www.emexotechnologies.com
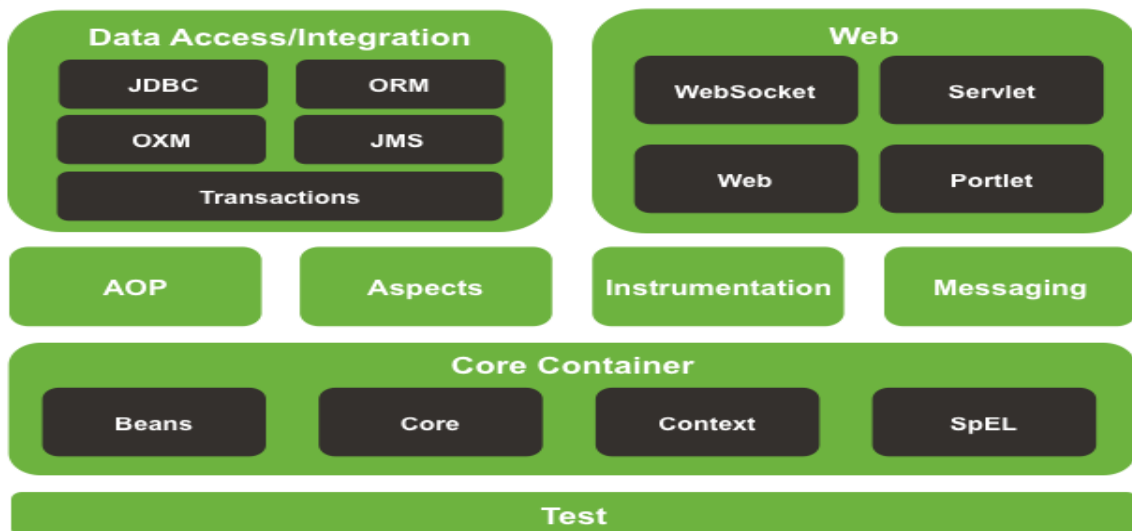
overview

Let eMexo Technologies **Best Spring Framework Training in Electronic City Bangalore** take you from the fundamentals of Spring framework and make you an expert in developing real-time Spring applications. Here are the major topics we cover under this Spring course Syllabus **Overview of Spring Technology, Spring Introduction, Spring Configurations, Annotation-based Dependency Injection (DI), Data Access and JDBC with Spring, Database Transactions with Spring, Aspect Oriented Programming and DAO, Spring Web, Factory Pattern in Spring, Testing a Spring-based Application, Spring Boot Testing Enhancements, Introduction to spring boot, Building Spring Boot Application, Rest Annotation with In-Memory Database & CRUD Operations, Rest Annotation with Relation DB, JPA Repository Concepts, Spring Batch, Actuator Concepts, Spring Boot Custom Logging, Spring Boot Profile Components, Auto Configuration, Thymeleaf Concepts, Integration with Spring Web, Rest with Spring MVC, Core Concepts, Micro Services, Micro Services Design Considerations, Spring Cloud, Spring Cloud Config, Fault Tolerance Concepts, API Gateway, Messaging Queue Concepts (CloudBus), Spring MVC Architecture and Overview, Spring Security, Spring Security Oauth, Swagger API, Spring Integration, and Cloud Hosting.** Every topic will be covered in mostly practical ways with examples for our Spring Framework Course in Electronic City Bangalore.

All the topics will be covered with Practical and hands-on training. Our trainers have industry experience with live project experience in cutting-edge technologies they teach. We hire only Best Spring framework industry specialists as trainers for our **Spring Framework Certification Training in Electronic City Bangalore**.

If you are looking for Spring Framework Certification Course in Electronic City Bangalore, eMexo Technologies is the **Best Spring Framework Training Institute in Electronic City Bangalore**. Come over to our training institute for a free demo class. Let our trainer give you a demo on Spring Framework and only then you take the decision to enroll in the training program.

Training Features

Real-life Case Studies

Do a real-life case study to understand the usage in real-world scenarios.

Assignments

Each class will be followed by a practical assignment switch that can be completed before the next class.

Preparation for interview

Our trainers are professionals working in multinational corporations. They are experts in their field and know exactly what the interviewer will look for in the candidate. Experienced trainers not only share interview questions but also conduct mock interviews to help prepare for the actual interview.

