

Index

SL	Course Type	Course Name	Page No.
1	Part A : Soft & Communication Skill	Computer Fundamental; Graphics Design; SEO; English Communication; Android Mobile Operation / Maintenance	2-5
2	Part B : Core Skill	Web Design & Development	6
3		Mobile Apps Development with vendor certification (Java SE8 Programmer, Andorid-401)	12
4		Web Application Development with Zend certification	23
5		Graphics Design & Multimedia	28
6		Network & Server Administration with vendor certification (CCNA, Redhat)	31
7		Programming in C# (70-483)	38
8		A+ (Core Hardware and Operating System Essentials)	41
9		SQL Server Administrator 2012	43
10		Business Process Outsourcing (BPO)	45
11		E-Commerce Professional Training	47
12	Part-C : Advance Skill	Prince2 Foundation	49
13		Oracle Forms Developer 11g	50
14		Oracle DBA 11g	51
15		Oracle Application Express (Appex)	52

Part : A (Soft & Communication Skill)

Topic : Computer Fundamental

Duration : 30 Hours

Module 1: Introduction to Computer

- Concepts of Computer Fundamentals: Concepts of Computer, Identify & Connect Computer Components
- Memory and Storage: What is memory? What is storage? Introduction and functions of memory and storage devices
- Input Devices: What is Input in computer? Introduction and Functions of input devices.
- Output Devices: What is output in computer? Introduction and Functions of output devices.

Module 2: Get Introduced to Windows Operating System

- Setting up Desktop Environment: Windows desktop application Set up, Displaying desktop icons, Adding desktop gadgets
- File and Folder Management: Creating new files, folders, Assigning file names, Selecting files and folders, Copying (and moving) files and folders, Deleting files and folders, Renaming files and folders, Searching for files

Module 3: MS Word 2010

- Editing a Document: Insert, Delete, or Rearrange Text, Undo Changes, Search and Replace Text
- Formatting Text: Change Font Appearance, Highlight Text
- Formatting Paragraphs: Set Tabs to Align Text, Control Paragraph Layout, Create Lists, Check Spelling, Grammar
- Adding Tables: Create a Table, Modify the Table Structure
- Controlling Page Appearance: Control Page Layout, Add Headers and Footers, Create and modify index
- Bangla Typing: Avro installation and typing, Bijoy installation and typing

Module 4: MS Excel 2010

- Getting Started: Starting Excel, Understanding the Display Screen, Working with the Ribbon, Exploring the Office Menu/Ribbon, Opening a Workbook, Managing Open Workbooks
- Entering Data: Moving the Cell Pointer, Selecting a Range of Cells, Creating a New Workbook, Entering Constant Values, Saving a Workbook, Editing Cell Contents, Clearing Cell Contents, Working with Undo and Redo, Closing a Workbook
- Using Formulas: Entering Formulas, Using the SUM Function, Summing Columns or Rows Automatically
- Modifying Columns and Rows: Inserting and Deleting Columns or Rows, Hiding Columns or Rows, Using Find and Replace

Module 5: Internet and E-Mail

- Internet and Network: Simple network and web overview (LAN, WAN, MAN, IP, www, URL, Internetetc), Internet browsing, Use of search engines (eg. Google, bing, amazon)
- E-Mail Communication: Introduction and creating E- mail Address, Operating e-mail (email open, check inbox, check spam, write email, save and send, file attachment, download file from received mail and save in computer, email print, sent item), Reply to a mail, Delete email, Email Security

Module 6: Troubleshooting

- Computer Cleaning: Disk clean up, Old and temporary files clean
- Computer Threats (General discussion): Virus, Antivirus

Topic : Graphics Design

Duration : 60 Hours

Fundamentals

Situation related Presentation, Making Website using PowerPoint.

Photoshop

Creating Cartoon Character by using Photoshop, Matt Design, Facebook cover photo resize, Landscape Design, Image Retouch, Clipping all Alphabets (a to z), Image Adjustment, Create Five Paper Ad Design, Image Manipulation, Login Page and Icon Design, Hair Masking using, Alpha Channel, Animated Web Ad Design, Text Effects and Image Effects, Paper Ad Design, Web Template Design, Web UI Design, Project on Photoshop.

Illustrator

Cartoon Shape Design by using vector graphics, Logo Design, Film Real and Sketch in illustration, Creating Ice-cream Shape, Magazine Page with Photo, Custom Brush and Blending Options, 3D Shape Design, Business Card, Letterhead, Envelop Design, Leaflet, Brochure, Paper Ad and Calendar Design, Product Packaging Design, Project on Illustrator.

Flash

Object or Cartoon Drawing, Animated Ad / Banner / Cartoon, Interactive Website.

Outsourcing Techniques

Introducing Online market place and knowing about contest related outsourcing, Bid Related Outsourcing, Service Related outsourcing, Odesk / Elance Special.

Topic : Search Engine Optimization (SEO)

Duration : 48 hours

1. Discussion on Introduction to Search Engine& Search Engine Optimization (SEO):
Familiar with Internet, What is search engine and functionality?, Basic Searching Techniques, What is Search Engine Optimization (SEO)?, Why does my website need SEO?, Why can't the search engines figure out my site without SEO?, Can I do SEO for myself?, Order of SEO
2. Making your blog site:
Blogger platform will be used: Things to know before making a blog (Your Target Audience, Planning, Maintenance, Networking, Branding, Sales Lead) How to make a blog using blogger.com, Keyword Research & Analysis using tools, Identifying and building your initial keyword list, SEO Friendly Domain Selection Process, Website planning & Site Structure
3. (Practical + Theory Session) On-Page Optimization:
Title: Optimize Keywords in Title Tag, Meta Description: Meta Tag Checker, Optimize Keywords in Description Meta Tag, Meta Keywords, H1-H3 Tags, Optimize Keywords in Heading Tags, Image ALT tag: Should use "Image & Video Meta Data Tag" (Optimize Image ALT tag & Video), Internal Links, URL Structure (Search Engine friendly URL optimization, Optimize Keywords in URL)
4. Off-Page Optimization:
Directory submission, Social Bookmarking, Social Networking Sites, Guest Posting, Forum Posting, Blog Comment Posting, Article Submission, Search Engine Submission, Sitemap Submission, The concept of Dofollow/ Nofollow Backlinks, Yahoo Answers, Link Wheel, Web 2.0, Tiered link building process, Video Promotion, and other form of backlink process effective now a days.
5. Keyword Research:
Keyword Research and Selection, Optimize Keywords in Anchor Text, Optimize Your Keyword Density, Keyword Density calculation formula and checking tool, Text Modifiers to

Emphasize Your Keywords, Discussion on LSI Keywords, Keyword Research Tips & Ideas, Using Google Insights for Search and Google Trends for Keyword Research

6. Content Optimization:
Setting up optimized Blog Post Title, Word limit for an optimized Blog Post?, Content Siloing, Reducing Bounce Rate of Your Blog
7. Tools, Add-On's & Extensions:
Discussion on different SEO Tools, Backlink checker tools, techniques and counts, Checking the Backlink of a site/link, StatCounter& other web analysis tools, SEO Power Suite (Rank Tracker, Link Assistant, SEO Spy Glass, Web Site Auditor)
8. Social Media Optimization:
Facebook: Creating a facebook group and Fan Page to increase Branding and Exposure, Google+: Creating a Google group and Page to increase Branding and Exposure, Twitter: Increasing Twitter followers and getting retweets, LinkedIn: LinkedIn profile building and content sharing, Pinterest: Building a new system of promotion and marketing, Go to Meeting & Webinar
9. Backlink age, authority, popularity: Discussion on Backlinks, Backlink age, Backlink authority, Backlink popularity, How to get high quality backlinks
10. Search Engine Ranking Factors: Different SE Ranking factors will be discussed in more details.
11. Search Engine Update and recovery tips (including latest updates) as example Google Panda & Penguin)
12. Search Engine Webmaster Central (Ex.- Google): Webmaster tools setup for SE
13. Search Engine Web Analytics (Google): Web Analytics Code Install, Testing, and Optimization
14. Knowledge of cross cultural legal aspect of SEO (Local & International aspect)
15. Case Study
16. Open Discussion on SEO and related projects in Online Freelance Marketplaces like Odesk, Freelancer and Elance.com. Some micro freelance marketplaces will also be shown for extra working opportunities.
17. Open SEO Discussion

Topic : English Communication

Duration : 30 hours

English Voice and Accent , Assertive Communication , Business Communication, Business Etiquette, Business Writing , Conversation skill , Creativity and Problem Solving, Customer Service, Delegation skills, Emotional Intelligent, Influencing skill, Information Skill, Interviewing Skill, Leadership Skill, Negotiation Skill, Planning and Prioritization, Sales, Team Building, Telephone Etiquette, Time and Stress management, Time Management, etc.

Topic : Mobile Operation/Maintenance

Duration : 16 hours)

Various apps installation with uses, email operation, internet connectivity, data/file transfer, photo edit, etc

Part : B (Core Skill)

Course Name : Web Design & Development

Duration : 210 hours

The Web Design Specialist course (formerly titled Design Methodology and Technology) teaches you how to design and publish Web sites. General topics include Web Site Development Essentials (such as the site development process, customer expectations, and ethical and legal issues in Web development), Web Design Elements (such as aesthetics, the site user's experience, navigation, usability and accessibility), Basic Web Technologies (such as basic Hypertext Markup Language [HTML], Extensible HTML [XHTML] and extended technologies, image files, GUI site development applications, site publishing and maintenance) and Advanced Web Technologies (such as multimedia and plug-in technologies, client-side and server-side technologies, and Web databases).

In this course, you will work with popular production tools such as Microsoft Expression Web, and Adobe Dreamweaver and Flash. You will study design and development technologies such as Cascading Style Sheets (CSS), Extensible Markup Language (XML), JavaScript, Java applets, Dynamic HTML, plug-ins, multimedia and databases. You will also explore the extensibility of design tools, incompatibility issues surrounding these tools, and the functionality of current Web browsers.

