

SHAREPOINT-2016 Syllabus

Overview:

Gone are those days when we used to manage all information in a corporate manually. For every type of requirement we have different solutions but integrating them is a big nuisance. SharePoint integrated intranet, document management, content management is an excellent way to find secure place to store, organize, share, and access information from almost any device. To get started using the extraordinary features of SharePoint all an associate in the organization need is just a browser like IE or Firefox or Chrome. SharePoint is a pre-developed ASP.NET application by Microsoft for managing day to day activities of a corporate portal.

Course Objectives:

This course is divided into 4 parts. They are:

- ❖ SharePoint Fundamentals
- ❖ SharePoint Designer and Branding
- ❖ SharePoint Administration
- ❖ SharePoint Development.

In SharePoint 2016 Fundamental Training modules the course will allow learners to

- ❖ Understand IIS Web Server and hosting websites in IIS.
- ❖ Understand the role of SharePoint in developing Corporate Portal.
- ❖ Creating Sites and Subsites.
- ❖ Understanding and the use out of the box lists and libraries to build the SharePoint site.
- ❖ Creating Custom Lists and Libraries.
- ❖ Working with Content Types and Site Columns.
- ❖ Use out of the box Web Parts.
- ❖ Use out of the box workflow management.

In SharePoint 2016 Designer and Branding Training modules, the course will allow learners to

- ❖ Develop familiarity with SharePoint Designer 2016.
- ❖ Creating External Lists using BCS.

- ❖ Branding SharePoint site.
- ❖ Working with Master Pages and Themes.
- ❖ Creating forms for lists and libraries using InfoPath.

In SharePoint 2016 Administration Training modules the course will allow learners to

- ❖ Installing and configuring all the required software's products to work with Microsoft SharePoint 2016.
- ❖ Creation of SharePoint Web Applications, Site Collections, Sites and Sub sites.
- ❖ Managing permissions for Active directory users in database based on Claims authentication.
- ❖ Provisioning Service Applications and binding with Web Applications.
- ❖ Managing large amount of data and documents using Content management features like document sets, document IDs and content organizer.
- ❖ Configuring and manage user profile service and activate various socializing features of SharePoint 2016.
- ❖ Implementing Search Features in the site.
- ❖ Learning PowerShell and writing scripts to performing important admin related operations.
- ❖ Plan and execute Backup and Restore.

In SharePoint 2016 Development Training modules the course will allow learners to

- ❖ Learning SharePoint Server API.
- ❖ Customizing most widely used sections of the SharePoint (site collections,sites,lists, lists items, list queries, fields).
- ❖ Using CAML Queries and LINQ to fetch data from SharePoint lists.
- ❖ Understand features and executing custom code while features are activated and deactivating.
- ❖ Write code for custom event handlers.
- ❖ Building and deploying web parts.
- ❖ Develop custom workflow solutions for SharePoint.
- ❖ Using features and solutions for deploying projects in Microsoft SharePoint Server 2016.
- ❖ Developing Sandboxed solutions with limited access.
- ❖ Accessing external data using BCS.
- ❖ Develop custom Application Page with Client Side Object Model.

- ❖ Using RESTful and OData.
- ❖ Develop SharePoint Apps for different environments.

Pre-requisite / Target Audience:

Fundamentals Module – Basic knowledge of using Windows and MS-Office products.

Designer and Branding Module – HTML and CSS

Administration Module – Though we cover from ground up, basic knowledge of networking will be added advantage.

Developer Module – Basic knowledge of C# and ASP.NET is mandatory.

Module 1:- General Introduction

In this module, we will talk about brief introduction to IIS, hosting a site in IIS. What is Pool, worker process and Appdomain. We also learn about HTTP life cycle and more about application security like HTTPS and SSL Certificate, and how to create certificate and add to respective application, how to create groups and users in active directory

- ❖ What is IIS
- ❖ IIS WebSite and WebApplication
- ❖ Steps to Create Multiple Websites on Port 80
- ❖ What is Application pool
- ❖ What is ISAPI Filter/Application
- ❖ Web Garden and WebFarm
- ❖ HTTPS and SSL
- ❖ Active Directory and Users Creation

Module 2:- Introduction to SharePoint

In this module, we will cover most important points about SharePoint and its features, and we will discuss briefly about six pillars of SharePoint, actually how does it works in real time environments. We also see about roles and different version of sharepoint.

