

# JAVA WITH SPRINGBOOT SYLLABUS NTH

- **Spring Framework**
  - Introduction
  - Spring VS Java EE
  - Advantage of using Spring Framework
  - Aspect Oriented Programming
  - Spring Modules
- **Spring Dependency Injection**
  - Spring AOP
  - Dependency Injection/IOC Container
  - Application Context
  - Constructor/Setter Injection
  - Spring DI Project
- **Spring MVC WEB**
  - Bean Auto wiring
  - Singleton Bean Design Pattern
  - Spring Web MVC and its Configuration
  - Annotations (Required, Auto wired, Service, Component, Repository,
  - Spring WEB MVC/Transaction Management(@Transaction)
  - Controller, Request Mapping, Path Variable, Model Attribute
  - Component Scan, View Resolver Resource
  - Redirect, Multipart file upload/ download
  - Spring Form tag library
  - Spring Persistence
  - Spring JDBCT emp late

- Spring Web Service
- Hibernate Integration with Spring
- **Boot Basic**
  - Basic Annotations in Boot
  - Execution Flow
  - Boot Starter class
  - Application Properties
  - Server Port Change
  - Managing of Dependencies
  - Common Problem in coding
  - @SpringBootApplication
- **Spring Boot Dev Tools**
  - What are Dev Tools
  - Dependency for Dev Tools
  - Working with Dev Tools
- **Spring Boot Data JPA**
  - Quick introduction to ORM with JPA
  - Benefits of using Spring with JPA
  - JPA configuration in Spring
  - Configuring Spring JPA using Spring Boot
  - Spring Data JPA dynamic repositories
  - JPA Repository, JPA DB Operations (CURD)
  - Find All and find By methods
  - @Query Annotation for HQL
- **Lombok API**

- @Data
- @Getter
- @Setter
- @ToString
- @NoArgsConstructor
- @AllArgsConstructor
- @NonNull
- **Spring REST Services**
  - What is REST?
  - Restful Controllers
  - JPA Repositories with Hibernate Provider
  - Spring Data Rest, Exposing Endpoints
  - Need of JSON
  - JSON and It's Auto Conversion
  - Testing Using POSTMAN
  - Types of HTTP Methods
  - PUT
  - GET
  - DELETE
  - POST
  - Response Entity Format
  - @RequestBody and @ResponseBody Format
  - Restful Clients using Rest Template
- **Spring Boot Security**

- Boot Security Design
- Authentication and Authorizations
- Roles and Ant Matcher ULR Patterns
- In Memory Authentication
- Default Form Logins
- Custom Form Creation
- JPA/Hibernate(ORM) Authentication
- **Spring Boot Email**
  - Java MAIL API structure
  - Mail Properties
  - Boot Mail Design
  - Simple Email
  - Mime Email with Attachments
- **Spring Boot with Swagger**
  - What is API Endpoints
  - Swagger Introduction
  - Design of Swagger UI
  - Coding for RestController
  - Testing Swagger Operations
- **Spring Cloud**
  - introduction of spring cloud
  - deployment of spring boot project in AWS
  - Google Recaptcha Integration
  - Facebook Login Integration