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ABOUT THE PROGRAM

The majority of Altimetrik projects leverage microservices architecture and public/private cloud in their applications. In this context, improving expertise in microservices and cloud technologies is a must. This course was created using hand-picked courses from Udemy to help participants become adept in

- a. creating applications that employ Microservices Architecture,
- b. establishing communication between services,
- c. securing, monitoring, dockerizing, and deploying services in AWS

The curriculum is self-paced, with mentors providing guidance on various topics and weekly introductions to each topic.

PROGRAM BENEFITS

- 1) The curriculum is tied to personal growth and career goals.
- 2) Linked Annual Performance Assessment. The certification can be included as a goal in the Annual Performance Evaluation.
- 3) Certificate course: - A certificate will be awarded at the end of the programme based on the various assessment criteria.

PROGRAM STRUCTURE

The programme is available in two electives in this Cohort, which begins in February 2023.

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1. Microservices Developer Certification in Java and Cloud

Week No	Topic
WEEK 1	<p>1. Functional programming Review https://altimetrik.udemy.com/course/microservices-with-spring-boot-and-spring-cloud/ section 12 (49 minutes)</p> <p>2. Spring and spring boot Fundamentals https://altimetrik.udemy.com/course/spring-boot-and-spring-framework-tutorial-for-beginners section 1, section 2, section 3, section 4 (4 Hrs 8 Minutes)</p>
WEEK 2	<p>1. Spring security https://altimetrik.udemy.com/course/spring-boot-and-spring-framework-tutorial-for-beginners section 16 (2 Hr 50 Min)</p> <p>2. Restful webservices with springboot https://altimetrik.udemy.com/course/microservices-with-spring-boot-and-spring-cloud/ interactions- Section 10, Section 11 : (2 Hr 28 minutes)</p> <p>3. Master Class in- API Best Practices</p>
WEEK 3	1. Microservices

	https://altimetrik.udemy.com/course/microservices-with-spring-boot-and-spring-cloud/ Section 1, Section 2, section 4 : (1 Hr 05 Minutes) 2. Restful services continued https://altimetrik.udemy.com/course/microservices-with-spring-boot-and-spring-cloud/ section 4 , section 6 : (3 Hr 40 Minutes)
WEEK 4	1. Microservices – deployment with docker https://altimetrik.udemy.com/course/microservices-with-spring-boot-and-spring-cloud/ section 7 (2 Hr 6 Minutes) 2. Unit and Integration Testing for Microservices https://altimetrik.udemy.com/course/testing-spring-boot-application-with-junit-and-mockito/ section 1 to section 3 (2 Hr 29 minutes) 3. Master Class in - <i>Monolith to Microservices</i>
WEEK 5	1. Unit and Integration Testing for Microservices (continued) https://altimetrik.udemy.com/course/testing-spring-boot-application-with-junit-and-mockito/ section 4 to section 7 (5 Hr 04 minutes)
WEEK 6	1. Microservices deployed in Kubernetes https://altimetrik.udemy.com/course/microservices-with-spring-boot-and-spring-cloud/ section 8 (3Hr 23 Min) 2. Cloud Fundamentals (AWS) https://altimetrik.udemy.com/course/introduction-to-cloud-computing-on-amazon-aws-for-beginners/ section 1 to section 5 (2 Hr 27 Minutes) 3. Master class in Docker and Kubernetes
Week 7	1. Cloud Fundamentals (AWS) – continued, Databases in AWS https://altimetrik.udemy.com/course/introduction-to-cloud-computing-on-amazon-aws-for-beginners/ section 6 to section 11 (4 Hr 19 minutes) 2. MongoDB with Springboot https://altimetrik.udemy.com/course/mongodb-with-spring-boot-spring-data-mongorepository-mlab-cloudfoundry - section 1- section 4 (56 Min)
WEEK 8	1. MongoDB with Springboot (continued) https://altimetrik.udemy.com/course/mongodb-with-spring-boot-spring-data-mongorepository-mlab-cloudfoundry - section 5- section 7 (1 Hr 37 Min) 2. Event Driven Microservices https://altimetrik.udemy.com/course/building-microservices-with-spring-boot-and-spring-cloud/ section 25 to section 27 (4Hr 35 Minutes) 3. Master Class in cloud deployment and monitoring
WEEK 9	1. Deploying Microservices to Cloud

	https://altimetrik.udemy.com/course/deploy-spring-microservices-to-aws-with-ecs-and-aws-fargate Section 1 to section 7 (3 Hr 42 Min) 2. Project detailing (Mentor-led with team and account's technical contacts) The project will be associated with the creation of a microservice that incorporates all cross-cutting concerns and API development best practises. The expectation is to run the application in local environment and conduct a demonstration with swagger https://altimetrik.udemy.com/course/building-microservices-with-spring-boot-and-spring-cloud section 20
WEEK 10	1. Deploying Microservices to Cloud – continued https://altimetrik.udemy.com/course/deploy-spring-microservices-to-aws-with-ecs-and-aws-fargate Section 8 and Section 10 (1 Hr 24 minutes) 2. Project Execution Master Class in Microservices Patterns
WEEK 11	1. Project Execution/ Interim Assessment – Interim assessment by respective Technical POCs from account
WEEK 12	1. Project Execution/ Evaluation 2. Final Assessment (Hackerrank Test based on the topics in the course – 2 Hrs)