- ❖ What is SharePoint?
- ❖ Role of SharePoint in LAN
- ❖ High level Features
- ❖ Six Pillars of SharePoint

- ❖ SharePoint 2016 Benefits
- ❖ Roles in SharePoint
- ❖ Version History of SharePoint
- ❖ SharePoint Editions

Module 3:- SharePoint Installation and Administration

In this module, we will talk installation of SharePoint , what are the pre-requisite for installing SharePoint.

- ❖ Server Hardware and SoftwareRequirements
- ❖ Supported Browser on Client
- ❖ Types of Installation
- ❖ Softwares's to be Installed

Module 4:- SharePoint Site Hierarchy

This module describes, how can we create webapplication, site collection and customization of homepage and creating sites and subsites. Create quota and how to use quota on application, create template and use it for different applications.

- ❖ Creating WebApplication
- ❖ Creating SiteCollection and TopLevel Site
- ❖ SharePoint Site HomePage
- ❖ Branding Look and Feel
- ❖ Working with Quota Templates
- ❖ Creating Sites and SubSites
- ❖ Save Site as Template and Creation Site Using Template

Module 5:- Lists

This module deals with complete about Lists, means creating list and adding custom columns to list

- ❖ Introduction to Lists
- ❖ Creating Custom Lists
- ❖ Adding Custom Columns
- ❖ Alert Me Option

- ❖ Sort and Filter List
- ❖ Create /Manage List View
- ❖ SiteColumn
- ❖ Content Type
- ❖ List Template
- ❖ MetaData Navigation Settings and List Throttling

Module 6:- Predefined Lists and Libraries

In this module, we will discuss about what are the predefined Lists and Libraries, how to add one or more files to library, and how to add/edit/delete document and giving permissions to view or edit the document, check in and check out of the documents, we will also cover how can we manage document and save it as template, we can use metadata to populate in sharepoint columns and we set icon on document. Most important point is mapping our library to network driver from there we can directly access our files/documents.

- ❖ Predefined Lists
- ❖ Predefined Libraries
- ❖ Create Document Library
- ❖ Add one or more files to a document Library
- ❖ Adding Custom Columns to the Library
- ❖ Add/Edit/Delete Document properties
- ❖ Enabling Approval
- ❖ Versioning Documents
- ❖ Check Out, Edit and Check in Files
- ❖ Managing Document Template
- ❖ Editing Document Template
- ❖ Use Word to Populate Metadata in SharePoint Columns
- ❖ To set Icon for new Document types
- ❖ Mapping Library to Network Drive
- ❖ Document Workspace
- ❖ Information Policy

Module 7:- SharePoint Designer 2013

In this module, we look at designing part, thus how we can create our own design and integrate to sharepoint site.

- ❖ Introduction to SharePoint Designer 2013
- ❖ Creating and Opening Site in SPD 2013
- ❖ Creating/ Customizing Lists and Libraries
- ❖ Ghosted and Unghosted pages
- ❖ Understanding MasterPages

Module 8:- Branding SharePoint Sites

We will cover, how can we brand our SharePoint team sites and public sites, we can create masterpages and access it to different applications, an creating one custom theme and use it on different sites.

Interaction with JavaScript on SharePoint pages.

