

# COURSE AGENDA - Scan



for complete course curriculum

## INTRODUCTION TO FULLSTACK TECHNOLOGIES

### INTRODUCTION TO FULLSTACK TECHNOLOGIES

What is Fullstack, 3-tier Architecture of FullStack, What are the Requirements to build End to End Web Application, What are the Challenges in modern web development

### CORE JAVA

Back End

### CORE JAVA- BACK END

Java Introduction, Installation of JDK, Structure of java program And Tokens, print() and println(), DataTypes & Variables, Operators, DynamicRead & Decision making statement, Looping-Statements, Logical Programming based on Loops, Methods, Static members, Non-static members & Constructor, OOPS, Object class and its methods, Arrays, Strings, Exception handling and its types, Wrapper class, Collection

### MYSQL

SQL introduction, Installation of MySql workbench Data types, Steps to create table, constraints (null, not null, unique), Constraints (check, default, primary key, composite primary key, foreign key) on delete cascade, Alter statements, DML statement, Sql built-in functions (row level, group function), Where clause, Having clause like operator, Joins, Stored-Procedures

### JDBC

J2EE, JDBC, JDBC Introduction, JDBC Architecture, Database Overview, JDBC basics & example ResultSet, Prepared Statement, Callable Statement

### HIBERNATE

Hibernate Introduction, Hibernate Architecture, Hibernate Association Mapping- One to One Mapping, One to Many Mapping, Many to One Mapping, Many to Many Mapping, Hibernate Session, Hibernate Session-Factory, Lazy\_loading Early-Loading, Hibernate Configuration, Hibernate with Annotation, Hibernate CRUD

### SPRING

Spring Framework, Spring Framework Introduction, Spring Basics, Inversion of Control, Dependency Injection, Beans Scope (Singleton, Prototype, Request Session, Global-Session), Autowiring

### SPRING MVC

Spring MVC Architecture, Spring Annotations, Spring MVC Basics, Spring MVC with Maven, Creation of project, Spring mvc first program with configuration, Methods used in springMVC

## SPRING BOOT

### SPRING BOOT

Spring Boot Features, STS installation, Creation of project, Spring-Initializer, Deploy Spring Boot Application on External Tomcat Server, Spring Boot- Common Application Properties (application.properties), Spring Boot, Spring Data with RESTful Web Service, Rest api's and data jpa, Service, Controller, DAO, DTO layers, Spring Boot, Hibernate CRUD Application, Spring Boot, Spring Data JPA, CRUD Application

### HTML

Front End

### HTML

Introduction to Web, Core Concept of html, Important tags, Form, HTML 5 Features

### CSS

Introduction to CSS, Selectors, Coloring & formatting, Fonts & text manipulation, Layout, Flexbox, Grid

### JAVASCRIPT

Front End

### JAVASCRIPT

Introduction to Javascript, Operators, DataStorage Techniques & DOM Manipulation, DOM & Dom Manipulations, Functions, Forms & Events

### GIT

Fast introduction to GIT commands, Simple Rebaser Example, Setup for rebasing conflict, Abort a Rebaser, Rebaser Conflict and Resolution, Pull with Rebaser (GitHub)

### GIT

### REACT

What is React, Variables and DataTypes, Node, Module, Package, Node Package Manager(NPM), Virtual DOM, Loops, Operator and Conditions, Array and String Methods, JSX, React Components, Props, State, Navigation, Forms, API Request (get/put/post/delete), Lifecycle Hooks

### REACT

### CORE JAVA (VAC)

Back End

### MAP

Set(Hash Set, Tree Set), Map(Hash Map, Tree Map, Hashable), Collection Framework Advanced Concepts, Comparable Interface

### THREAD

Concept, Lifecycle, Extends Thread, Implement Runnable Interface, Thread Priorities, Thread Methods

### MULTITHREADING

Data inconsistency, Deadlock

### THREAD SYNCHRONIZATION

Synchronization, Object Locking, Inter Thread Communication

## PROGRAMMING

Logical programming based on loops, Pattern printing programs, Array based programs, String based programs

## MY SQL ADVANCED CONCEPTS (VAC)

My SQL ADVANCED CONCEPTS In, Between operator, Null Values, TOP, LIMIT, Java Application Using JDBC Connectivity, Handling SQL Exceptions, DB Connectivity Steps, Store Image in SQL, Read Image in SQL

## ADVANCED JAVA (VAC)

Need of Server Side Programming, Servlet Life Cycle, init(), Service(), doGet(), doPost(), destroy(), Servlet Hello World Application, 2.2.5 Web.xml Structure Servlet Directives- include(), Forward(), SendRedirective() HttpServletResponse, HttpServletResponse in Servlet, Servlet and JDBC Integration, Servlet, HTML 5, MySQL, Tomcat using Real Time Login Application

### SERVLET

### JSP

JSP, JSP Basics, Creating dynamic Web content with JSP, Scriptlet, Declaration, Servlet, JSP, MySQL, Tomcat, CRUD Application

## CSS (VAC)

Front End

The Transitions Property, Transform property, Creating Animations w/Keyframes, Adding an Animation, Animation Properties, Media Queries in css- Introduction, properties

### ANIMATION & TRANSITIONS, MEDIA QUERIES

## BOOTSTRAP (VAC)

Front End

Introduction to Bootstrap, Layout & Components, Utilities, Flex, Grid

### BOOTSTRAP

## ADVANCED JAVASCRIPT (VAC)

Front End

Error Handling, OOPS, ES6 Concepts, JSON, Asynchronous JavaScript & ES6+ Features, HTML 5 Features

### ADVANCED JAVASCRIPT

## Skills and Tools Covered

