# **Assessment of 5 days JEE Training**

**Purpose**:

Assessment of the 5 Days training of Architect Enterprise Applications with Jakarta EE (Microservices with Spring Boot)

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**GitHub URL: https://github.com/ccsyen96/microservices**

**Section A : Multiple Choices ( 20% )**

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| **No** | **Questions** |
| 1 | What is JEE ?   1. Java Enterprise Edition 2. Jakarta Enterprise Edition 3. Jupiter Environment Edition 4. Java Environment Edition |
| Answer: b) Jakarta Enterprise Edition | |
| 2 | What are the Not true about Git Hubs   1. Version Control and keep track changes of file 2. GitHub is a website to hosts repositories and source file online 3. Is a networking hub to control the network bandwidth and network speed 4. You can make use of github as your IT knowledge profile |
| Answer:  c) Is a networking hub to control the network bandwidth and network speed | |
| 3 | Which are the below Not covered under Spring   1. Dependencies Injection 2. AOP (Aspect Oriented Programming) 3. Java EE 4. Spring Boot |
| Answer: b) AOP (Aspect Oriented Programming) | |
| 4 | What is Dependency Injection?   1. It is a design pattern which implements Inversion of Control for software applications. 2. It is one of the spring module. 3. It is a technique to get dependencies of any project. 4. It is used to promote tight coupling in code. |
| Answer:   1. It is a technique to get dependencies of any project. | |
| 5 | Which are the below is Not HTTP method of restful services   1. Put 2. Post 3. Backup 4. Delete |
| Answer: d) Delete | |
| 6 | Which of the following components of HTTP response indicates server status for the requested resource?   1. Status/Response Code 2. HTTP Version 3. Response Header 4. Response Body |
| Answer: a) Status/Response Code | |
| 7 | Which of the following HTTP methods should be used to fetch resources using RESTful web service?   1. GET 2. DELETE 3. PUT 4. OPTIONS |
| Answer: a) GET | |
| 8 | Which of the following elements maps java.util.List property in hibernate?   1. <set> 2. <list> 3. <bag> 4. <map> |
| Answer: a) <set> | |
| 9 | What is Not true about Microservices below   1. Is a design pattern 2. It can be installed 3. It promote scalability 4. It promote ease of performance tuning |
| Answer: b) It can be installed. | |
| 10 | API is stands for Application Programming Interface   1. True 2. False |
| Answer: a) True | |

**Section B : Multiple Choices ( 20% )**

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| 1 | Provide 3 benefits of using GitHub? |
| Answer:   1. Easy for open-source project contributions. 2. Repository for coding communities for wide exposure of project developments. 3. Track changes is available for developers to trace out previous historical version for developed project. | |
| 2 | Provide 5 benefits of using Microservices? |
| Answer:   1. Independently deployable for multiple team autonomies. 2. Ease of scalability. 3. Ease of performance handling. 4. Provide loose coupling services for multiple services like mining. 5. Support various type of design pattern and framework like Spring Boot, Kurbrnetes, Angular Application and so on. | |
| 3 | Provide 3 disadvantages of using Microservices? |
| Answer:   1. Complex and experience needed. 2. Expensive for combination of multiple framework and design pattern like network scalability hardware, Kurbrnetes and so on. 3. Not suitable for small scale company with less than concurrent 100 users. | |

**Section C : Writing Code (60 %)**

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| 1 | Commit Your Projects to your own repository as profile  This exercise needs completion of the Manual B and Manual D setup as URL below  [https://github.com/ccsyen96/microservices](https://github.com/ccsyen96/microservices%20)  It should contains of 2 projects as below on your own repository   1. covid-model 2. covid-web |
| 2 | Troubleshooting using Lombok Logger  Hit the <http://localhost:8081/covid/logging?aNumberOnly=testing> on browser then should throw some error on log file. Locate the log file and paste the top 5 lines of stacktrace. Stack Trace should contain time and date of the exercise week.  Example:  2021-03-08 19:28:51.040 ERROR 7580 --- [nio-8081-exec-2] o.a.c.c.C.[.[.[.[dispatcherServlet] : Servlet.service() for servlet [dispatcherServlet] in context with path [] threw exception [Request processing failed; nested exception is java.lang.NumberFormatException: For input string: "testing"] with root cause  java.lang.NumberFormatException: For input string: "testing"  at java.lang.NumberFormatException.forInputString(NumberFormatException.java:68) ~[?:?]  at java.lang.Integer.parseInt(Integer.java:652) ~[?:?]  at java.lang.Integer.parseInt(Integer.java:770) ~[?:?]  at com.app.controller.MyCovidController.getLogging(MyCovidController.java:72) ~[classes/:?] |
| Answer:  java.lang.NumberFormatException: For input string: "testing"  at java.lang.NumberFormatException.forInputString(NumberFormatException.java:68) ~[?:?]  at java.lang.Integer.parseInt(Integer.java:652) ~[?:?]  at java.lang.Integer.parseInt(Integer.java:770) ~[?:?]  at com.app.controller.CovidController.getLogging(CovidController.java:126) ~[classes/:?] | |
| 3 | Your First Practical Spring MVC. Objective is to test the HTTP get and get a hello API response  Refer to the TODO: Practical 1 on  [https://github.com/ccsyen96/microservices/blob/main/my-covid-web/src/main/java/com/app/controller/CovidController.java](https://github.com/ccsyen96/microservices/blob/main/my-covid-web/src/main/java/com/app/controller/CovidController.java%20) |
| 4 | Creating your add and delete Service  Refer to the TODO: Practical 4 on  [https://github.com/ccsyen96/microservices/blob/main/my-covid-web/src/main/java/com/app/controller/CovidController.java](https://github.com/ccsyen96/microservices/blob/main/my-covid-web/src/main/java/com/app/controller/CovidController.java%20) |
| 5 | Practical 5 - Loosely-Couple Microservices  The mining service under MyCovidController is not optimized and tight coupling to the service. Imagine that you would have 20-30 mining services and each time a HTTP get operation will invoke these services.  The HTTP get - “/covid/mining/my” and relevant classes need to move to a new project and new service  On the covid-web project, you may need to split the service into 2 so it will be cleaner. |