2. Microservices Lead Certification in Java and Cloud

WEEK 1	1. Spring Boot and Rest API – review https://altimetrik.udemy.com/course/building-microservices-with-spring-boot-and-spring-cloud Section 4 to section 8 (3 Hr 36 Minutes) The code from section 3 has to be downloaded and executed before proceeding with section 4 2. Microservices https://altimetrik.udemy.com/course/building-microservices-with-spring-boot-and-spring-cloud Section 9 (46 Minutes)
WEEK 2	1. Microservices Continued https://altimetrik.udemy.com/course/building-microservices-with-spring-boot-and-spring-cloud Section 10 (1 Hr 15 Minutes) 2. Spring Cloud https://altimetrik.udemy.com/course/building-microservices-with-spring-boot-and-spring-cloud Section 11 to section 18 (4 Hr 27 Minutes) 3. Master Class in API Best Practices
WEEK 3	1. Spring Cloud Continued https://altimetrik.udemy.com/course/building-microservices-with-spring-boot-and-spring-cloud section 19 to section 21 (2 Hr 13 minutes) 2. Dockerize Application https://altimetrik.udemy.com/course/building-microservices-with-spring-boot-and-spring-cloud section 22 (45 minutes) 3. API management and GraphQL

	https://altimetrik.udemy.com/course/software-architecture-design-of-modern-large-scale-systems section 4 (40 minutes) https://altimetrik.udemy.com/course/domain-driven-design-and-microservices section 15 (1Hr 1 Min)
WEEK 4	1. Domain Driven design https://altimetrik.udemy.com/course/domain-driven-design-and-microservices Section 1 to section 7. (5 Hrs 12 minutes) 2. Master Class in - Monolith to Microservices
WEEK 5	1. Domain Driven design and Domain Events – continued https://altimetrik.udemy.com/course/domain-driven-design-and-microservices section 8 , section 9 (2 Hr 17 Minutes) 2. Cloud Fundamentals (AWS) https://altimetrik.udemy.com/course/introduction-to-cloud-computing-on-amazon-aws-for-beginners/ section 1 to section 5 (2 Hr 27 Minutes)
WEEK 6	1. Cloud Fundamentals continued https://altimetrik.udemy.com/course/introduction-to-cloud-computing-on-amazon-aws-for-beginners/ section 6 to section 11 (4 Hr 19 minutes) 2. Master class in- Docker and Kubernetes
WEEK 7	1. Deploying Microservices using Kubernetes and Cloud https://altimetrik.udemy.com/course/kubernetes-crash-course-for-java-developers section 1 to 6 (4Hrs 56 minutes)
WEEK 8	1. Deploying Microservices using Kubernetes and Cloud https://altimetrik.udemy.com/course/kubernetes-crash-course-for-java-developers section 7 to section 9 (2 Hr 28 Minutes) 2. Master Class in Cloud Deployment and Monitoring 3. Microservices pattern (DB performance) https://altimetrik.udemy.com/course/domain-driven-design-and-microservices section 10 and section 11 (2 Hrs)
WEEK 9	1. Microservices Patterns continued (data integrity ,saga) https://altimetrik.udemy.com/course/domain-driven-design-and-microservices section 12 to section 14 (2 Hr 10 minutes) 2. System design at large scale https://altimetrik.udemy.com/course/software-architecture-design-of-modern-large-scale-systems section 1 to section 3, section 5 to section 6 4 Hr 33 minutes) 3. Project detailing (Mentor-led with team and account's technical contacts) The project will be associated with the creation of multiple microservices that incorporates all cross-cutting concerns and one of the microservices patterns discussed in the course

	Ref: https://altimetrik.udemy.com/course/microservices-clean-architecture-ddd-saga-outbox-kafka-kubernetes
WEEK 10	<ol style="list-style-type: none"> 1. Project Execution 2. Master Class in Microservices Patterns
WEEK 11	<ol style="list-style-type: none"> 1. Project Execution/ Interim Assessment – Interim assessment by respective Technical POCs from account
WEEK 12	<ol style="list-style-type: none"> 1. <i>Project Execution/ Evaluation</i> 2. Final Assessment (Hackerrank Test based on the topics in the course – 2 Hrs)

2. React JS Certification

Please retain the topics that are required and add necessary react topic based on any course curriculum