Outline

Overview of Web Design Concepts: Web Technology, The Nature of the Web, Web Design Concepts, New Technologies, Evaluating Your XHTML Skills

Web Development Teams

Web Teams and Tasks

Web Project Management

Web Project Collaboration

You're Web Design Portfolio

You're Web Design Business

Web Project Management Fundamentals

Web Project Management Phases

Project Documentation and Communication

Web Site Development Process

Bottom-Up Approach to Web Development

Understanding the Business Process

Defining a Web Site Vision From, Vision to Strategy Web Site Specifications

Web Page Layout and Elements

Web Users and Site Design

Effective Web Page Layout

Branding and the Web

Color and Web Design

Fonts and Web Design

Web Site Usability and Accessibility

Audience Usability and Accessibility

Defining Usability

Web Site Usability Testing

Web Page Accessibility

Browsers

Browsers and Navigation Browsers and Design

Considerations

Browser Adoption
Major, Minor and Alternative Browsers
Creating Aliases with TinyURL Utilizing CAPTCHA

Navigation Concepts
Why Is Navigation Critical?
Primary and Secondary Navigation
Navigation Hierarchy
Site Structure, URLs and FileNames
Familiar Navigation Conventions
Guided Navigation
Navigation Action Plan

Web Graphics
Web Site Images
Digital Imaging Concepts Raster vs. Vector Graphics Graphics Applications Image File Formats
Creating and Optimizing Images Essential Graphic Design Concepts

Multimedia and the Web
Multimedia and Web Sites
Current Multimedia Capabilities
Animation and the Web
Audio and the Web
Video and the Web
Goals of a Multimedia Site
Multimedia Site Design Basics
User Interaction
Selecting Multimedia Elements

Ethical and Legal Issues in Web Development
Ethics and Law in Web
Development
Ethical Issues and the Web
Legal Issues and the Web

HTML and the Evolution of Markup
Function of Markup Languages SGML: A Short History
What Is HTML? HTML Goals
The HTML Standard
HTML 1.0 and 2.0
HTML 3.0 and 3.2
HTML 4.0 and 4.01
Separating Format from Structure in HTML
Extensible HTML (XHTML) Reference Sites for Web Developers

XML and XHTML
What Is XML? XML Goals
What Is an XML Document? Rules for Well-Formed XML HTML Transition to XML What Is XHTML?
Applying a Single Standard Consistently

Web Page Structure — Tables and Framesets
Creating Structure with X/HTML Tables
Diagramming a Basic X/HTML Table

Borderless Web Page Structure X/HTML Frames and Framesets The X/HTML <frameset> Tag
The X/HTML <frame> Tag Targeting Hyperlinks in X/HTML The X/HTML <noframes> Tag

Cascading Style Sheets

Style Sheets Cascading Style Sheets

Defining and Using Styles Changeable Style Attributes Style Guides

Changes from CSS1 to CSS2 Page Layout with CSS

The CSS Box Model

Document Flow and Positioning CSS Positioning Schemes

Site Content and Metadata

Written Web Site Content Internet Marketing and Search

Engine Optimization (SEO) Metadata

The <meta> Tag and Document Identification

The <meta> Tag and Search Engines

The <meta> Tag and Delayed File Change

Site Development with Microsoft Expression Web 3 — Introduction

The Transition from FrontPage Microsoft Expression Web 3 Expression Web Views Expression
Web Menus and

Toolbars

Opening Web Sites and Files in Expression Web

Developing W3C-Compliant Code with Expression Web

Site Development with Expression Web 3 — Basic Features

Page Layout Options in Expression Web

Creating a New Web Site Using Expression Web

Page Layout with CSS

Inserting Images with Expression Web

Creating Hyperlinks with Expression Web

Creating Image Maps with Expression Web

Creating Navigation Bars Using CSS

Expression Web's Dynamic Web Templates

Pasting Formatted Text with Expression Web

Pasting X/HTML content with Expression Web

Site Development with Expression Web 3 — Advanced Features

Expression Web Styles

Adding Interactivity to Web Pages Creating Web Forms with

Expression Web Connecting to Databases Expression Web Reports

Options for Replacing Old Webbots

Site Development with Adobe Dreamweaver CS5 — Introduction

Adobe Dreamweaver CS5 Dreamweaver Layout Options

Site Development with Dreamweaver CS5 — Basic Features

Page Layout in Dreamweaver Creating Image Maps in Dreamweaver

Creating Templates in Dreamweaver

Importing Content in Dreamweaver

Site Development with Dreamweaver CS5 — Advanced Features

Rollover Images in Dreamweaver

Dreamweaver Web Forms

Dreamweaver Behavior.

Creating Web Pages Using Open-Source Tools

Open-Source GUI Editors

GUI HTML Editors vs. Text Editors Open-Source Text Editors Creating a Static Web Page Using Templates

Checking Spelling

Image Editing with Adobe Fireworks CS5

Adobe Fireworks CS5

Creating an Image Document in Fireworks

Adding Text to Images in Fireworks Cropping Images in Fireworks Image Layers in Fireworks

Image States in Fireworks Transparent Images in Fireworks Image Slices in Fireworks

Multimedia with Adobe Flash Professional CS5

The History of Flash Flash Technology Features Developing with Flash Flash Shapes

Color and Fills in Flash

Multimedia with Flash Professional CS5 — Timeline, Layers, Symbols and Buttons

Flash Timeline

Flash Layers

Saving and Publishing Flash Movies Flash Symbols

Flash Buttons

Customizing the Flash Library

Multimedia with Flash Professional CS5 — Tweens

Flash Tweens

Motion Tweens in Flash

Shape Tweens in Flash

Tweening Text in Flash

Multimedia with Flash Professional CS5 — Movie Clips

Flash Movie Clips

Adding Sound to Flash Files Adding Flash Movies to X/HTMLFiles

Testing for the Flash Player Plug-In

Multimedia with Flash Professional CS5 —

ActionScript, Masks and Practical Uses

Flash ActionScript Mask Layers in Flash

Using SWF and SVG Files on the Web

Flash and Accessibility

JavaScript and DHTML Fundamentals

Why Script?

JavaScript and Common Programming Concepts

What Is JavaScript? JavaScript vs. Other Languages Embedding JavaScript into X/HTML

Using JavaScript to Communicate with the User

JavaScript Functions

Using JavaScript for Browser Detection

Dynamic HTML (DHTML)

Plug-Ins and Java Applets

Plug-In Technology

Plug-In Installation

Adobe Shockwave and Flash Players

Adobe Reader Real Networks RealPlayer.

HTTP Server & Web Application

Database
Website publication & Maintenance
Web Development Course Outline

PHP web Application Development with MySQL Database (Using Larabel)

- PHP Basics
 - How to install PHP/Apache
 - PHP language
 - Basic syntax,
 - control and loops,
 - types,
 - functions,
- MySQL/Maria DB installation
- Introduction to SQL syntax,
 - Selecting, updating and deleting SQL data,
- PHP Web application overview
 - HTML/CSS,
 - Dynamic Web pages with PHP,
- Connecting PHP & MySQL
 - Database connections strings,
 - Retrieving result sets from MySQL,
- Build a web application
 - Error handling,
 - Advanced PHP
 - Regular expressions,
 - Date & time stamps,
 - Arrays
 - Testing & debugging,
 - Image handling & manipulation,
 - Display and update database tables,
 - Storing binary data in a MySQL database,
 - Authentication & authorisation,
 - User session management and cookies,
 - Application security,

Course Name : Mobile Apps Development

Duration : 140 hours

Required Training: Java, Android Application Development, UX/UI Design

Course Title: Java

Duration: 80 hours

Vendor Certification Exam: After completion of the course students can attend from Oracle Certified Professional Java SE 8 programmer. Students have to join two exams in Java SE-8.

Course Outline

What Is a Java Program?

- Introduction to Computer Programs
- Key Features of the Java Language
- The Java Technology and Development Environment
- Running/testing a Java program

Creating a Java Main Class

- Java Classes
- The main Method

Data In the Cart

- Introducing variables
- Working with Strings
- Working with numbers
- Manipulating numeric data

Managing Multiple Items

- Working with Conditions
- Working with a List of Items
- Processing a list of items

Describing Objects and Classes

- Working with objects and classes
- Defining fields and methods
- Declaring, Instantiating, and Initializing Objects
- Working with Object References
- Doing more with Arrays
- Introducing the NetBeans IDE
- Introducing the Soccer League Use Case

Manipulating and Formatting the Data in Your Program

- Using the String Class
- Using the Java API Docs
- Using the StringBuilder Class
- More about primitive data types
- The remaining numeric operators
- Promoting and casting variables

Creating and Using Methods

- Using methods
- Method arguments and return values
- Static methods and variables
- How Arguments are Passed to a Method
- Overloading a method

Using Encapsulation

- Access Control
- Encapsulation
- Overloading constructors

More on Conditionals

- Relational and conditional operators
- More ways to use if/else constructs
- Using Switch Statements
- Using the NetBeans Debugger

More on Arrays and Loops

- Working with Dates
- Parsing the args Array
- Two-dimensional Arrays
- Alternate Looping Constructs
- Nesting Loops
- The ArrayList class

Using Inheritance

- Overview of inheritance
- Working with subclasses and superclasses
- Overriding methods in the superclass
- Introducing polymorphism
- Creating and extending abstract classes

Using Interfaces

- Polymorphism in the JDK foundation classes
- Using Interfaces
- Using the List Interface
- Introducing Lambda expressions

Handling Exceptions

- Handling Exceptions: An overview
- Propagation of exceptions
- Catching and throwing exceptions
- Handling multiple exceptions and errors

Java Platform Overview

- Defining how the Java language achieves platform independence
- Differentiating between the Java ME, Java SE, and Java EE Platforms
- Evaluating Java libraries, middle-ware, and database options
- Defining how the Java language continues to evolve

Java Syntax and Class Review

- Creating simple Java classes
- Creating primitive variables
- Using operators
- Creating and manipulate strings
- Using if-else and switch statements
- Iterating with loops: while,do-while,for,enhanced for
- Creating arrays
- Using Java fields, constructors, and methods

