 - Entity Framework joins, Group by where clause, Projection
- Data Validation Using Data Annotation.
 - Client side Validation
 - Server side Validation
 - Custom Validation
- Authentication
 - Understanding ASP MVC Authentication
 - Bounding Authorization
 - Applying Filters
 - State Management, Session State, Cookies Query Strings
- Web API
 - Introduction to Web API
 - Difference between Web API & MVC
 - Consuming Web API Via JQUERY AJAX
 - CRUD Operation