- ❖ Branding site Team Sites
- ❖ Branding SharePoint Publishing sites
- ❖ Custom MasterPages and Layout Pages
- ❖ Creating Custom Theme
- ❖ Creating and using a Design Package
- ❖ Using Device Channels
- ❖ Adding Interaction SharePoint Pages by using JavaScript

Module 9:- Security -User Groups and Permissions

In this module, we discuss about giving permissions by creating and giving permission at groups and users level in active directory, especially for managing permission for subsite and editing list and libraries, how can we manage accounts

- ❖ Authentication Vs Authorization
- ❖ Creating users and Groups in Active Directory
- ❖ SharePoint Groups
- ❖ Creating Custom Permission Groups
- ❖ Creating Custom Permission level
- ❖ To bind User/Groups and Permission Level

- ❖ Managing Permissions in Subsite
- ❖ Permissions for Lists Libraries or List Item
- ❖ To set Site Confirmation and Deletion of Unused Sites
- ❖ Managed Accounts
- ❖ Allow users to Create their Own Sites
- ❖ Additional Security Features

Module 10:- Claim bases Authentication

In this module, we will cover about claim based authentication working and authentication for accessing sql server, and Creating WebApplication using CBA and how to enable form based authentication, and creating zones and how to use it mapping.

- ❖ How does claim based Authentication Works
- ❖ Creating SQL Server Database for Authentication using Membership and Role Provider
- ❖ Creating WebApplication using CBA
- ❖ Allowing anonymous access in a WebApplication
- ❖ Enable Forms based Authentication
- ❖ Editing Web.Config of WebApplication, Central Admin Application and STS
- ❖ Zones in SharePoint
- ❖ Creating Alternate Access mapping.

Module 11:- Understanding Service Applications

In this module, we will cover about service applications, thus what is service application and what are the benefits of service application using on sites. We also cover service application life cycle.

- ❖ What is ServiceApplication ?
- ❖ Benefits of Service Application
- ❖ ServiceApplication Life Cycle
- ❖ Installing ServiceApplications and associating with WebApplications
- ❖ List of Service Applications

Module 12:- Enterprise Content Management

In this module, we will talk about ECM and various ECM content types.

- ❖ Introduction to ECM
- ❖ Provisioning Managed Metadata Service Application
- ❖ Termstore Management Tool
- ❖ Enterprise Content Types
- ❖ Document Sets
- ❖ Document Id Service
- ❖ Content organizer
- ❖ Documents and Records Managements

Module 13:- User Profile Service Administration

We will discuss about social computing, how to use profile service application and how can we manage user profiles on sites. What is activity feed job and how to use them on working sites. How to create and configuring communities on sharepoint sites.

- ❖ What is Social Computing?
- ❖ Managing User Profiles
- ❖ User Profile service Application
- ❖ Synchronization Service
- ❖ Working with My Site
- ❖ Activity Feed Job
- ❖ Following settings Creating and Configuring Communities
- ❖ Working with Audience

Module 14:- Administering and Configuring Search

In this module, we will discuss about search solution and what is the purpose of enterprise search solution and more brief about MS server side products. What are all the new features in 2016 and configuring crawler settings, queries and result setting. Creating search administration at site level to search for data, and creating keywords and etc for better provisioning .

- ❖ Purpose of Enterprise Search Solution
- ❖ Microsoft Server Side Search products
- ❖ What's new in SharePoint Search Server 2016
- ❖ Logical architecture for Enterprise Search Components

- ❖ Setting up Search service Application
- ❖ Configuring Crawler Settings
- ❖ Queries and result Settings
- ❖ Search Administration at SiteCollection level
- ❖ Creating KeyWords, Definitions, Best Bets and Synonyms
- ❖ Creating Search Scopes

Module 15:- PowerShell

In this module, we will talk about Powershell commands, and writing scripts in windows powershell, sharepoint powershell snapin on managing sites, creating and managing webapplication and sitecollection and site using powershell scripts windows.

- Overview of Powershell
- Pipelining of Command lets
- Windows Powershell Scripts
- Using .Net objects
- SharePoint Powershell Snapin
- Creating/Managing a WebApplication
- Creating/Managing SiteCollection and Site

Module 16:- Backup and Restore

In this module, we will talk about how to take backup and restore of webapplication and granular backup of site collection, and how to export and importing of lists.

- ❖ Complete Backup of WebApplication
- ❖ Complete Restore of WebApplication
- ❖ Granular backup of SiteCollection
- ❖ Exporting and Importing of Lists

Module 17:- Server Object Model

We will discuss about server object model in detail and various server objects. How to work with list and document libraries, and some sample examples on object model.