Encapsulation and Subclassing

- Using encapsulation in Java class design
- Modeling business problems using Java classes
- Making classes immutable
- Creating and use Java subclasses
- Overloading methods

Overriding Methods, Polymorphism, and Static Classes

- Using access levels: private, protected, default, and public.
- Overriding methods
- Using virtual method invocation
- Using varargs to specify variable arguments
- Using the instanceof operator to compare object types
- Using upward and downward casts
- Modeling business problems by using the static keyword
- Implementing the singleton design pattern

Abstract and Nested Classes

- Designing general-purpose base classes by using abstract classes
- Constructing abstract Java classes and subclasses
- Applying final keyword in Java
- Distinguish between top-level and nested classes

Interfaces and Lambda Expressions

- Defining a Java interface
- Choosing between interface inheritance and class inheritance
- Extending an interface
- Defaulting methods
- Anonymous inner classes
- Defining a Lambda Expression

Collections and Generics

- Creating a custom generic class
- Using the type inference diamond to create an object
- Creating a collection by using generics
- Implementing an ArrayList
- Implementing a TreeSet
- Implementing a HashMap
- Implementing a Deque
- Ordering collections

Collections Streams, and Filters

- Describing the Builder pattern
- Iterating through a collection using lambda syntax
- Describing the Stream interface
- Filtering a collection using lambda expressions
- Calling an existing method using a method reference
- Chaining multiple methods together
- Defining pipelines in terms of lambdas and collections

Lambda Built-in Functional Interfaces

- Listing the built-in interfaces included in java.util.function
- Core interfaces - Predicate, Consumer, Function, Supplier
- Using primitive versions of base interfaces
- Using binary versions of base interfaces

Lambda Operations

- Extracting data from an object using map
- Describing the types of stream operations
- Describing the Optional class
- Describing lazy processing
- Sorting a stream
- Saving results to a collection using the collect method
- Grouping and partition data using the Collectors class

Exceptions and Assertions

- Defining the purpose of Java exceptions
- Using the try and throw statements
- Using the catch, multi-catch, and finally clauses
- Autoclose resources with a try-with-resources statement
- Recognizing common exception classes and categories
- Creating custom exceptions
- Testing invariants by using assertions

Java Date/Time API

- Creating and manage date-based events
- Creating and manage time-based events
- Combining date and time into a single object
- Working with dates and times across time zones

- Managing changes resulting from daylight savings
- Defining and create timestamps, periods and durations
- Applying formatting to local and zoned dates and times

I/O Fundamentals

- Describing the basics of input and output in Java
- Read and write data from the console
- Using streams to read and write files
- Writing and read objects using serialization

File I/O (NIO.2)

- Using the Path interface to operate on file and directory paths
- Using the Files class to check, delete, copy, or move a file or directory
- Using Stream API with NIO2

Concurrency

- Describing operating system task scheduling
- Creating worker threads using Runnable and Callable
- Using an ExecutorService to concurrently execute tasks
- Identifying potential threading problems
- Using synchronized and concurrent atomic to manage atomicity
- Using monitor locks to control the order of thread execution
- Using the java.util.concurrent collections

The Fork-Join Framework

- Parallelism
- The need for Fork-Join
- Work stealing
- RecursiveTask
- RecursiveTask

Parallel Streams

- Reviewing the key characteristics of streams
- Describing how to make a stream pipeline execute in parallel
- List the key assumptions needed to use a parallel pipeline
- Defining reduction
- Describing why reduction requires an associative function
- Calculating a value using reduce
- Describing the process for decomposing and then merging work
- Listing the key performance considerations for parallel streams

Database Applications with JDBC

- Defining the layout of the JDBC API
- Connecting to a database by using a JDBC driver
- Submitting queries and get results from the database
- Specifying JDBC driver information externally
- Performing CRUD operations using the JDBC API

Localization

- Describing the advantages of localizing an application
- Defining what a locale represents
- Read and set the locale by using the Locale object
- Building a resource bundle for each locale
- Calling a resource bundle from an application
- Changing the locale for a resource bundle

Topic: Android Application Development (60 Hours)

Prerequisite: Students should have depth knowledge of Java programming

Vendor Certification Exam: After completion of the course students can attend for Android Certified Application Developer, Exam Code AND- 401

Course Outline:

Lesson 1: Android Framework and Android Studio

- Introduction
- AndroidSoftwareLayers
- AndroidLibraries
- ComponentsofanAndroidApplication
- ApplicationLife-cycle
- Pre-requisitesforAndroidApplication development
- AndroidStudio
- Gradle
- Lab1:CreatingYourFirstApplication

Lesson 2: Android SDK Tools and Activity Class

- AndroidProjectStructure
- TheAndroidManifestFile
- StructureoftheManifestFile
- Android SDKTools
- Activity
- MethodstoRemember
- Lab-2Controlling a Camera'sFlash Light

Lesson 3: Fragments, Views, and List View

- Introduction
- Fragments
- Views
- ListViewandListActivity
- Methodstoremember
- CreatingaSimpleTo-DoListApplication

Lesson 4: Intents and Intent filters

- Introduction
- Intents
- NativeAndroidActions
- DataTransfer
- IntenttoCallActivities
- Registeran IntentFilter
- Methodstoremember
- Lab 4: Creating Contacts SelectionApplication

Lesson 5: Android Layouts and Custom Views

- Introduction
- Views
- Layouts
- CustomizedViews
- ModifyExistingViews
- Lab 5: Custom View, Drawer Layout, and Fragments Application

Lesson 6: Android Resources, Themes, and Material Design

- Introduction
- AndroidResources
- AndroidThemesandStyles
- AndroidMaterial Design
- Methodstoremember
- Lab6:ATo-DoList ApplicationinMaterialDesign

Lesson 7: Android UI-Dialogs, Menus, and Web View

- Introduction
- UserInteractionthroughMessages
- Dialogs
- Activitieswith DialogTheme
- Toasts
- Menus
- Context Menus
- Additional MenuItemOptions
- Popup Menus
- WebView
- MethodstoRemember
- Lab7:WallpaperApplication

Lesson 8: Android Storage and Background Processing

- AndroidStorageOptions
- File I/O
- SharedPreferences
- Connectingtotheinternet
- Background Processing
- Lab 8: Quotes Provider Application

Lesson 9: Android Storage: SQLite and Content Providers

- Introduction
- DatabasesinAndroid
- ContentProviders
- NativeAndroidContentProviders
- CustomContentProvider
- SyncAdapters
- MethodstoRemember
- Lab9:SQLiteDatabasesand Content provider

Lesson 10: Android Notifications

- Introduction
- Creating a notification
- Notification actions
- Expandable Notifications
- Notifications Layouts
- Notification Priority
- Notifications in Android 5.0(Lollipop)

Course Title: UX/UI Design (24 hours)

Course outline

- Introduction to overview
- Introduction To User Interface
- UI Design Process
- Design Document
- About Objects And Classes
- Creating and Saving Levels
- How To Load Scenes and Quit
- Psychology and Human Factors for User Interface Design
- Importing Previous Number's Fun Script
- Finishing Number's Fun UI
- UI Animation (Optional)
- Transitioning - Definition to Design
- Ideation
- Visualization
- Storyboarding essentials
- Prioritization
- Maintaining good tension
- Conflict management
- Documentation
- Design Principles
- Visual design
- Unity and variety
- Focal point
- Economy of elements
- Balance and proportion
- Interaction
- Association and affordance
- Economy of motion
- Responsive design
- Psychology
- The effects of good UXD design
- Flow and Interaction
- Guiding principles
- UXD Principles
- What is UXD?
- Designing for multi-device environments
- What you need to master
- What are you trying to communicate?
- Why is user experience important?
- The UXD Ecosystem
- Identify the project parameters
- Brand presence
- Marketing campaign
- Content source
- Responsive considerations
- Proposal preparation

- Creating the proposal
- Title page
- Executive summary
- Project outline and approach
- Assumptions
- Deliverables
- Project scoping
- Legal considerations
- Pricing and payment structures
- Statements of work
- Project approach
- Project objectives
- UXD process
- Waterfall / Agile / Modified approaches
- Business objectives
- Status quo analysis
- Heuristic analysis
- Stakeholder input
- Roles and responsibilities
- Consolidating outcomes
- User Research
- Research basics
- User group definitions
- Research techniques
- Contextual inquiry
- Research analysis
- Content Strategy
- Personas
- Advanced personas
- The empathy map
- When, where, who, what, why and how of UXD
- Tips on content

Course Name : Web Application Development

Duration : 160 hours

Introduction:

In this course, you will learn HTML5, CSS, Bootstrap, JavaScript, PHP, MySQL, SEO, Wordpress and Advanced level PHP (OOP) with Code Igniter framework and how to execute scripts on your server. You will also learn advanced level CSS, Database Normalization & Relation of Database. After attending the course, you can develop project using PHP framework Code Igniter with MySQL.

How participants will benefit after the course:

After attending this course, participants will be able to develop professional dynamic website using PHP framework Code Igniter, design database with proper documentation.