Key Features

eMexo Technologies offers the **Best Spring Framework Training Course in Electronic City Bangalore** with the TOP industry expert trainers.

Here are the key features.

★ Free Demo Class Available

★ Practical Approach

★ Expert & Certified Trainers

★ 100% Job Oriented Training

★ Real World use cases and Scenarios

★ Completed 500+ Batches

★ Certification Guidance

Unit 1: Introduction to Spring

➢ Introduction to Spring Framework

➢ Why Spring

➢ Java Frameworks

➢ Spring Framework architecture

➢ Object Coupling Problem

➢ Loose coupling and Tight coupling

➢ Dependency Injection and its types

➢ Bean Life cycle

➢ Bean scopes (singleton and prototype)

➢ Hands-On

Unit 2: How Does Spring Work Internally?

➢ The Spring Bean Lifecycle

➢ The BeanFactoryPostProcessor interception point

➢ The BeanPostProcessor interception point

➢ Spring Bean Proxies

➢ @Bean method return types

➢ Hands-On

Unit 3: Spring Configurations

➢ What is Autowiring

➢ Different types of autowiring

➢ Implementing autowiring in different ways

➢ Spring bean definition inheritance

➢ Specifying default values using @value annotation

➢ Autowiring bean using @Autowired

➢ Resolving bean using @Qualifier

➢ Defining a component using @Component

➢ Using @PostConstruct and @PreDestroy

➢ Automatic Bean discovery in a Spring application

➢ Using Spring Expression Language(SpEL)

➢ Hands-On

Unit 4: Annotation-based Dependency Injection

➢ Component scanning

➢ Autowiring using @Autowired

➢ Java configuration versus annotations, mixing

➢ Lifecycle annotations: @PostConstruct and @PreDestroy

➢ Stereotypes and meta-annotations

➢ Lab (Annotation Based configuration)

➢ Hands-On

Unit 5: Data Access and JDBC with Spring

➢ Using Jdbc Template

➢ Binding variables in database query

➢ Mapping database rows to Java class

➢ Jdbc Batch Processing

➢ What is Hibernate

➢ Working With Hibernate

➢ Integrating Hibernate with Spring

➢ Database Transaction

➢ Spring support for Database transactions

➢ Hands-On

Unit 6: Database Transactions with Spring

➢ Transactions overview

➢ Transaction management with Spring

➢ Transaction propagation and rollback rules

➢ Transactions and integration testing

➢ Lab (Transaction management, Transaction propagation)

➢ Hands-On

Unit 7: Aspect Oriented Programming and DAO

➢ What is Aspect Oriented Programming (AOP), AOP terminologies

➢ Implementing MethodBeforeAdvice

➢ Implementing AfterReturningAdvice

➢ Implementing MethodInterceptor

➢ Implementing ThrowsAdvice

➢ What is AspectJ

➢ AspectJ provided annotations like @Aspect,@Before etc.,

➢ Data Access Object (DAO)pattern

➢ Using property files

➢ Hands-On

Unit 8: Spring Web

➢ Spring MVC Architecture

➢ MVC Components

➢ Setup Spring MVC Application

➢ Writing a Spring MVC application

➢ Exception Handling

➢ Apache Tiles

➢ Hands-On

Unit 9: Factory Pattern in Spring

➢ Using Spring FactoryBeans

➢ Lab (Spring Factory Beans)

➢ Hands-On

Unit 10: Testing a Spring-based Application

➢ Spring and Test-Driven Development

➢ Spring 5 integration testing with JUnit 5

➢ Application context caching and the @DirtiesContext annotation

➢ Profile selection with @ActiveProfiles

➢ Test data setup with @Sql

➢ Lab(Test-driven development)

➢ Hands-On

Unit 11: Spring Boot Testing Enhancements

➢ Spring Boot testing overview

➢ Integration testing using @SpringBootTest

➢ Web slice testing with MockMvc framework

➢ Slices to test different layers of the application

➢ Lab(Sprint boot testing with Mockito)

➢ Hands-On

Unit 12: Introduction to spring boot

- ➢ Types of software architectures
- ➢ SOA and Monolith Architecture
- ➢ Why Microservices
- ➢ Detailed MicroService Architecture
- ➢ App Layer
- ➢ Business Layer
- ➢ Enterprise Layer
- ➢ Infra Layer
- ➢ Need for Spring Boot
- ➢ Difference between Spring & Spring Boot
- ➢ Advantages with Micro Services
- ➢ Hands-On