- ❖ Site Architecture and Server object Model

- ❖ SPWebApplication, SPSite, SPWeb, SPList and more
- ❖ Working with List
- ❖ Working with Document Libraries
- ❖ Sample Programs to understand the Object Model

Module 18:- Camal and Linq Queries

In this module we will talk detail explanation about CAMAL and Linq Queries.

- ❖ CAML Overview
- ❖ Querying Lists using CAML
- ❖ Querying Joined Lists using CAML
- ❖ Linq to SharePoint Overview
- ❖ Using SPMetal Tool
- ❖ Querying Lists using Linq
- ❖ Querying based on lookup Column
- ❖ Querying Joined Lists using LINQ

Model 19:- Features

This module explains about features part of sharepoint 2016, how can we access sharepoint root directory, and creating new feature and deploying and manage sharepoint solution using powershell commands.

- ❖ SharePoint Root Directory
- ❖ Features Overview
- ❖ Features Scope
- ❖ Creating a new Feature and Deploying using V.S 2012
- ❖ Feature Events
- ❖ Managing SharePoint Solution using Powershell Commands

Module 20:- CAMAL

In this module, we will discuss about creating sitecolumns , custom actions and site definition using CAMAL, and how can we modify the UI using custom actions.

- ❖ Creating lists SiteColumns, CustomActions and SiteDefinition

- ❖ Modify the UserInterface using the Custom Actions
- ❖ Creating the Site Definition

Module 21:- Types of Pages in SharePoint

This model describes about various types of pages in sharepoint indetail.

- ❖ Site Pages
- ❖ Application pages
- ❖ Master Pages

Module 22:- Event Receivers

This modules gives us knowledge on Event functionalities in sharepoint and how to handle event handlers and receiver,and registering and sample examples on before events and after events.

- ❖ Event Handlers-Before Events and After Events
- ❖ Event Receiver Base Classes
- ❖ Registering Event Handlers
- ❖ Example of Before Events
- ❖ Programming After Events

Module 23:- Working with WebParts

In this module, we will discuss about creating webparts and adding to sites, and different types of webparts in sharepoint. We can talk about more about content rollup and different filters and forms, media and content and search, social collaboration in sharepoint.

- ❖ Content Rollup
- ❖ Filters
- ❖ Forms
- ❖ Media and Content
- ❖ Search
- ❖ Social Collaboration
- ❖ Bulding a Simple WebPart
- ❖ Persisting Properties
- ❖ Editing properties in Editor WebPart

- ❖ Developing Custom EditorWebPart
- ❖ Composite WebPart
- ❖ Visual WebPart
- ❖ Web Part Communication

Module 24:- Sandboxed Solutions

In this module, we will discuss about sandboxed solution and benefits of it. We can compare solution with web farm solution and how to enable sandboxed solution through central admin. How to create sandboxed solution and deploy on site, and few windows powershell for admin.

- ❖ What is Sandboxed Solution?
- ❖ Comparing Farm Solution with Sandbox Solution
- ❖ Benefits of using Sandbox Solution
- ❖ To enable sandboxed solutions by using Central Admin
- ❖ Create a Sandbox Solutions Project with a WebPart
- ❖ Build and Deploy the Sandboxed Solution
- ❖ Using Windows Powershell for Administration Sandbox Solutions

Module 25: - Business Connectivity Service

This module describes everything business connectivity service

- ❖ Creating a BDC Project in Visual Studio
- ❖ Working with Entities and Methods
- ❖ Type Descriptor
- ❖ Using Data in External List
- ❖ Granting Permissions to the BDC List

Module 26:- Workflow

In this module, we will learn about workflow and built in workflows features in sharepoint 2016. We can create workflow using Visio and designer 2016. We can build workflow using visual studio and deploy.