Course Highlights:

- Complete package on web development
- Advanced CSS, JavaScript, Bootstrap

- PHP framework along with documentation process
- Client Side & Server Side Validation
- CI Framework Reporting
- File upload & Email
- Using PHP and MySQL create a Blog as a project
- PHP framework Code Igniter Project
- Wordpress

Hypertext Markup Language (HTML) (24 hours)

HTML Review and Basics

HTML Elements, HTML Attributes, HTML Headings, HTML Paragraphs, HTML Hyper links, HTML Table, Table & Data Alignment Options, Table Cell Spacing & Padding, Changing Table Height & Width of Table Elements, Links, Anchor Tag, HTML Lists & Blocks, HTML Forms & Media

HTML Advanced

HTML Form, Form Overview, Marquee Tag, HTML Iframes, Create Interactive Button, List Background Using Images, Make menu Button Using HTML code & Image, HTML bdo tag, HTML span tag

CSS (21 hours)

CSS Review and Basics the Inheritance

Introduction to CSS, External Style Sheet, Internal Style Sheet, Inline Style, Multiple Style Sheet, CSS Syntax, CSS Id & Class, CSS Selectors, CSS1 vs CSS2 vs CSS3, The Cascade & Styling, The letter-spacing Property, The word-spacing Property, Text Align Property, Line Height Property, Background-URL, Background-Position, Background-Repeat, Specificity & Validating your CSS

Building Layout with CSS

CSS Box Model, 2 & 3 Column Layout, CSS Border, Outline, Margin & Padding

CSS Advanced

CSS Floating & Positioning, CSS Dimension & Display, CSS Align, Pseudo-class, Pseudo-element & Navigation Bar, CSS Image Gallery, Opacity, Sprites & Media Types

Creative Artwork with CSS3

CSS3 Round Corners, CSS3 Font-face, CSS3 Transparency and Semi-transparency, CSS3 Box Shadow & Text Shadow, CSS3 Transitions, Transform & Gradient, Grouping/Nesting, Dimension, Display, Positioning, Floating, Align, Pseudo-class, Pseudo-element, Navigation Bar, Image Gallery, Image Opacity, Image Sprites, Media Types, Attributes Selectors,

Bootstrap (12 hours)

Introduction, Setting Up Bootstrap, The Grid System, Responsive Helpers, Site Structure, The Home Page, The Blog Page, The Clients Page, The Contact Page, Customizing Bootstrap

Basic & Advanced JavaScript & JQuery (18 hours)

- Introduction, How to use JavaScript, Output/Why use, Statements, Comments, Variables, Data Types, Objects, Function
- Operators:
- Arithmetic, Assignment, Comparison, Logical, Conditional
- Conditional Statements:
if, if...else, if...else if...else, switch
- Loops:
for, for/in, while, do while, break
- Error
- Validation

Angular JS (15 hours)

Basics

Conceptual overview, Angular Philosophy, Architecture, MVC, Dependency Injection, Models, Controllers, Scope and Templates

Templating

ng-repeat, filters, Built in Directives, Custom directives , Data Binding, Two way binding and Layout Templates

Server-side (optional, depending on your current back end)

NodeJS

Testing

Protractor (Optional Jasmine or QUnit)

Animation

ngAnimate module, CSS3 Transitions and Optional CSS3 keyframe animation

PHP and MySql (30 Hours)

➤ Introduction of PHP Installation

- What is Dynamic Website?
- What kind language of PHP?
- Introduction of PHP
- Installation
 - (1) Apache, (2) PHP, (3) MySql
 - OR
 - XAMPP Installation

➤ PHP Programming Basics

- Syntax of PHP
- Embedding PHP in HTML & HTML in PHP
- Introduction to PHP Variable
- Using PHP Variables
- Understanding Data Types
- Using Operators
- Writing Statements and Comments
- Using Conditional Statements
- If(), else if() and else if condition Statement
- Switch() Statements
- Using the while() Loop, do() Loop and for() Loop

➤ PHP Functions

- PHP Functions
- Creating an Array
- Modifying Array Elements
- Processing Arrays with Loops
- Grouping Form Selections with Arrays
- Using Array Functions
- Using Predefined PHP Functions
- Creating User-Defined Functions

➤ PHP Advanced Concepts

- Reading and Writing Files
- Reading Data from a File
- Writing Data to a File
- Testing File Attributes.
- Managing Sessions and Using Session Variables
- Creating a Session and Registering Session Variables
- Destroying a Session

- Storing Data in Cookies
- Setting Cookies
- Retrieving Cookie Data
- Dealing with Dates and Times

MySQL Database (12 hours)

- Introduction to Database
 - Understanding a Relational Database (RDBMS)
 - Introduction to MySQL Database
 - Understanding Tables, Records, and Fields
 - Understanding Primary and Foreign Keys
 - Understanding SQL and SQL Queries
 - Understanding Database Normalization
 - Using the MySQL Command-Line Client
- Working with MySQL Database & Tables
 - Creating MySQL Databases
 - Creating Tables
 - Specifying Field Data Types
 - Selecting the Most Appropriate Data Type
 - Adding Field Modifiers and Keys
 - Selecting a Table Type
 - Altering Table and Field Names
 - Altering Field Properties
 - Adding and Removing Fields and Keys
 - Altering Table Types
 - Backing Up and Restoring Databases and Tables
 - Backing Up Databases and Tables
 - Restoring Databases and Tables from Backup
 - Dropping Databases and Tables
 - Viewing Database, Table, and Field Information
 - Using PhpMyAdmin Tool
- SQL and Performing Queries
 - Inserting Records
 - Editing and Deleting Records
 - Performing Queries
 - Retrieving Specific Columns
 - Filtering Records with a WHERE Clause
 - Using Operators
 - Sorting Records and Eliminating Duplicates
 - Limiting Results
 - Using Built-In Functions
 - Grouping Records
 - Joining Tables
 - Using Subqueries
 - Using Table and Column Aliases
- Working with PHP & MySQL – Project
 - Managing Database Connections
 - Performing Queries
 - Processing Result Sets
 - Queries Which Return Data
 - Queries That Alter Data
 - Handling Errors

- Project Discussion
- Requirements analysis of Project

Project code Execution& testing

Wordpress (27 hours)

- Introduction and Wordpress Installations
- Themes Installation
- Plugin Installation
- Creating Wordpress Content
- Wordpress Additional Types of Content
- Controlling Wordpress Blog
- Using WordPress as a Content Management System
- Customizing Wordpress Appearance
- Getting More Performance from WordPress
- Exploring the Anatomy of a Theme
- Customizing Wordpress Themes
- Using and Developing Plugins
- Maintaining Your Wordpress Website
- SEO Plugin Installation & Manage
- Content Sharing on Social Sites.

Course Name : Graphics Design & Multimedia

Duration : 300 hours

Sl.No	S u b j e c t s	T o p i c s	Software/Device/P. Language
1	Computer Basics	<ul style="list-style-type: none"> ❖ O p e r a t i n g S y s t e m ❖ Word Processing. ❖ Presentation. ❖ Internet with Social Media and Mail Com 	Windows and Internet
2	Digital Graphics	<ul style="list-style-type: none"> ❖ Basic concept of Digital Graphic ❖ To know the tool palette. ❖ Working with Basic Selections. ❖ Digital Art. ❖ Getting started with Layers. ❖ Working with Multiple Images, Rulers, an ❖ Adjusting Color with the New Adjustment ❖ Image manipulation. ❖ Photoshop Splatter / dispersion photo man ❖ Photo Retouching. ❖ Introduction to color correction. ❖ Creating & Working with different types c ❖ Using quick Mask Mode. ❖ Working with the Pen tool. ❖ Creating special effects. ❖ Advanced Photo Filter. ❖ Use & Customize Filter Gallery. 	Adobe Photoshop
3	Digital Drawing	<ul style="list-style-type: none"> ❖ Primary Concept of Digital Drawin ❖ Drawing with the Key tool. ❖ Working with Shapes and Objects. ❖ Drawing and Transforming Objects. 	Adobe Illustrator

		<ul style="list-style-type: none"> ❖ Drawing and Painting. ❖ Working with Color. ❖ Gradients, Pattern Fills, and Blends. ❖ Points and Paths. ❖ Branding and Product Design. ❖ Illustrator Effects. ❖ Symbols. ❖ Illustration. 	
4	2D Animation	<ul style="list-style-type: none"> ❖ Animation Fundamentals ❖ Animation Principles. ❖ Using the Primitive Tools. ❖ Drawing with Pen, Pencil and Line Tools. ❖ Working with Graphics. ❖ Creating and Editing Symbols. ❖ Character Design. ❖ Timeline Basics. ❖ Getting Started with Motion Presets. ❖ Creation a Motion Tween. ❖ Animation Layout. ❖ Advanced 2D Animation. ❖ Using Sound & Video. ❖ Overview of Flash Publish Settings. 	Adobe Flash Professional
5	Programming with Flash using ActionScript 3.0	<ul style="list-style-type: none"> ❖ Introducing Programming with Scripting Language & Introduction to Action Script ❖ Variables. ❖ Data Types. ❖ If else and nested if else. ❖ Loop(for and while). ❖ Function (Without Argument and With Argument) ❖ Class and Object. ❖ OOP. ❖ Stop () Action. ❖ Events. ❖ KeyBoard Event. ❖ MouseEvent. ❖ HitObject. ❖ SWF files Load and UnLoad. 	ActionScript 3.0
6	3D Model Design & Animation	<ul style="list-style-type: none"> ❖ Setting the Project Folder ❖ Basic Modeling Techniques. ❖ Modeling from 2D Objects ❖ Use Geometry & Shape. ❖ Character & Product Design ❖ Command Panel use. ❖ Introduction to Materials. ❖ Mapping Coordinates and Scale. ❖ Specialization Elective 3D (Modeling and Animation) ❖ Animation Layout ❖ Animation& Render. 	3 D S M a x
7	Video Editing	<ul style="list-style-type: none"> ❖ Video Editing Basics ❖ Import media into Premiere Pro &Organize ❖ Using Timeline for Video and Audio track ❖ Create sequences and nested sequences. 	Adobe Premiere Pro

