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Course Title in Spring Reales, Spring Book 5: Mileon Services

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                             Common Serve
  Course Fee :: 7000/- (with out recording)
                          12000/- (with recording)
   Course material : I hirds by the material, class room ages.
                                     door land etc., will be given using
                                    PDGroup in attending service)
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                                      using Google drive
    Faculty and saled a details:
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                                     FB group unit: https://www.disabook.com/groups/040000025161900
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                                      Rajeshwari (admin) :: 7007010407.
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       Course plan
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    (iver enabling managing beard communication)

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Course Title :: Spring Basics, Spring Boot & Micro Services

Duration: 120 sessions to 130 Sesssions

Pre-requisites:: Core Java (oops, exception handling, collections,....)

JDBC basics SQL Basics

**Common Sense** 

Course Fee :: 7000/- (with out recordings)

12000/- (with recordings)

Course material: Initially the material, class room apps,

docs and etc.. will be given using

FBGroup(natarazjavaarena)

=>Later same things will be shared using Google drive

Faculty and admin details::

FB Group name :: natarazjavaarena

FB group url :: https://www.facebook.com/groups/388095825162910

To collect material :: https://www.facebook.com/groups/388095825162910/files (batch code ::NTSPBMS515)

email id :: natarazjavaarena@gmail.com

For new Batches Info :: https://nareshit.com/new-batches-hyderabad/

youtube url:: https://www.youtube.com/NareshIT

Rajeshwari (admin) ::: 7337313417

=>Spring/Spring boot frameworks are coming in the form of collection of modules (25+) modules

=> Example modules are core,mvc,data jpa, data mongodb, security, cloud, scheduling, batch and etc... => spring boot framework = spring framework++

**Spring-boot framework** 

spring framework

Spring boot framework is the extension of spring framework

=>if we develop proj1 (super market) using java language let as assume we need to write 20K LOC =>if we develop proj1 (super market) using java technologies let as assume we need to write 15K LOC

=>if we develop proj1 (super market) using spring let as assume we need to write 10K LOC

=>if we develop proj1 (super market) using spring Boot let as assume we need to write 6K LOC (Lines of Code)

=> if any module is used in app/project development in spring style programming then it

is called spring module

eg:: spring core, spring mvc, spring batch, spring security and etc..

bone programming then it

=> if any module is used in app/project development in spring

is called springdule

eg: spring boot core, spring boot mvc, spring boot security and etc..

- =>All frameworks including spring and spring boot takes care of common logics generation internally and dynamically to make the programmers to write only application specific logics
- => Frameworks provide abstraction on technologies and languages to simplify

the application development process

=> Abstraction means highlighting necessary details and hiding unnecessary details from the programmers/users

Course plan

\_\_\_\_\_

=>spring core (spring programming basics)

JPA :: Jakarta Persistence API

- =>Spring boot core (spring boot programming basics)
- =>spring boot data jpa (DB interaction and DB tables data manipulation (curd operations))
- |---> for interacting with SQL DB s/ws (oracle, mysql and etc..)

(fixed schema and fixed attributes)

- =>Spring boot mongoDB (for NoSQL DB interaction and data manipulation)
- |----> for interacting MongoDB s/w that deals with dynamically growing unstructured data in the docs
- => spring boot Scheduling (For enabling scheduling on the jobs)
- => spring boot mailing (For mailing operations)
- => spring boot batch processing (reading, processing and write huge amount data batch by batch)
- =>Spring boot mvc (For web application development) => spring boot Rest (For Distributed App development)
- => browser to s/w app interaction is called web application/website(B2C) eg:: browser to flipkart.com, browser to nareshit.com => App to App interaction (B2B) is called Distributed App eg:: browser--> flipkart.com ----> phone App -----> web application Distributed App
- =>spring boot security (For securing web apps and Distributed apps) => spring boot oauth
- => Spring boot JWT (JSON web Tokens) => spring boot okta

For advanced

security features implementation like SSO (Single Sign On)

- => Spring boot Actuators (provides set of readily available non-functional features like threads info, processes info, objects info, heap info..)
- => Spring boot Cloud

(For developing Micro Service Architecture based Projects)

- => Spring boot JMS (active MQ, Rabbit MQ and etc..) (For enabling messaging based communication b/w the software Apps or Projects in offline env..)
- => Spring boot apache kafka

(For more advanced messaging based communication)

=> Spring boot Apps integration with UI (angular/React JS)

- => Spring boot Al (Artificial Intelligence)
- => 4-5 Mini Project

Bank app

(SBI) Distributed App

- => the main features of project like opening account, closing a/c, withdraw, deposit and etc.. of banking app are called functional features
- => The supporting operations on the project are called non-functional features (threads info, heap info)
- => We generally see projects in the market following two architectures
- a) Monolith Arch (old and legacy)
- b) Micro Services Arch (latest and hot cake)
- => In monolith arch, all services will be combined into single unit and will related as single jar/war file

## **Bank App**

- |--> Coding Standards
- |--> Naming Conventions
- |--> Design Patterns (Best Practices)
- |---> Tools support
- => Open topics (Suggested by Students)

**Daily** 

Loans service

SBI BankApp.war/jar

Admin service

mutual funds

- => In Micro Services ARch, every service will be developed as separate Project having separate packing and all them will integrated using third party tools and softwares .Here
- => 10+ Realtime tools (maven, git, slf4j, junit, Mockito, SonarQube, jacoco, Jenkins, docker,JIRA and etc..) each project is called one MicroServices
- =>10+ Common topics
- --> Resume preparation
- |---> Interview tips

Proj1.jar/war

Proj1 (MS#1) DailyTx Service

Proi2 (MS#2)

Loans service

Proj2.jar/war

- |---> Knowing about IT Industry
- |---> Building a Strong Software Career

Proj3 (M3#1)

|---> How to show gap as the experience

> Hot to arrange the projects and how to explain the projects
Proi4 (MS#4) admin service
Mutual funds Service
All MS projects
will be integrated
and etc
Proj3.jar/war
using third party tools and sofftwares
Proj4.jar/war
In java Domain there are 3 categories of subjects to learn
Programming Languages
a) Java Programming Language (Core java course)
b) Java Technologies (adv.java course)
c) Java Framework (Spring, spring boot and MicroService Course)
=>Programming languages are raw materials of programming providing basic features of the Application devleopment
=> These are directly installable softwares providing compilers and interpreters for checking the syntaxes (rules of programming) and semantics (structure of the programming) of the application Coding.
=>These are base for creating Technologies, frameworks, tools, Operating systems,DB s/ws and etc either directly or indirectly
eg:: Java, c,c++, C#, ada, small talk, java script and etc
=> There are multiple JVM based languages which have got their own compilers and Programming syntaxes and semantics, but all them can use JVM/JRE to execute the compiled byte class (.class file). So these are called JVM based languages
.java
(best) java compiler
.scala
>.class (byte code) scala.compiler> .class (byte code)kts(kotlin) kotlin compiler>.class (byte code)
JRE/JVM
.groovy
groovy compiler
>.class (byte code),
and etc.