Unit 13: Building Spring Boot Application

- ➢ Normal Spring Manual Approach
- ➢ Maven Overview
- ➢ Spring Initializer
- ➢ STS
- ➢ Eclipse with STS Plugin
- ➢ Understanding the Spring Boot auto-configuration
- ➢ Hands-On

Unit 14: Rest Annotation with In Memory Database & CRUD Operations

- ➢ H2

- ➢ Derby

- ➢ HSQL

- ➢ Redis Cache

- ➢ PostMan or Swagger Overview

- ➢ Hands-On

Unit 15: Rest Annotation with Relation DB

- ➢ MySql

- ➢ PostGresSQL

- ➢ Hands-On

Unit 16: JPA Repository Concepts

- ➢ Crud Repository

- ➢ JPA Query Concepts

- ➢ NamedQueries

- ➢ QueryAnnotation

- ➢ Pagination and Sorting

- ➢ AsyncResults

- ➢ Hands-On

Unit 17: Spring Batch

- ➢ Spring batch overview

➢ Tasklet based

➢ Chunk Oriented

➢ Hands-On

Unit 18: Actuator Concepts

➢ Production Monitoring

➢ Health Check Concepts

➢ Security Measurements

➢ Hands-On

Unit 19: Spring Boot Custom Logging

➢ Logging Level

➢ Patterns Changes

➢ Rolling Logs

➢ Hands-On

Unit 20: Spring Boot Profile Components

➢ Introduction

➢ Multiple Properties

➢ YML File

➢ Command Line Runner Example

➢ Real time scenarios of components

➢ Hands-On

Unit 21: Auto Configuration

➢ Introduction

➢ Conditional Flow

➢ Customize conditional annotations

➢ Spring Boot built-in conditional annotations

➢ Hands-On

Unit 22: Thymleaf Concepts

➢ Introduction

➢ Example on Web Application

➢ Validations on Web Applications

➢ Internalization i18n Concepts

➢ Hands-On

Unit 23: Integration with Spring Web

➢ Using Spring Web MVC

➢ Using Spring Web MVC

➢ Need for embedded servers & customization

➢ Hands-On

Unit 24: Rest with Spring MVC

➢ An introduction to the REST architectural style

➢ Controlling HTTP response codes with @ResponseStatus

➢ Implementing REST with Spring MVC, @RequestMapping, @RequestBody and @ResponseBody

➢ Spring MVC's HttpMessageConverters and automatic content negotiation

➢ Lab (Develop Spring Boot application with Restful)

➢ Hands-On

Unit 25: Core Concepts

➢ Spring Boot AOP

➢ Spring Boot Cache

➢ Guava Cache integration

➢ Caffenine Cache

➢ EH Cache

➢ MultiResourceItemReader

➢ Spring MVC vs JAX-RS

➢ SprinBoot with Jersey

➢ Junit Integration

➢ Rest Integration Test Cases

➢ Hands-On

Unit 26: Micro Services

➢ Micro Services Introduction

➢ Principle and Characteristics

➢ Use cases and Benefits

➢ Challenges

➢ Design standards

➢ Micro Services Communication

➢ Synchronous

➢ Asynchronous

➢ Pitfalls

➢ Hands-On

Unit 27: Micro Services Design Considerations

➢ Micro Services per JVM?

➢ Micro Services share the data stores?

➢ Micro Services Transaction boundaries

➢ User Interfaces integration with Micro Services

➢ Challenges in Micro Services implementation

➢ Hands-On

Unit 28: Spring Cloud

➢ Introduction

➢ Cloud Architecture

➢ Cloud application benefits

➢ Hands-On

Unit 29: Spring Cloud Config

➢ Introduction

➢ Setup version control repository

➢ Integration with repository

➢ Hands-On

Unit 30: Fault Tolerance Concepts

➢ Circuit Breaker Pattern

➢ Hystrics Concepts & Hystrix Dashboard

➢ Hands-On

Unit 31: API Gateway

➢ Introduction to ZUUL

➢ Design standards

➢ Integration

➢ Hands-On

Unit 32: Messaging Queue Concepts (CloudBus)

➢ JMS

➢ Apache KAFKA

➢ RabbitMQ

➢ Hands-On

Unit 33: Spring MVC Architecture and Overview

➢ Introduction to Spring MVC and request processing

➢ Controller method signatures

➢ Using @Controller, @RestController, and @GetMapping annotations

➢ Configuring Spring MVC with Spring Boot

➢ Spring Boot packaging options, JAR or WAR

➢ Lab (Develop web applications with Spring MVC)

➢ Hands-On

Unit 34: Spring Security

➢ What problems does Spring Security solve?