		<ul style="list-style-type: none"> ❖ Create and work with keyframes. ❖ Use the color-correction tools. ❖ Stop Motion Animation. ❖ Effects & Transitions. ❖ Add text, shapes, and logos to your project. ❖ Rendering. 	
8	Sound Editing	<ul style="list-style-type: none"> ❖ Importing & Recording Audio. ❖ Audio Editing. ❖ Audio Restoration & Noise reduction. ❖ Music and Sound Effects. ❖ Waveform & Multitrack Editors. ❖ Working with Loops and Markers. ❖ Separate background music & vocal. ❖ Output Formats. 	Adobe Audition
9	Visual Effects	<ul style="list-style-type: none"> ❖ The basics of creating projects, compositions, and layers. ❖ Importing footage, including video, audio, and images. ❖ Compositing and Visual effects. ❖ Creating animation for shapes, objects, and text. ❖ Motion Graphics. ❖ Adding and animating text. ❖ Drawing & Animating shapes. ❖ Environmental Simulation/Effect Simulation. ❖ Creating and using masks and track mattes. ❖ Working in 3D. ❖ Advanced Production Tools and Techniques. 	Adobe After Effects
10	Page makeup for Publishing	<ul style="list-style-type: none"> ❖ Creating and Viewing Documents. ❖ Understanding Your Workspace. ❖ Working with Type & Graphics. ❖ Formatting Objects. ❖ Working with Color. ❖ Managing and Transforming Objects. ❖ Character and Paragraph Formatting. ❖ Points and Paths. ❖ Using Styles. ❖ Tables. ❖ Packaging and Printing. 	Adobe In-Design/ QuarkXPress
11	Photography	<ul style="list-style-type: none"> ❖ Camera Controls. ❖ Photography Fundamentals. ❖ Exposure, Black and White Conversion, Image Enhancement. ❖ Composition tips, and Shooting at Night. ❖ Photography and Contemporary Art. ❖ Still Photography. 	Digital Camera
12	Videography and Film Making	<ul style="list-style-type: none"> ❖ The basic understanding of operation of a video Camera. ❖ The basic principles of how to capture video. ❖ Brief history of Film Making. ❖ Plot/Script writing. ❖ Shot Division. ❖ Dialog writing. ❖ Music. ❖ Shooting. ❖ Editing. 	Practical with Digital Camera

1 3	Art of Communication	Different forms of communication 1. Poster, leaflet, advertisement, social media 2. Seminar with target group. 3. Art of Presentation. a) Pronunciation. b) Appropriate terminology. c) Gesture of delivery. 4. Mannerism with the contact people	
-----	----------------------	--	--

Course Name : Network & Server Administration (CCNA, Redhat) (180 hours)

Course Title : Cisco Certified Network Associate (CCNA)

Duration : 72 hours

Course Outline

1.0 Network Fundamentals

1.1 Compare and contrast OSI and TCP/IP models

1.2 Compare and contrast TCP and UDP protocols

1.3 Describe the impact of infrastructure components in an enterprise network

1.3. a Firewalls

1.3. b Access points

1.3. c Wireless controllers

1.4 Describe the effects of cloud resources on enterprise network architecture

1.4.a Traffic path to internal and external cloud services

1.4.b Virtual services

1.4.c Basic virtual network infrastructure

1.5 Compare and contrast collapsed core and three-tier architectures

1.6 Compare and contrast network topologies

1.6.a Star

1.6.b Mesh

1.6.c Hybrid

1.7 Select the appropriate cabling type based on implementation requirements

1.8 Apply troubleshooting methodologies to resolve problems

1.8.a Perform and document fault isolation

1.8.b Resolve or escalate

1.8.c Verify and monitor resolution

1.9 Configure, verify, and troubleshoot IPv4 addressing and subnetting

1.10 Compare and contrast IPv4 address types

1.10.a Unicast

1.10.b Broadcast

1.10.c Multicast

1.11 Describe the need for private IPv4 addressing

1.12 Identify the appropriate IPv6 addressing scheme to satisfy addressing requirements in a LAN/WAN environment

1.13 Configure, verify, and troubleshoot IPv6 addressing

1.14 Configure and verify IPv6 Stateless Address Auto Configuration

1.15 Compare and contrast IPv6 address types

1.15.a Global unicast

1.15.b Unique local

1.15.c Link local

1.15.d Multicast

- 1.15.e Modified EUI 64
- 1.15.f Autoconfiguration
- 1.15.g Anycast

2.0 LAN Switching Technologies

- 2.1 Describe and verify switching concepts
 - 2.1.a MAC learning and aging
 - 2.1.b Frame switching
 - 2.1.c Frame flooding
 - 2.1.d MAC address table
- 2.2 Interpret Ethernet frame format
- 2.3 Troubleshoot interface and cable issues (collisions, errors, duplex, and speed)
- 2.4 Configure, verify, and troubleshoot VLANs (normal/extended range) spanning multiple switches
 - 2.4.a Access ports (data and voice)
 - 2.4.b Default VLAN
- 2.5 Configure, verify, and troubleshoot interswitch connectivity
 - 2.5.a Trunk ports
 - 2.5.b Add and remove VLANs on a trunk
 - 2.5.c DTP, VTP (v1&v2), and 802.1Q
 - 2.5.d Native VLAN
- 2.6 Configure, verify, and troubleshoot STP protocols
 - 2.6.a STP mode (PVST+ and RPVST+)
 - 2.6.b STP root bridge selection
- 2.7 Configure, verify and troubleshoot STP related optional features
 - 2.7.a PortFast
 - 2.7.b BPDU guard
- 2.8 Configure and verify Layer 2 protocols
 - 2.8.a Cisco Discovery Protocol
 - 2.8.b LLDP
- 2.9 Configure, verify, and troubleshoot (Layer 2/Layer 3) EtherChannel
 - 2.9.a Static
 - 2.9.b PAGP
 - 2.9.c LACP
- 2.10 Describe the benefits of switch stacking and chassis aggregation

3.0 Routing Technologies

- 3.1 Describe the routing concepts
 - 3.1.a Packet handling along the path through a network
 - 3.1.b Forwarding decision based on route lookup
 - 3.1.c Frame rewrite
- 3.2 Interpret the components of a routing table
 - 3.2.a Prefix
 - 3.2.b Network mask
 - 3.2.c Next hop
 - 3.2.d Routing protocol code
 - 3.2.e Administrative distance
 - 3.2.f Metric
 - 3.2.g Gateway of last resort
- 3.3 Describe how a routing table is populated by different routing information sources
 - 3.3.a Admin distance

- 3.4 Configure, verify, and troubleshoot inter-VLAN routing
 - 3.4.a Router on a stick
 - 3.4.b SVI
- 3.5 Compare and contrast static routing and dynamic routing
- 3.6 Compare and contrast distance vector and link state routing protocols
- 3.7 Compare and contrast interior and exterior routing protocols
- 3.8 Configure, verify, and troubleshoot IPv4 and IPv6 static routing
 - 3.8.a Default route
 - 3.8.b Network route
 - 3.8.c Host route
 - 3.8.d Floating static
- 3.9 Configure, verify, and troubleshoot single area and multi-area OSPFv2 for IPv4 (excluding authentication, filtering, manual summarization, redistribution, stub, virtual-link, and LSAs)
- 3.10 Configure, verify, and troubleshoot single area and multi-area OSPFv3 for IPv6 (excluding authentication, filtering, manual summarization, redistribution, stub, virtual-link, and LSAs)
- 3.11 Configure, verify, and troubleshoot EIGRP for IPv4 (excluding authentication, filtering, manual summarization, redistribution, stub)
- 3.12 Configure, verify, and troubleshoot EIGRP for IPv6 (excluding authentication, filtering, manual summarization, redistribution, stub)
- 3.13 Configure, verify, and troubleshoot RIPv2 for IPv4 (excluding authentication, filtering, manual summarization, redistribution)
- 3.14 Troubleshoot basic Layer 3 end-to-end connectivity issues

4.0 WAN Technologies

- 4.1 Configure and verify PPP and MLPPP on WAN interfaces using local authentication
- 4.2 Configure, verify, and troubleshoot PPPoE client-side interfaces using local authentication
- 4.3 Configure, verify, and troubleshoot GRE tunnel connectivity
- 4.4 Describe WAN topology options
 - 4.4.a Point-to-point
 - 4.4.b Hub and spoke
 - 4.4.c Full mesh
 - 4.4.d Single vs dual-homed
- 4.5 Describe WAN access connectivity options
 - 4.5.a MPLS
 - 4.5.b Metro Ethernet
 - 4.5.c Broadband PPPoE
 - 4.5.d Internet VPN (DMVPN, site-to-site VPN, client VPN)
- 4.6 Configure and verify single-homed branch connectivity using eBGP IPv4 (limited to peering and route advertisement using Network command only)
- 4.7 Describe basic QoS concepts
 - 4.7.a Marking
 - 4.7.b Device trust
 - 4.7.c Prioritization
 - 4.7.c. (i) Voice
 - 4.7.c. (ii) Video
 - 4.7.c. (iii) Data
 - 4.7.d Shaping
 - 4.7.e Policing
 - 4.7.f Congestion management

5.0 Infrastructure Services

- 5.1 Describe DNS lookup operation
- 5.2 Troubleshoot client connectivity issues involving DNS
- 5.3 Configure and verify DHCP on a router (excluding static reservations)
 - 5.3.a Server
 - 5.3.b Relay
 - 5.3.c Client
 - 5.3.d TFTP, DNS, and gateway options
- 5.4 Troubleshoot client- and router-based DHCP connectivity issues
- 5.5 Configure, verify, and troubleshoot basic HSRP
 - 5.5.a Priority
 - 5.5.b Preemption
 - 5.5.c Version
- 5.6 Configure, verify, and troubleshoot inside source NAT
 - 5.6.a Static
 - 5.6.b Pool
 - 5.6.c PAT
- 5.7 Configure and verify NTP operating in a client/server mode

6.0 Infrastructure Security

- 6.1 Configure, verify, and troubleshoot port security
 - 6.1.a Static
 - 6.1.b Dynamic
 - 6.1.c Sticky
 - 6.1.d Max MAC addresses
 - 6.1.e Violation actions
 - 6.1.f Err-disable recovery
- 6.2 Describe common access layer threat mitigation techniques
 - 6.2.a 802.1x
 - 6.2.b DHCP snooping
 - 6.2.c Nondefault native VLAN
- 6.3 Configure, verify, and troubleshoot IPv4 and IPv6 access list for traffic filtering
 - 6.3.a Standard
 - 6.3.b Extended
 - 6.3.c Named
- 6.4 Verify ACLs using the APIC-EM Path Trace ACL Analysis tool
- 6.5 Configure, verify, and troubleshoot basic device hardening
 - 6.5.a Local authentication
 - 6.5.b Secure password
 - 6.5.c Access to device
 - 6.5.c. (i) Source address
 - 6.5.c. (ii) Telnet/SSH
 - 6.5.d Login banner
- 6.6 Describe device security using AAA with TACACS+ and RADIUS