WEEK 1	<ol style="list-style-type: none"> 1. Modern ES6/ES7 Java script concepts https://altimetrik.udemy.com/course/javascript-es6-tutorial/learn/lecture/5422280?learning_path_id=3361302#overview Section: 3 to 10 and 13 to 15 (3 hours 45 Minutes) 2. TypeScript Concepts https://altimetrik.udemy.com/course/typescript-for-professionals/learn/lecture/32861472?learning_path_id=3361302#overview Section 1 and 2 (1 hours 45 Minutes)
WEEK 2	<ol style="list-style-type: none"> 1. React JS https://altimetrik.udemy.com/course/react-front-to-back-2022/learn/lecture/29768998?learning_path_id=3361302#overview Section: 1 to 7 and 12 ,17 and 18 (5 hours 30 Minutes) 2. Master Class in- API Best Practices
WEEK 3	<ol style="list-style-type: none"> 1. React Js - Continued https://altimetrik.udemy.com/course/redux-with-react-learn-redux-with-modern-react/learn/lecture/17002190?learning_path_id=3361302#overview Section : 2 and 3 (2 hours 30 Minutes) 2. React / Custom Hooks https://altimetrik.udemy.com/course/react-hooks-tutorial/learn/lecture/13742674?learning_path_id=3361302#overview Section: 2 and 6 (3 hours)
WEEK 4	<ol style="list-style-type: none"> 1. Redux/ Flux/ Redux-Saga / Redux-Thunk Architecture https://altimetrik.udemy.com/course/redux-saga/learn/lecture/18774842#overview (1 hours 30 Minutes) 2. <i>Improve performance concept - react components / Webpack / Babel / Lazy Loading / ReactMemo / Avoid re-rendering component.</i> https://altimetrik.udemy.com/course/react-2nd-edition/learn/lecture/7707732#overview Section: 6,9 and 10 (4 hours 30 Mins) 3. Master Class in - Monolith to Microservices

WEEK 5	1. Redux/ Flux/ Redux-Saga / Redux-Thunk Architecture and Improve performance concept and <i>Improve performance concept</i> – Continued https://altimetrik.udemy.com/course/react-2nd-edition/learn/lecture/7707732#overview Section: 11 and 19 (5 hours)
WEEK 6	1. User Authentication with client and server apps using JWT Token https://altimetrik.udemy.com/course/react-redux-tutorial/learn/lecture/10467028#overview Section: 5 and 6 (5hr) Master class in- Docker and Kubernetes
WEEK 7	1. Jest - Unit testing / Code coverage using Jest https://altimetrik.udemy.com/course/react-testing-library-and-jest/learn/lecture/35701642#overview Section: 1 to 6 (3hr 30mins) Docker and Kubernetes
WEEK 8	1. Error Boundaries 2. Deploying React Applications to Cloud 3. Master Class in - cloud deployment and monitoring
WEEK 9	1. Deploying React Applications to Cloud (continued) 2. <i>Project detailing (Mentor-led with team and account's technical contacts)</i>
WEEK 10	1. <i>Project Execution</i> 2. Master Class in <i>Microservices Patterns</i>
WEEK 11	1. Project Execution/ Interim Assessment – Interim assessment by respective Technical POCs from account
WEEK 12	1. <i>Project Evaluation</i> 2. Final Assessment (Hacker Rank test)

WHO IS THIS PROGRAM FOR

1. **Microservices Developer Certification in Java and Cloud:** In this cohort expects knowledge of Java 1.8 and Spring, Oracle, JPA, JDBC template, JUnit testing, Mockito. This course is ideal for developers who are less than 5 years experienced.
2. **Microservices Lead Certification in Java and Cloud:** In this cohort expects knowledge of Java 1.8 and Spring Boot, JPA, JDBC template, JUnit testing, Mockito, Oracle, Design Patterns in Java, and Functional programming. This course is ideal for developers who are between 5 and 10 years experienced.
3. **The React certification course expects** the below knowledge
 - JavaScript + HTML + CSS fundamentals are absolutely required
 - You DON'T need to be a JavaScript expert to succeed in this course!
 - ES6+ JavaScript knowledge is beneficial
 - Visual Studio Code editor
 - Node.js
 - React dev tool & Redux dev tool extensions

CERTIFICATE

Sample certificate to be added here

SUCCESSFUL COMPLETION

Successful completion requires

1. 60% marks in the assessments excluding Pre-Assessment, if any
2. Completion of the project with all criteria mentioned in the Project's Done definition
3. 100% Completion of the Udemy courses

MENTORS

1. Chandrasekar J
2. Govind Agarwal
3. Koteswara sarma Varanasi (KV)
4. Sasikumar Palakkizhi
5. Amitkumar Arun Marode
6. Sanjeev Bhalerao

PROGRAM COORDINATORS

1. Monika Himanshu Vaidya – Allocation of participants , schedules and schedule delays, single point of contact for all general queries.
2. Jyotsna Singal – Academic Quality, content
3. Srikanth Palagani - tools used in the program such as playground, Udemy, Hackerrank, maga dashboard