➢ Configuring authentication

➢ Implementing authorization by intercepting URLs

➢ Authorization at the Java method level

➢ Understanding the Spring Security filter chain

➢ Spring security testing

➢ Lab (Spring Security Authentication, Authorization, and security filters)

➢ Hands-On

Unit 35: Spring Security Oauth

➢ OAuth 2 Overview

➢ Implantation with Token Based

➢ Implementing OAuth 2 using Spring Security Oauth

➢ Lab (OAuth2.0 and JWT)

➢ Hands-On

Unit 36: Swagger API

➢ Introduction

➢ Integration

➢ Hands-On

Unit 37: Spring Integration

➢ Introduction to messages

➢ Channels, and Endpoints

➢ Receiving Messages

➢ Common Endpoints

➢ Endpoint API

➢ Message Flow components

➢ Introduction to Adapters

➢ Hands-On

Unit 38: Cloud Hosting

➢ Pivotal Cloud Foundry Account Setup

➢ Hosting to Pivotal

➢ AWS Account Setup

➢ Hosting to AWS

➢ Enabling cloud features like load balancing, security

➢ Hands-On

FAQs

1. How is the training organized? How much percentage is theoretical and how much is practical hands-on?

     We at eMexo believe nothing beats hands-on practice when it comes to learning a concept. Our teaching methodology is 100% practical and hands-on-oriented. You learn a concept, you practice it then and there with the trainer. We also give you assignments for each topic which you can practice at home and any doubts regarding the topic can be cleared with the trainer the next day.

2. What is the course duration? How and when do you plan to complete the course?

     We generally cover our courses in 60 hours, however, we are aware that we can't put a hard- stop to learning with a number. Our trainer will make sure that you have learned everything that is part of the curriculum. This could mean 58 hours or 65 hours, doesn't matter.

3. What is the material provided in the training?

     We have industry standard course material which is used by our trainers to train you. At the end of the training apart from the notes which you have taken during the course, we will also provide you with the training material which was used. This training material includes the training content, interview questions, etc.

4. Do you help in preparing for the interview?

     Our trainers are working professionals who work in MNCs. They are the expert in their domain and know exactly what an interviewer looks into a candidate. Our expert trainers apart from sharing the interview questions will also conduct mock interviews to help you prepare for the real interview.

5. Who are your trainers?

     Our trainers are industry experts who work in their respective technologies day in and day out. They work in MNCs and are technology experts within their organisations.

6. What is the total batch size per course?

     We maintain a strict batch size of a maximum of 5 students. We also provide exclusive one-to-one training as well. Talk to our training partner to get more details.

7. Do you provide certification for the course?

Yes, at the end of training we provide a certification of completion.

8.Will I be joining a new batch or be merged with another batch?

You will be added to a new batch.

9. Is fast track training available?

Yes, we also provide fast-track training for those who want to complete the course faster. The curriculum and the total hours required to complete the course will remain the same. However, the trainer will be spending more hours with you to complete the course.

10. Do you assist in job placement?

Our trainers are expert professionals in their organizations and they often act as the interviewer to hire new candidates. Our trainers will help you prepare your resume with industry standards. After all, they know exactly what to look for in a resume.

11. Timings for training - Regular training/weekend training

We provide both regular and weekend training. Talk to our training partner to learn more about the timings.

12. Will you be working on a live project during training?

Yes, apart from doing the hands-on practice our trainer will also be taking a real-world project and working with you for the implementation.

13. What happens if I miss a class?

If you miss a class the content of that class will be taught to you again. With us, you might miss a class but not the content.

14. Can I attend a demo before the actual class?

Yes, absolutely! Talk to our training counselor on phone at **+91-9513216462** or email us at **info@emexotechnologies.com** to arrange a free demo. You can also fill in the contact us form below and we will call you to discuss your training requirements.