7.0 Infrastructure Management

- 7.1 Configure and verify device-monitoring protocols
 - 7.1.a SNMPv2
 - 7.1.b SNMPv3
 - 7.1.c Syslog
- 7.2 Troubleshoot network connectivity issues using ICMP echo-based IP SLA
- 7.3 Configure and verify device management

- 7.3.a Backup and restore device configuration
- 7.3.b Using Cisco Discovery Protocol or LLDP for device discovery
- 7.3.c Licensing
- 7.3.d Logging
- 7.3.e Timezone
- 7.3.f Loopback
- 7.4 Configure and verify initial device configuration
- 7.5 Perform device maintenance
 - 7.5.a Cisco IOS upgrades and recovery (SCP, FTP, TFTP, and MD5 verify)
 - 7.5.b Password recovery and configuration register
 - 7.5.c File system management
- 7.6 Use Cisco IOS tools to troubleshoot and resolve problems
 - 7.6.a Ping and traceroute with extended option
 - 7.6.b Terminal monitor
 - 7.6.c Log events
 - 7.6.d Local SPAN
- 7.7 Describe network programmability in enterprise network architecture
 - 7.7.a Function of a controller
 - 7.7.b Separation of control plane and data plane
 - 7.7.c Northbound and southbound APIs

Course Title : Redhat Linux

Duration : 108 Hours

Course Outline:

Red Hat System Administration-I:

- Unit 1 - Access the command line
- Unit 2 - Manage files from the command line
- Unit 3 - Getting help in Red Hat Enterprise Linux
- Unit 4 - Create, view, and edit text files
- Unit 5 - Manage local Linux users and groups
- Unit 6 - Control access to files with Linux file system permissions
- Unit 7 - Monitor and manage Linux processes
- Unit 8 - Control services and daemons
- Unit 9 - Configure and secure OpenSSH service
- Unit 10 - Analyze and store logs
- Unit 11 - Manage Red Hat Enterprise Linux networking
- Unit 12 - Archive and copy files between systems
- Unit 13 - Install and update software packages
- Unit 14 - Access Linux file systems
- Unit 15 - Use virtualized systems
- Unit 16 - Comprehensive review

Red Hat System Administration-II:

- Unit 1 - Automate installation with Kickstart
- Unit 2 - Use regular expressions with grep
- Unit 3 - Create and Edit text files with vim
- Unit 4 - Schedule future Linux tasks
- Unit 5 - Manage priority of Linux processes
- Unit 6 - Control access to files with access control lists (ACL)
- Unit 7 - Manage SELinux security
- Unit 8 - Connect to network-defined users and groups
- Unit 9 - Add disks, partitions, and file systems to a Linux system

Unit 10 - Manage logical volume management (LVM) storage
Unit 11 - Access networked attached storage with network file system (NFS)
Unit 12 - Access networked storage with SMB
Unit 13 - Control and troubleshoot the Red Hat Enterprise Linux boot process Limit network communication with firewall
Unit 14-Comprehensive review

Red Hat System Administration-III:

Unit 1 - Control services and daemons
Unit 2 - Manage IPv6 networking
Unit 3 - Configure link aggregation and bridging
Unit 4 - Control network port security
Unit 5 - Manage DNS for servers
Unit 6 - Configure email delivery
Unit 7 - Provide block-based storage
Unit 8 - Provide file-based storage
Unit 9 - Configure MariaDB databases
Unit 10 - Provide Apache HTTPD web service
Unit 11 - Write Bash scripts
Unit 12 - Bash conditionals and control structures
Unit 13 - Configure the shell environment
Unit 14 - Linux containers preview
Unit 15 - Comprehensive review

Course Name : Programming in C# (70-483)

Duration : 72 Hours

About this course

This training course teaches developers the programming skills that are required for developers to create Windows applications using the C# language. During their five days in the classroom students review the basics of C# program structure, language syntax, and implementation details, and then consolidate their knowledge throughout the week as they build an application that incorporates several features of the .NET Framework 4.5.

At course completion

After completing this course, students will be able to:

- Describe the core syntax and features of C#.
- Create and call methods, catch and handle exceptions, and describe the monitoring requirements of large-scale applications.
- Implement the basic structure and essential elements of a typical desktop application.
- Create classes, define and implement interfaces, and create and use generic collections.
- Use inheritance to create a class hierarchy, extend a .NET Framework class, and create generic classes and methods.
- Read and write data by using file input/output and streams, and serialize and deserialize data in different formats.
- Create and use an entity data model for accessing a database and use LINQ to query and update data.
- Use the types in the System.Net namespace and WCF Data Services to access and query remote data.
- Build a graphical user interface by using XAML.
- Improve the throughput and response time of applications by using tasks and asynchronous operations.

- Integrate unmanaged libraries and dynamic components into a C# application.
- Examine the metadata of types by using reflection, create and use custom attributes, generate code at runtime, and manage assembly versions.
- Encrypt and decrypt data by using symmetric and asymmetric encryption.

Course Outline

Module 1: Review of C# Syntax

This module reviews the core syntax and features of the C# programming language. It also provides an introduction to the Visual Studio 2012 debugger. Lessons

- Overview of Writing Applications using C#
- Datatypes, Operators, and Expressions
- C# Programming Language Constructs

Module 2: Creating Methods, Handling Exceptions, and Monitoring Applications

This module explains how to create and call methods, catch and handle exceptions. This module also describes the monitoring requirements of large-scale applications. Lessons

- Creating and Invoking Methods
- Creating Overloaded Methods and Using Optional and Output Parameters
- Handling Exceptions
- Monitoring Applications

Module 3: Developing the Code for a Graphical Application

This module describes how to implement the basic structure and essential elements of a typical desktop application, including using structures and enumerations, collections, and events. Lessons

- Implementing Structs and Enums
- Organizing Data into Collections
- Handling Events

Module 4: Creating Classes and Implementing Type-safe Collections

This module explains how to create classes, define and implement interfaces, and create and use generic collections. This module also describes the differences between value types and reference types in C#. Lessons

- Creating Classes
- Defining and Implementing Interfaces
- Implementing Type-safe Collections

Module 5: Creating a Class Hierarchy by Using Inheritance

This module explains how to use inheritance to create a class hierarchy and extend a .NET Framework class. This module also describes how to create generic classes and define extension methods. Lessons

- Creating Class Hierarchies
- Extending .NET Framework Classes
- Creating Generic Types

Module 6: Reading and Writing Local Data

This module explains how to read and write data by using file input/output (I/O) and streams, and how to serialize and deserialize data in different formats. Lessons

- Reading and Writing Files
- Serializing and Deserializing Data
- Performing I/O Using Streams

Module 7: Accessing a Database

This module explains how to create and use an entity data model for accessing a database, and how to use LINQ to query and update data. Lessons

- Creating and Using Entity Data Models
- Querying Data by Using LINQ
- Updating Data by Using LINQ

Module 8: Accessing Remote Data

This module explains how to use the types in the System.Net namespace, and WCF Data Services, to query and modify remote data. Lessons

- Accessing Data Across the Web
- Accessing Data in the Cloud

Module 9: Designing the User Interface for a Graphical Application

This module explains how to build and style a graphical user interface by using XAML. This module also describes how to display data in a user interface by using data binding. Lessons

- Using XAML to Design a User Interface
- Binding Controls to Data
- Styling a User Interface

Module 10: Improving Application Performance and Responsiveness

This module explains how to improve the throughput and response time of applications by using tasks and asynchronous operations. Lessons

- Implementing Multitasking by using Tasks and Lambda Expressions
- Performing Operations Asynchronously
- Synchronizing Concurrent Access to Data

Module 11: Integrating with Unmanaged Code

This module explains how to integrate unmanaged libraries and dynamic components into a C# application. This module also describes how to control the lifetime of unmanaged resources. Lessons

- Creating and Using Dynamic Objects
- Managing the Lifetime of Objects and Controlling Unmanaged Resources

Module 12: Creating Reusable Types and Assemblies

This module explains how to examine the metadata of types by using reflection, create and use custom attributes, generate managed code at runtime, and manage different versions of assemblies. Lessons

- Examining Object Metadata
- Creating and Using Custom Attributes
- Generating Managed Code
- Versioning, Signing and Deploying Assemblies

Module 13: Encrypting and Decrypting Data

This module explains how to encrypt and decrypt data by using symmetric and asymmetric encryption. Lessons

- Implementing Symmetric Encryption
- Implementing Asymmetric Encryption

Course Name : A+ (Core Hardware and Operating System Essentials)

Duration : 50 Hours

Course Description:

A+ Certification is designed to give the students a solid foundation & working knowledge in two key areas: computer hardware (including peripherals & subsystems) & disk operating systems SDOS, Windows 95/98 & Windows 2000 Professional) as set forth and required by CompTIA (Computing Technology Industry Association). Students will learn in theory & implementation the fundamentals necessary to pass the Core Hardware Service Technician exam and the Operating System Technologies exam. Students will also be introduced to the fundamentals of local area networking and internetworking concepts & technologies.

Who Should Attend?

The target student is anyone with basic computer user skills who is interested in obtaining a job as an IT professional or PC technician. Possible job environments include mobile or corporate settings with a high level of face-to face client interaction, remote-based work

environments where client interaction, client training, operating systems, and connectivity issues are emphasized, or settings with limited customer interaction where hardware activities are emphasized. In addition, this course will help prepare students to achieve a CompTIA A+ Certification.

