



Payilagam: SpringBoot with Micro Services – Syllabus

About Payilagam:

"Learn with Confidence. Lead with Character."

Payilagam is a people-centered, technology training institute based in Chennai, dedicated to empowering aspiring software professionals with strong technical and ethical foundations. Established with a vision to bridge the gap between academic learning and IT industry expectations, Payilagam offers comprehensive, hands-on training programs tailored to equip students with real-time project experience and industry-relevant skills.

At Payilagam, the focus goes beyond just teaching – it's about transforming individuals into confident, career-ready professionals through continuous mentoring, practical sessions, and placement support. The institute specializes in a wide range of software technologies including Java, Python, Full Stack Development, Data Science, Software Testing, Spring Boot with Micro-services, and more.

What sets Payilagam apart is its commitment to affordability, quality, and personalized attention, ensuring every student, regardless of their background, gets an equal opportunity to build a rewarding IT career.

Location: https://maps.app.goo.gl/ihZwA4EzzLSief1B9?g_st=ac

What Others say about Payilagam:

Check Video Reviews from our Trainees here.

https://www.youtube.com/results?search_query=payilagam+reviews

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Web Technology

- What is a server, basic client-server architecture.
- Understanding HTTP methods.
- HTTP status codes.
- What is Spring and Spring Boot.
- Learning the architecture diagram of Spring MVC, understanding the flow of Spring MVC.

Maven Key Concepts

- How to build a Maven project.
- Maven Life Cycle.
- Building JAR and WAR files.
- Difference between JAR and WAR.

Spring Boot with REST API

- Understanding the basic annotations used for building a monolithic enterprise application.
- Creating POJO, using Lombok dependency.
- Creating Service Layer.
- Connecting controller, service, repository, and entity.
- RestTemplate implementation.
- Consuming REST API with a real-time scenario.

Spring Data Validation

- Validating the incoming request.
- Types of validation.

Spring JPA

- What is a Repository and its types.
- Difference between CRUD and JPA Repository.
- User-defined query.

Spring Hibernate

- Hibernate concepts.
- One-to-One Mapping.
- One-to-Many Mapping.
- Many-to-Many Mapping.
- Creating custom queries (Native Query and JPQL).

Spring Connectivity with PostgreSQL

- Usage of JDBC Driver.
- Setting path in application properties file.

Spring Security

- Spring Security Architecture.
- Spring default authentication.
- Spring Basic Auth.
- Spring In-Memory Authentication.
- Spring JWT Authentication.
- Creating various roles for users.
- Authorization and authentication as per roles.

Spring Exception Handling

- Global Exception Handling.
- Handling default and user-defined exceptions.
- Presenting proper error messages as per the exception occurred.

Thymeleaf

- Adding Thymeleaf dependency.
- Understanding front-end flow.
- Using Thymeleaf templates for our project to create front-end views.

Spring Boot Cache

- Implementation of Redis Cache service.

Spring Micro Services

- What are Micro Services?.
- Monolith vs. Micro Service architecture.
- Benefits and challenges of Micro Service.
- Implementation of service discovery
 1. Eureka Server
 2. Eureka Client
- API Gateway
- Spring Cloud Gateway.
- Application Monitoring.
- Actuator.
- Docker Basics

Spring Logging

- Implementing SLF4J for logging service.
- Creation of log file and maintenance.

Spring Messaging using Kafka

- Asynchronous event handling using Kafka.
- Integration of Spring with Kafka service.

Tools

- IntelliJ or Eclipse - IDE
- Postman - API development
- DBeaver - Database (PostgreSQL)
- GitLab - Code versioning

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