Syllabus for 6 months Cloud Computing

Modules	Topic	Description
Module 1	Introduction to Cloud Computing	Cloud Computing definition, characteristics
		Cloud service Models(SAAS,PAAS,IAAS)
		Organizational Cloud Types(Private, Public, Hybrid)
		Benefits and limitations of Cloud
		Comparison of SAAS, PAAS, IAAS
		Utility Computing
		Elastic Computing
Module 2	Virtualization	Virtualization Basics
		Objectives
		Benefits of Virtualization
		Emulation
		Virtualization for Enterprise
		VMware
		Xen
Module 3	Data in the Cloud	Data in the Cloud: Relational Database
		Cloud File Systems: GFS and HDFS, BigTable, HBase and Dynamo
		Map-Reduce –Model And Its Extensions
Module 4	Cloud Security	Cloud Security Fundamentals
		Vulnerability Assessment Tool For Cloud
		Privacy and Security in Cloud
		Cloud Security Architecture
		Identity Management and Access control
		Cloud Computing security challenges
Module 5	Issues in Cloud Computing	Issues in Inter cloud computing
		Quality of services in cloud Computing
		Data Migration in Cloud
		Streaming in Cloud
		Monitoring in Cloud Environment

Module 6	Cloud Platforms	Introduction to all available cloud Platforms and its utilization
Module 7	Hadoop Architecture	What is Hadoop?
		Hadoop Architecture
		Hadoop tools installation
		Hadoop API
		Hadoop File System
		Hadoop Example
Module 8	Amazon Cloud	AWS Overview
		Installation of AWS
		Architecture of AWS
		Amazon Simple DB
		Amazon EC2
		Amazon Map Reduce
		Amazon S3
		Amazon Networking
		Application development On Amazon Cloud
		Deployment on Amazon cloud
Module 9	Google App Engine	GAE Overview and its features
		GAE Architecture
		Runtime environments
		Installation of GAE
		Data Storage in App Engine
		GAE Services
		Implementation of Google Application
		Deployment of Application on GAE cloud
Module 10	Azure Cloud	Azure Introduction
		Azure Architecture
		Azure Web Roles(Configuration, Endpoints, Security, Logging, Load Balancing)
		Azure installation
		Azure Application architecture
		Azure Storage
		SQL Azure
		Publishing to the cloud