- ❖ What is Workflow?
- ❖ Built-in SharePoint 2016 WorkFlows
- ❖ Workflow Manager

- ❖ Building Custom Workflow using Visio 2016 and SharePoint Designer 2016
- ❖ Site Workflow
- ❖ Publishing and Deploying Workflow
- ❖ Building Custom Workflow using Visual Studio 2016

Module 27:- Client Object Model

In this module, we can learn about complete Client Object Model.

- ❖ How Client Object Model Works?
- ❖ Managed Client Object Model and Design
- ❖ Understanding Load and Execute Query Methods of Client Context
- ❖ Adding List and List Items
- ❖ Querying List data using Camal
- ❖ Performing Crud Operations over List
- ❖ Querying Large Lists
- ❖ JavaScript Client Object Model
- ❖ Overview
- ❖ Performing Async Operations using SP.Client Context object
- ❖ Fetching Lists Properties
- ❖ Crud over Lists

Module 28:- Rest API and OData Standard

This module explains what are the roles and Odata in sharepoint in detail and explains about rest service architecture in sharepoint and few examples of it.

- ❖ Role of rest and OData in SharePoint
- ❖ SharePoint Rest Service Architecture
- ❖ Rest End Points using OData queries to Select Filter and Sort
- ❖ Example to Create, Update and Delete Lists
- ❖ Example to Add, Edit and Delete Items in the List

Module 29:- Apps for SharePoint 2016

In this module, we will discuss about APPS

- ❖ Overview
- ❖ Apps Hosting Options
- ❖ Configuring an Environment for apps for SharePoint
- ❖ Manage the App Catalog in SharePoint 2016
- ❖ Using office 365 and NAPA tool for Development
- ❖ Deploying SharePoint SharePoint Hosted App using VS 2012
- ❖ Developing Custom Action
- ❖ Developing Client WebPart
- ❖ Using Rest API
- ❖ Deploying Provider hosted App
- ❖ Deploying Auto Hosted App

Module 30:- InfoPath

In this module, we will discuss about InfoPath in detail.

- ❖ About InfoPath
- ❖ Creating SharePoint List and Publishing Sharepoint SharePoint Site
- ❖ Creating Form and Publishing to SharePoint Site
- ❖ Deploy Form Templates that Contain form Code that requires full trust
- ❖ Writing Custom Code in InfoPath form
- ❖ Walkthrough to Delete SharePoint List Items from InfoPath form
- ❖ Convert Word forms to InfoPath
- ❖ Convert Excel Documents to InfoPath

Module 31:- InfoPath Digital Signature

This module will explain digital signature on InfoPath.

- ❖ Publish an InfoPath form to forms Server and digitally sign it
- ❖ Enable Sections in an InfoPath form to accept digital Signatures
- ❖ Digitally sign an InfoPath Form and Submit using email

Module 32:- InfoPath External Data

In this module, we will talk about infopath external data and more info about external data.

- ❖ Retrieve data from SharePoint Lists and your databases into InfoPath forms
- ❖ InfoPath Validation Formatting
- ❖ Template Part – Email field with Built in Validation
- ❖ Enhance InfoPath form with Validation ,Formatting and Lookups

Module 33:- **New Features in SharePoint 2016**

- ❖ Fast Site Creation
- ❖ Feature Activation
- ❖ Navigation
- ❖ Hybrid Feature
- ❖ Document Library Support
- ❖ Office 365
- ❖ Security Improvements
- ❖ User Improvements

Real-time Project involving most of the above concepts with following will be provided

- ❖ Product Abstract Document
- ❖ Requirement Specification Document
- ❖ **Step-by-Step procedure for building the project from ground up**
- ❖ Complete Source Code
- ❖ Database Script with Sample data
- ❖ Instructions to Setup the Project on a Development box
- ❖ Instruction to Deploy the project on Production Box / Microsoft Azure

At the end of the course participants will be able to

1. Build and Maintain an Effective SharePoint Site
2. Work with SharePoint Document Libraries
3. Customize SharePoint to Fit Your Team's Needs
4. Automate Routine Office Tasks by Using SharePoint Workflows
5. Build Simple Interfaces to Facilitate Finding Data Quickly and much, much more