H.N.G. University, Patan
M.Sc.(C.A. & I.T.) SEMESTER - IX
903 : Cloud Computing

Unit : 1 [25%]

ASP.NET AJAX:
Understanding AJAX Technology, Need of AJAX in Web Application, Building a ASP.NET Page with Ajax Using Update Panel, Update Progress and Timer AJAX Server Controls, AJAX Control Toolkit, Downloading and Installation AJAX Control Toolkit Extenders
(The controls available in AJAX Control Toolkit)

Unit : 2 [30%]

Cloud computing:
Introduction to Cloud Computing: What is Cloud Computing, A Short History of Cloud Computing, How Cloud Computing Works - Companies in the Cloud: Cloud Computing Today - Why Cloud Computing Matters - Are you ready for Computing in the Cloud? - The Pros and Cons of Cloud Computing - Who Benefits from Cloud Computing? - Who Shouldn't Be Using Cloud Computing? - Developing Cloud Services: Why Develop Web-Based Applications? - The Pros and Cons of Cloud Service Development - Types of Cloud Service Development - Discovering Cloud Services Development Services and Tools

Virtualization concepts: Types of Virtualization & its benefits, Introduction to Various Virtualization OS (VMware, KVM etc), SAN backend concepts, Cloud Fundamentals, Cloud Building Blocks, Understanding Public & Private cloud environments

Infrastructure as a Service (IaaS): Introduction to IaaS, Resource Virtualization, Server, Storage, Network

Platform as a Service (PaaS): Introduction to PaaS, Cloud platform & Management, Computation, Storage
Software as a Service (SaaS): Introduction to SaaS, Web services

Unit : 3 [30%]

WCF (Windows Communication Foundation) Programming:
Need for SOA (Service Oriented Architecture), Why WCF, WCF Architecture
WCF Concepts (Messages (Message Structure, Message Programs, Message Patterns) Channels, Services), WCF Programming Model, WCF Addresses & Programming (Address Types, Address Formats), WCF Binding using code and Configuration file, Programming WCF Contract (Data Contracts, Service Contracts, Message Contract)

Unit : 4 [15%]

OData Fundamentals (Problem/Solution/Technology) – OData Model – OData Protocol (REST/ AtomPub/JSON/SOA) – OData Client Libraries – OData Services

Text/Reference Books:
AJAX:
1. Professional ASP.NET 3.5 AJAX , Bill Evjen, matt Gibs, Dan Wahlin, Dave Reed, Wrox publications
1 Microsoft® ASP.NET and AJAX: Architecting Web Applications, Dino Esposito

WCF:
1 Professional WCF Programming, Scott Klein, Wrox publisher
2 Learning WCF, Michele Leroux Bustamante, O'Reilly

Cloud Computing:
1 Cloud Computing (A Practical Approach) Anthony T. Velte, Toby J Velte
2 Cloud Application Architectures (Building Applications and infrastructure in the cloud), George Reese, O'Reilly
3 Cloud Computing, Barrie Sosinsky, Bible
4 Cloud Computing Architected, John Rhoton and Risto Haukioja
5 *Cloud Computing with the Windows Azure Platform* by Roger Jennings, Wrox Publications
6 Windows Azure Programming Patterns for Start-Ups by Riccardo Becker