

Core Java

- Introducing the Java Technology
- Java Features
- Language Fundamentals
- Working with classes , Objects
- Advanced Object Oriented Programming
- String Processing (String, String Buffer, String Builder class)
- Packages
- Exception Handling

- Multi Threading and Concurrency
- Collection framework and other utility classes
- Generics
- Java File I/O fundamental , Serialization
- Java File I/O (NIO.2)
- Building Database Applications with JDBC
- Localization

Advanced Java

Servlet and JSP

- Introduction to Web Application Technologies
- Servlets and Hypertext Transfer Protocol
- Servlet Life Cycle
- Initialization parameters
- Servlet Collaboration
- Developing Web Applications Using Session Management)
- Servlet 3.0 with annotation
- Using Filters in Web Applications

- Secure Web Application
- Asynchronous web applications
- Developing Java Server Pages
- Advance JSP
 - Using Java Standard Tag Library (JSTL)
 - Developing JSP Pages using the Expression Language (EL)
 - Developing JSP Pages Using Custom Tags

J2EE

- **EJB**
 - Overview of EJB
 - EJB Fundamentals
 - Writing Your First Bean
 - Introduction to Session Beans
 - Different types of Beans

- **Struts**
 - An Introduction to Struts
 - Building a Simple Struts Application
 - The Model Layer
 - The View Layer
 - The Controller Layer

- **Hibernate**
 - Introduction to Hibernate
 - Integrating and Configuring Hibernate
 - Building a Simple Application
 - The Persistence Life Cycle
 - An Overview of Mapping

- **Spring**
 - Overview of Spring
 - Modules of Spring framework
 - Dependency injection
 - The bean factory and application context
 - DAO support and JDBC framework

SYLLABUS OF .NET

Overview of dot net framework, NET as better Programming Platform, Common Language Run-time, MSIL and JIT, Class library. Introduction to C#, Features of C#, Integrated Development Environment (IDE), Variables, Constants, Data types, Operators, Conditional Statements and Loops. Windows Forms and Basic Controls, Windows Forms and Events, Message Box, Creating MDI, Using basic controls like command buttons, Text Box, List Box, Radio Buttons, Labels, Link Labels, Combo Box, Building Small Applications

Argument Passing Mechanism, Built-in Functions, Overloading functions. Error handling and Debugging, Types of Errors, Introduction to Exception Handling, Unstructured and Structured Exception Handling, Raising an Exception Intentionally, System Exception, Throwing an Exception, Try, Catch and Finally statements. Object oriented programming, Concept of OOP (Abstraction, encapsulation, inheritance and polymorphism), Classes and Objects, Creating Class Libraries, Constructors and Destructors, Overloading, Overriding and Shadowing.

Advanced controls, Rich Text Box, Scroll Bars and Progress Bars, Date Time Picker, Picture Box, Tree View and List View Controls. Designing Menus, Working with Files and Folders, Accessing Folders and Files. Introduction to .Net Assemblies. Data Access with ADO .Net, Using Databases, Server Explorer, Data Adapter and Data-sets, Working with ADO .Net, Architecture of ADO .Net, Using Data controls: Data Grid, Data Binding, Creating New Data Connection in Code. Introduction to Structured Query Language, Executing SQL Statements, Selection Queries, SQL joins, Introduction to query builder.

MVC

Introduction, Difference between MVC2, MVC3, MVC 4 and MVC5, Features of MVC4, Difference between MVC and asp.net, Software required, Creating asp.net MVC4 application, Templates in asp.net MVC4.

Basics of model, view and controllers, Razor view engine, Difference between razor and aspx view engine, Routing Engine, Creating controllers, Action method in controllers and Uses Views, Razor view syntax, Model & it's types, Practical Examples, HTML Helpers in MVC4, Properties or attributes of HTML helper, Helper types, Examples on helper.

Data annotations & validations, creating custom html helper , Examples on creating custom HTML helpers, Partial views, Layout or master views Caching, Cookies, Role managements JSON uses in MVC4, Examples on JSON in MVC4.

Routing Ajax call in MVC4, Ado.net in MVC4, Entity frame work, LINQ Queries Examples in Ajax with jQuery and java script in MVC4, jQuery & JavaScript in MVC4.

Data Binding and modification in MVC4, Ken do UI integration and uses in MVC4, Examples on ken do UI in MVC4, Content delivery networks, Unobtrusive JavaScript, Asynchronous forms

jQuery UI, Handlers in MVC4, Filtering in MVC4, Send SMS & emails in MVC4, Model popup and validation in MVC.

WCF

Web Services overview, WCF introduction, Hosting, Calling WCF services, Binding & contracts, Exceptions, Diagnostics & message patterns, Sessions & transaction, WCF security, Rest services & syndication's.

LINQ

Introduction, Language enhancements, LINQ to Objects, SQL, data-sets and XML

AJAX

Fundamentals, Server side AJAX, Controls, ASP.NET, AJAX Control Tool Kit

Python for Raspberry Pi

The Raspberry Pi Programming Environment

Understanding Python Basics

Using Arithmetic in Your Programs

Controlling Your Program

Learning About Loops

Using Lists and Tuples

Dictionaries and Sets

Working with Strings

Using Files

Creating Functions

Working with Modules

Exploring the World of Object-Oriented Programming

Employing Inheritance

Regular Expressions

Exception Handling

GUI Programming

Game Programming

Python and AWS

A Quick Note About Python

Installing boto

Getting Started with Amazon Web Services

Using boto with Eucalyptus

Using boto with Google Cloud Storage

Finding Available Regions for AWS

Enabling Debug Output with boto

Controlling Socket Timeouts in boto

EC2 Recipes

Launching an Instance

Keeping Track of Instances with Tags

Accessing the Console Log

Uploading Your Own SSH Keypair

Synchronizing SSH Keypairs Across EC2 Regions

Associate an Elastic IP Address with an Instance

Attach a Persistent EBS Volume to an Instance

Back Up Your EBS Volumes

Restore a Volume from a Snapshot

Clone an Existing Instance

Find All Running EC2 Instances

Monitoring the Performance of Your Instance

Getting Notifications

Storing Custom Data in CloudWatch

Executing Custom Scripts upon Instance Startup

Create a Bucket

Create a Bucket in a Specific Location

Store Private Data

Store Metadata with an Object

Computing Total Storage Used by a Bucket

Copy an Existing Object to Another Bucket

Modify the Metadata of an Existing Object

Find Out Who Is Accessing Your Data

Reduce the Cost of Storing Noncritical Data

Generating Expiring URLs for S3 Objects

Preventing Accidental Deletion of Data from S3

Hosting Static Websites on S3

Uploading Large Objects to S3

