Java J2EE, Hibernate, Spring Core, Spring MVC, Spring Boot

- ➢ **Databases - Oracle + MYSQL** - SQL & PL/SQL Programming(Procedures + Functions + Packages + Cursor + Ref Custor), whatever need in project Development.

- ➢ **JDBC Programming with Oracle & MYSQL Databases** - JDBC Drivers, Connectivity Steps, Statement, CallableStatement, PreparedStatement, ResultSet, ResultSetMetaData, DatabaseMetaData, ProcedureCalling in Java - bcos in IT Indestry all database Transactions must be done with the help of Procedures & Functions,   for all DML & Select Statements we need to design procedures.

- ➢ **Servlets -** Servlets Basics, diff b/w Generic + HttpServlet, how to get value from HTML page in servlets, diff b/w Page Redirecting & RequestDispatching, Session Handling, Cookies, Servlet Filters diff b/w – Session + Request + ServletContext Attributes & Query String Parameters, ServletListeners & Database Connectivity with Oracle & MySQL Database.
    ** how to work with Project Modules. - Project Architecture & Steps for Design a project

- ➢ JSP - basic concepts, Form Actions, Exception Handlingin JSP, Directives(page/include/taglib), Session, Cookies, Beans in JSP, Plugins in JSP, JSP tags & JSP Custom Tags Design, Page Directive Attributes, Dynamic Page designing using JSP, AJAX
    ** Web Project designing using – BootStrap, JSP, Servlets, JDBC & MySQL or Oracle DB.

Hibernate - with JPA(Annotations) & XML

-> Advantages of Hibernate compared to JDBC
-> Introduction.
-> ORM (Object Relational Mapping)
-> Configuration xml file and Mapping xml file along with dtds.
-> Hibernate architecture
-> Installation and Directory Structure
-> Hibernate Data Types.
-> First Application using Hibernate.
-> Hibernate API
-> CRUD(Create, Read, Update and Delete) operations using JPA & XML
-> Primary key Generators
-> Hibernate Query Language (HQL)
-> Native SQL
-> Criteria API
-> Hibernate Annotations
-> Inheritance in Hibernate (using JPA & XML)
-> Relations (one to one, one to many, many to one, many to many) - (using JPA & XML)
-> Connecting with Multiple Databases
-> Integrating Hibernate with Servlets and JSP

Spring,MVC & Spring Boot - with JPA(Annotations) & XML

Spring Core - all Spring core concept implement with both methods - JPA & XML

-> Introduction to Spring Framework

-> What is a Core Container & BeanFactory

-> Introduction to IOC(Inversion of Control)

-> Types of DI(Dependency Injection)

-> Setter VS Constructor

-> Resolving Constructor Confusion

-> Collection DI

-> Bean Inheritance

-> Collection Merging

-> Inner Beans

-> Using IDRef

-> Bean Scopes, Inner Beans

-> Bean Autowiring in Spring

-> Nested Bean Factories

-> Dependency Check & Depends On

-> Factory Beans, Static Factory Method & Instance Factory Method

-> Bean Lifecycle & Bean Factory Post process

-> Spring AOP (Aspect-oriented programming)

-> Spring DAO(Data Access Object).

-> Spring JDBC - JDBCTemplate, SimpleJdbcTemplate, SimpleJdbcCall

-> Connection Pooling in Spring JDBC

-> Spring Transactions

Spring MVC -

-> Advantages of Spring MVC Framework

-> Understanding the flow of Spring Web MVC

-> Directory Structure of Spring MVC

-> Directory Structure of Spring MVC using Maven (using STS & Eclipse)

-> Spring + Maven – Step by Step config...

-> Required Jar files or Maven Dependency

-> String Config with XML & JPA(Annotations)

-> RequestParam + PathVariable + Model + ModelAttribute + All Required Annotations in Spring.

-> Spring JDBC in MVC with Properties file (using JPA & XML)

-> Spring Integration with ORM - Integrating with Hibernate

-> Creating and Injecting Hibernate Session Factory & Managing Transaction

-> Spring MVC Validation - Regular Expression Validation, Number Validation, Custom Validation

-> Web Services - Java Web Services API - SOAP & RESTful Web Services - Design & Consume

-> Spring internationalization.

Spring Boot -

–> Introduction

-> Spring Boot + Maven – Step by Step config...

–> Creating a RESTful Web Service Example

–> How to Change Default Tomcat Server Port

–> How to Change Default Context Path

–> How to Reload Changes Without Restarting the Server

-> Common Application Properties (application.properties)

-> How to Deploy Spring Boot Applications on External Tomcat Server

-> Spring Boot + Spring MVC + JSP Hello World Example

-> Spring Boot JDBC + MySQL – How to Create/Configure a DataSource

-> Spring Boot JDBC + MySQL – How to Configure Multiple DataSource

-> Spring Security – RESTful Web Service with basic Authentication

-> Example of RESTful Web Service with XML Response

–> RESTful Web Service with POST Request in JSON Example

–> RESTful Web Service with POST Request in XML Example

–> RESTful Web Service with Database Authentication

–> Display All Beans Available in ApplicationContext

-> How to Configure Cache in Spring Boot Applications

-> Micro Services.