Benefits of Attendance:

Upon completion of this course, students will be able to:

- ☐ Identify the components of standard desktop personal computers.
- ☐ Identify fundamental components and functions of personal computer operating systems.
- ☐ Identify best practices followed by professional personal computer technicians.
- ☐ Install and configure computer components.
- ☐ Install and configure system components.
- ☐ Maintain and troubleshoot peripheral components.
- ☐ Troubleshoot system components.
- ☐ Install and configure operating systems.
- ☐ Maintain and troubleshoot installations of Microsoft Windows.
- ☐ Identify network technologies
- ☐ Install and manage network connections.
- ☐ Support laptops and portable computing devices.
- ☐ Support printers and scanners.
- ☐ Identify personal computer security concepts.
- ☐ Support personal computer security

Storage Devices, Power Supplies and Adapters.

- ☐ Understanding Display Devices.
- ☐ Understanding Laptops and Portable Devices.
- ☐ Installing and Configuring Printers.
- ☐ Operating System Features and Interfaces.
- ☐ Installing and Configuring Operating Systems.
- ☐ Troubleshooting Theory and Preventing Maintenance.
- ☐ Troubleshooting Operating Systems, Hardware, Printers and Laptops.
- ☐ Understanding Operational Procedure.
- ☐ Installing, Maintaining and Troubleshooting Hardware.
- ☐ Installing, Configuring and Troubleshooting Laptops.
- ☐ Resolving Printer Problems.
- ☐ Operating System Structures and Commands.
- ☐ Operating System utilities and Troubleshooting Issues.
- ☐ System Security

Course Name : SQL Server Administrator 2012

Duration : 160 Hours

About this Course:

Earning the Microsoft Certified Solutions Associate (MCSA): Windows Server 2012 certification, confirms that you have core Windows Server 2012 skills, those are relevant across multiple solution areas. This foundational certification validates your ability to work with Windows Server 2012 in a real-world business context.

Course Objectives

- ☐ Administer a Windows Server 2012 Infrastructure in an enterprise environment
- ☐ Implement and configure Windows Server 2012 core services, such as Active Directory and the networking services
- ☐ Administration tasks necessary to maintain a Windows Server 2012 infrastructure, including user and group management, network access, and data security

- ☐ Advanced configuration tasks necessary to deploy, manage, and maintain a Windows Server 2012 infrastructure, including fault tolerance, certificate services, and identity federation
- ☐ Key topics and concepts addressed on the MCSA: Windows Server 2012 exams

Audience Profile

- ☐ IT professionals with at least two years of hands-on experience implementing and administering network and desktop operating systems
- ☐ Systems engineers, network engineers, systems analysts, network analysts, and technical consultants who want to prepare for their MCSA: Windows Server 2012 credential in an accelerated format
- ☐ MCSAs on Windows Server 2008

Module Summary of this course:

- ☐ 70-687: Windows 8 Configuring.
- ☐ 70-410: Installing and Configuring Windows Server 2012
- ☐ 70-411: Administering Windows Server 2012
- ☐ 70-412: Configuring Advanced Windows Server 2012 Services.

Course Outline

Module Name: 70-410: Installing and Configuring Windows Server 2012

- ☐ Deploying and Managing Windows Server 2012
- ☐ Introduction to Active Directory Domain Services
- ☐ Managing Active Directory Domain Services Objects
- ☐ Automating Active Directory Domain Services Administration

Implementing IPv4

Implementing Dynamic Host Configuration Protocol

- ☐ Implementing Domain Name System
- ☐ Implementing IPv6
- ☐ Implementing Local Storage
- ☐ Implementing File and Print Services
- ☐ Implementing Group Policy
- ☐ Securing Windows Servers Using Group Policy

Objects

- ☐ Implementing Server Virtualization with Hyper-V

Module-2: 70-411: Administering Windows Server 2012

- ☐ Deploying and Maintaining Server Images
- ☐ Configuring and Troubleshooting Domain Name System

- ☐ Maintaining Active Directory Domain Services
- ☐ Managing User and Service Accounts
- ☐ Implementing a Group Policy Infrastructure
- ☐ Managing User Desktops with Group Policy
- ☐ Configuring and Troubleshooting Remote Access
- ☐ Installing, Configuring, and Troubleshooting the

Network Policy Server Role

- ☐ Implementing Network Access Protection
- ☐ Optimizing File Services
- ☐ Configuring Encryption and Advanced Auditing
- ☐ Implementing Update Management
- ☐ Monitoring Windows Server 2012

Module-3: 70-412: Configuring Advanced Windows Server 2012 Services

- ☐ Implementing Advanced Network Services
- ☐ Implementing Advanced File Services
- ☐ Implementing Dynamic Access Control
- ☐ Implementing Distributed Active Directory Domain

Services Deployments

- ☐ Implementing Active Directory Domain Services

Sites and Replication

- ☐ Implementing Active Directory Certificate Services
- ☐ Implementing Active Directory Rights Management

Services

- ☐ Implementing Active Directory Federation Services
- ☐ Implementing Network Load Balancing
- ☐ Implementing Failover Clustering
- ☐ Implementing Failover Clustering with Hyper-V
- ☐ Implementing Disaster Recovery

Course Name : Business Process Outsourcing (BPO, KPO and Other Back Office)

Duration : 160Hrs.

Course Objectives:

This course is designed for creating a pool for technical and analytical BPO activities

- Able to be a problem solving business analyst
- Understanding the overall supply chain scopes
- Common Surgical Procedures, Diagnostic Studies
- Understand the way forward to implement digital marketing strategies
- Understand the basics of service marketing and its scopes from Bangladesh

Course Outline

Name of the Course	Duration of Course		Entry Qualification
BPO, KPO and Other Back Office	Total Duration =160 hrs. 1. Generic Skills & Occupation Specific knowledge (trade theory) =40 Hrs. 2. Occupation Specific Skills(practical/demonstration) = 120Hrs.	1. 5 days per week 2. 5 Hours per day	1. Age minimum =18 yrs. 2. Education = Bachelor/Diploma

I. Requirement of Competencies for the Targeted Occupations in the Job market

- Participant must have the ability to pronounce well both in Bangla and English
- Participant should have an average skill to understand business scopes
- Participant must have the ability to handle basic computer operations
- Minimum level of education required: Bachelor/Diploma

II. Competency Level: Semi-Skilled Worker Level 3

III. Student Assessment Method

- a) Class Test (oral & practical based on achievement of competencies, once every 7 days)
- b) Monthly Test (oral & practical, once every 30 days)
- c) Final Test (oral and practical based on achievement of competencies outlined for the course)
- d) Final Test to be conducted by Industry Assessors and institutional Trainers to assess the skills received during training

IV. Industry Assessor Requirements,

Assessor to conduct assessment must meet the following requirements

- a) Trainer (from other institution) or practitioner in the trade area at least for three (3) years
- b) Trainer (from other institution) or practitioner should be certified by BTEB/ISC/industry association
- c) One assessor can assess maximum 6(six) Trainees a day

V. Certification System

- a) Certification will be done based on the assessment report from Industry Assessors and marks obtained from weekly, monthly and final test /assessment Time Distribution

Module 1: Analytical & Quantitative Ability (32 Hrs.)

- Approach towards problem solving
- Understanding and accuracy while analyzing and organizing the given data to solve a given questions / problems / puzzles etc.
- Ability to apply logic and calculations while tackling day-to-day arithmetic, involving simple-to-complicated problems / situations
- understanding and accuracy while exercising calculations for arriving at answer / solution / conclusion for a given problem/puzzle.

Module 2: Introduction to Supply Chain Management (32 Hrs.)

- Understanding the Corporate Environment
- Specifying Requirements & Planning Supply
- Analyzing Supply Markets
- Developing Supply Strategies
- Appraising & Short-listing Suppliers
- Obtaining & Selecting Offers
- Negotiating
- Environmental Procurement
- Group Purchasing
- E-procurement
- Customer Relationship Management
- Operations Management
- Managing Finance along the supply chain
- Preparing the Contract
- Managing the Contract and Supplier Relationships
- Managing Logistics in the Supply Chain
- Managing Inventory
- Measuring and Evaluating Performance

Module 3: Digital Marketing (32 Hrs.)

- Introduction to Digital Marketing
- Digital Advertising
- Social Media Marketing
- Content Marketing & SEO
- Digital & Integrated Strategy
- Analytics & Conversion
- Email Marketing

Module 4: Service Marketing (32 Hrs.)

- Introduction to Services Marketing
- Understanding the services scopes
- Role of services in Bangladeshi economy
- The basic 4 p's of service marketing
- Define the marketing framework of a business organization

- Develop marketing audits and analysis
- How to develop quality service marketing process
- Combine best practices, tools and models to implement an effective marketing and sales management system
- Develop strategies, initiatives and programs
- Apply proper planning and the execution

Course Name : E-commerce Business Development Training

Duration : 80 hours

Topic of the Course:

- An Overview of E-commerce
- Traditional Business and E-business
- Motivation for life and business success
- Psychological aspects of entrepreneurship
- Perception towards the new opportunities of business
- Content In E-commerce
- Proposition & Strategy
- Business Model and Concept
- Business Organogram and Management
- Business Planning and Goal Setup
- Investment and Budget
- Effective leadership
- Skills Development and Team Building
- How to be a good human resource
- Market analysis and Product Selection
- Product Sourcing and Supply chain
- Stock/Inventory Management
- Up sell and Cross Sell
- Smart Pricing and Quality Assurance
- Service Selection and Development
- Service Quality Assurance and Value Addition
- E-commerce Technology
- Domain-Hosting
- Basic Features of E-commerce Website
- Advance Features of E-commerce Website
- Website Design and User Interface
- E-commerce Content Management System(CMS)
- Popular CMS Introduction
- Website Catalog Management
- Product Description and Review
- Order and Customer Management
- Analytics and Report
- E-commerce Website Security
- Payment Method and Gateway
- Transaction/Accounts Management
- Shipment Method and Delivery System
- Privacy Policy, Terms and Condition
- Creative Content Development
- Photography

- Graphics in E-commerce
- Video and Animation
- Communication skill inside of company
- Communication Skills outside of company
- Brand and Branding
- e-Governance & e-commerce
- Offline Marketing (Media & Campaign)
- Digital Marketing
- Social Media Marketing
- Introduction to Facebook Marketing
- Facebook page and Ad Management
- Insights and Audience
- Advance Facebook Marketing
- Search Engine Optimization: Keywords Research
- Search Engine Optimization: On page, Off page
- Search Engine Marketing: Google Adwords
- Search Engine Marketing: Others
- Email Marketing
- SMS Marketing
- E-commerce Revenue Models
- Customer Services: CRM - Relationships and Returns
- Customer Services:
- Deliveries and Deadlines
- Impression and Follow-up
- Tips and Tricks :
- Business Documentation
- Promotion and Campaign
- Retargeting and Remarketing
- Future Trends
- Trust Buildup and Success Review

Part : C - Advanced Skill

Course Name : Prince2 Foundation (24 hours)

Duration : 24 hours

Course Topics

Structured Approach to Managing Projects - Setting the scene for a structured approach to managing all projects; project success criteria; the model of the PRINCE2 method including the integrated elements of principles, processes, themes and tailoring.

