

## Cloud Computing

The term ‘cloud computing’ also refers to the technology that makes cloud work. This includes some form of *virtualized IT infrastructure*—servers, operating system software, networking, and other infrastructure that’s abstracted, using special software, so that it can be pooled and divided irrespective of physical hardware boundaries. For example, a single hardware server can be divided into multiple virtual servers. This course will help us learn about various cloud concepts, dbms concepts and apply the same in building some web applications

**Total Duration: 25 Hrs    Modules : 6**

**Capstone Project : 3**

**Related Tags: cloud , java , sql , mongodb.**

**Module 1:** Java Introduction , Installation(3 Hrs)

**Module 2:** OOPS Concepts , JDBC (3 Hrs)

**Module 3:** Cloud Concepts (3 Hrs)

**Module 4:** SQL (4 Hrs)

**Module 5:** MongoDB(4 Hrs)

**Module 6 :** Cloud based projects(8 Hrs)

### **Module 1: Java - Introduction | Variables , DataTypes and Statements**

**Duration : 3 Hrs**

1. Java Introduction
2. Java Variables
3. Datatypes and statements

#### **Key Description:**

Java Introduction: Get to know more about Java language, features, jdk jre installation and how to use netbeans ide. Java Variables: Discover more about identifiers, and different types of comments in Java. Java Data Types and Statements: Explore more about different data types in Java, looping statements and decision-making statements.

### **Module 2: OOPS Concepts, JDBC**

**Duration: 3 Hrs**

1. OOPS Concepts
2. JDBC

#### **Key Description:**

OOPS Concepts – Explore more about different OOPS concepts like inheritance, abstract class, encapsulation and apply the same in solving various real-world applications. JDBC Examples – Discover more about JDBC, how to connect Java with the database, create database, create tables and how to insert records inside the table.

### **Module 3: Cloud Concepts**

**Duration : 3 Hrs**

1. Introduction to cloud computing
2. Cloud Deployment Models
3. Cloud Service Models

#### **Key Description:**

**Introduction to cloud computing:** Learn more about cloud concepts, cloud architecture, advantages and disadvantages of cloud computing.

**Cloud Deployment Models:** Get to know more about different types of cloud computing models like public cloud, private cloud and hybrid cloud. Cloud Service Models: Explore more about different types of cloud service models like IaaS, PaaS and SaaS.

### **Module 4 : SQL**

**Duration : 4 Hrs**

1. SQL Overview
2. SQL Queries

#### **Key Description:**

**SQL Overview:** Get to know more about SQL, RDBMS Concepts, Operators and datatypes

**SQL Queries:** Discover more about different types of sql queries, how to create database, create tables and insert some records inside the tables.

### **Module 5: MongoDB**

**Duration: 4 Hrs**

1. MongoDB Introduction
2. MongoDB Concepts

#### **Key Description:**

MongoDB Introduction – Learn more about MongoDB, MongoDB installation, how to create database and how to create collections. MongoDB Concepts – Explore more about MongoDB like projection, limiting records, sorting and aggregation

### **Module 6: Projects**

**Duration: 8 Hrs**

- 1) Erasure Coding

- 2) Public Auditing
- 3) Counselling Management System
- 4) Software Puzzle
- 5) Crime Management System
- 6) Online Examination Portal
- 7) Secure multi owner Data sharing
- 8) Vehicle Management system.

**Capstone Project :**

- 1) Online Blood Bank System
- 2) Cloud – Based Book store
- 3) Bug Tracking System