The Process-based Approach - PRINCE2 focuses on key processes needed for successful project management which must be present, but may be 'tailored' to reflect the complexity, scope and risks faced by the project. SPOCE's PRINCE2 Process Model will be used to help delegates understand and appreciate what should be done to manage each project, why it should be done and when in the project lifecycle.

Business Case - What is a Business Case; Outcomes, Outputs, Benefits and Dis-benefits; Developing, Verifying and Maintaining the Business Case; Confirming the benefits and the Benefits Review Plan.

Organization - Project Management Team Structure and the Project Board, Project Assurance, Project Manager, Team Manager, Change Authority and Project Support roles & responsibilities. Stakeholder management; Communication Management Strategy.

Plans - Levels and content of Plans; Exception Plans; Product-based approach to planning – Project Product Description, Product Breakdown Structure, Product Description, Product Flow Diagram; the PRINCE2 planning steps.

Progress - Management and Technical Stages. Tolerance and Raising Exceptions. Project Board and Project Manager Controls for Reviewing and Reporting Progress; Baselines for Control; Capturing and Reporting Lessons; Event-driven and time-driven controls.

Change - Issue and Change Control procedure; Configuration Management procedure; Configuration Management Strategy; Baseline, Handling changes; Tracking and protecting products; Change Authority; Change Budget.

Quality - Quality Defined, The Quality Audit Trail; Acceptance Criteria, Quality Criteria, Quality Management Strategy, Quality Assurance, Quality Controls and Quality Review technique.

Risk - Risk and Risk Management; Risk Management in Projects; Risk Management Strategy; Risk Management Procedure; Risk Budget.

Practical Work - A specially written scenario runs throughout the course from start to finish. A comprehensive set of tasks help provide a practical application of the method. Many tasks are designed to help delegates link the four integrated elements of PRINCE2® - Principles, Processes, Themes and Tailoring.

Course Name : Oracle Forms Developer 11g (120 hours)

Duration : 120 Hours

Vendor Certification Exam: After completion of the training students can go for Oracle Certified Professional Forms Developer Vendor Exam

Course Outline:

Oracle Database 11g: Introduction to SQL : 40 hours

Introduction to Oracle Database ► Retrieve Data using the SQL SELECT Statement ► Learn to Restrict and Sort Data ► Usage of Single-Row Functions to Customize Output ► Invoke Conversion Functions and Conditional Expressions ► Aggregate Data Using the Group Functions ► Display Data From Multiple Tables Using Joins ► Use Sub-queries to Solve Queries ► The SET Operators ► Data Manipulation Statements ► Use of DDL Statements to Create and Manage Tables ► Other Schema Objects ► Control User Access ► Management of Schema Objects ► Manage Objects with Data Dictionary Views ► Manipulate Large Data Sets ► Data Management in different Time Zones ► Retrieve Data Using Sub-queries ► Regular Expression Support.

Oracle 11g: Program with PL/ SQL: 40 hours

Introduction ► Introduction to PL/SQL ► Declare PL/SQL Identifiers ► Write Executable Statements ► Write Executable Statements ► Interaction with the Oracle Server ► Control Structures ► Composite Data Types ► Explicit Cursors ► Exception Handling ► Stored Procedures ► Stored Functions and Debugging Subprograms ► Packages ► Deploying Packages ► Implement Oracle-Supplied Packages in Application Development ► Dynamic SQL ►

Design Considerations for PL/SQL Code ► Triggers ► Creating Compound ► DDL ► and Event Database Triggers ► Creating Compound ► DDL ► and Event Database Triggers ► PL/SQL Compiler ► Manage PL/SQL Code ► Manage Dependencies

Oracle Forms Developer: Build Internet Application: 40 hours

Introducing Oracle Forms Developer and Forms Services ► Creating Forms Modules ► Working with Data Blocks and Frames ► Working with Input Items ► Working with Non Input Items ► Working with Windows and Canvases ► Producing Triggers ► Debugging Triggers ► Adding Functionality to Items ► Run-Time Messages and Alerts ► Query Triggers ► Validation ► Navigation

Project: one project has to be completed

Course Name : Oracle DBA 11g

Duration : 120 Hours

Vendor Certification Exam: After completion of the training students can go for Oracle Certified Professional Database Administration 11g

Course Outline:

Oracle Database 11g: Introduction to SQL: 40 hours

Introduction to Oracle Database ► Retrieve Data using the SQL SELECT Statement ► Learn to Restrict and Sort Data ► Usage of Single-Row Functions to Customize Output ► Invoke Conversion Functions and Conditional Expressions ► Aggregate Data Using the Group Functions ► Display Data From Multiple Tables Using Joins ► Use Sub-queries to Solve Queries ► The SET Operators ► Data Manipulation Statements ► Use of DDL Statements to Create and Manage Tables ► Other Schema Objects ► Control User Access ► Management of Schema Objects ► Manage Objects with Data Dictionary Views ► Manipulate Large Data Sets ► Data Management in different Time Zones ► Retrieve Data Using Sub-queries ► Regular Expression Support.

Oracle Database 11g: Administration Workshop I NEW: 40 hours

Exploring the Oracle Database Architecture, ► Preparing the Database Environment ► Creating an Oracle Database ► Managing the Oracle Instance ► Configuring the Oracle Network Environment ► Managing Database Storage Structures ► Administering User Security ► Managing Schema Objects ► Managing Data and Concurrency ► Managing Undo Data ► Implementing Oracle Database Security ► Database Maintenance ► Performance Management ► Backup and Recovery Concepts ► Performing Database Backups ► Performing Database Recovery ► Moving Data ► Enhancing Database Capabilities

Oracle Database 11g: Administration Workshop II NEW : 40 hours

Core Concepts and Tools of the Oracle Database ► Configuring for Recoverability ► Using the RMAN Recovery Catalog ► Configuring Backup Settings ► Creating Backups with RMAN ► Restore and Recovery Task ► Using RMAN to Perform Recovery ► Monitoring and Tuning RMAN ► Diagnosing the Database ► Using Flashback Technology I ► Using Flashback Technology II ► Performing Flashback Database ► Managing Memory ► Managing Database Performance ► Managing Performance by SQL Tuning ► Managing Resources ► Automating Tasks with the Scheduler ► Managing Space in Blocks ► Managing Space in Segments ► Managing Space for the Database ► Duplicating a Database.

Project: one project has to be completed

Course Name : Oracle Application Express (Appex.)

Duration : 70 Hours

Vendor Certification Exam: After completion of the training students can go for Oracle Appex Vendor Exam

Course Outline:

Maintaining Database Objects Using SQL Workshop

- Browse, create and modify database objects using Object browser
- Execute SQL scripts using SQL Command and SQL Scripts
- Build and save SQL queries using Query Builder
- Import and export data using Utilities

Building Database Applications

- Discuss the difference between a Database Application and a Web sheet Application
- Identify the components of a database application
- Create a database application from scratch
- Create a database application from a spreadsheet

Creating Reports

- Identify the types of reports you can create
- Create, manipulate and customize interactive reports
- Create and modify classic and wizard reports

Creating Forms

- Identify the types of forms you can create
- Create and modify various types of forms

Working with Pages and Regions

- View and edit page definitions and attributes
- Create and modify a region and subregion
- Create a Page Zero
- Add page groups and comments

Adding Items and Buttons

- Identify different types of items
- Create items and edit item attributes
- Create and use List of Values
- Create buttons and edit button attributes

Understanding Session State and Debugging

- Explain how APEX uses session state
- View, reference and clear session state values
- Review messages in debug mode

Including Page Processing

- Explain the difference between page rendering and page processing
- Create computations in application pages
- Create page processes
- Create validations to verify user input
- Create branches within a application

Building a Websheet Application

- Create a Websheet Application
- Add a Page to a Websheet Application
- Add and manipulate a Data Grid and Report
- Add Annotations to a Data Grid
- Create a Saved Report of a Data Grid
- Add Sections to a Page

- Share Websheets using an Access Control List

Using Application and Page Utilities

- Use the Advisor to verify your application
- Manage defaults using the Attribute Dictionary

Adding Shared Components that Aid Navigation

- Explain the use of shared components in an application
- Create and edit tabs, navigation bar entries, lists and breadcrumbs

Displaying Dynamic Content

- Create and use a dynamic action
- Import and use a plugin
- Create and modify a chart
- Create a calendar
- Create a tree

Working with Themes, Templates, and Files

- Explain what themes and templates are
- Create a new theme from the repository and switch to the theme to make current
- Create and edit a template
- Upload and use a Cascading Style Sheet and an image

Administering Application Express Workspaces

- Create a developer and a workspace administrator user
- Request a schema or a storage
- Monitor the developer activity log

Implementing Security

- List the different ways to secure your application
- Differentiate between authentication and authorization
- Create an authentication scheme for your application
- Create an authorization scheme using Access Control
- Enable and configure Session State Protection

Deploying Your Application

- Identify the supporting objects for your application
- Export an application and its supporting objects
- Import an application
- Install the supporting objects

Managing and Maintaining the Application Development Process

- Track Features, Milestones, Bugs and To Dos
- Manage Feedback