# **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/KahouTong/sample**

**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: a) before 2019, b) after 2019 | |
| 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 | |
| 3 | Which are the below Not covered under Spring   1. Dependencies Injection 2. AOP (Aspect Oriented Programming) 3. Java EE 4. Spring Boot |
| Answer: d | |
| 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: a,c,d | |
| 5 | Which are the below is Not HTTP method of restful services   1. Put 2. Post 3. Backup 4. Delete |
| Answer: c | |
| 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 | |
| 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 | |
| 8 | Which of the following elements maps java.util.List property in hibernate?   1. <set> 2. <list> 3. <bag> 4. <map> |
| Answer: b | |
| 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 | |
| 10 | API is stands for Application Programming Interface   1. True 2. False |
| Answer: a | |

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

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| 1 | Provide 3 benefits of using GitHub? |
| Answer:  Version Control and keep track changes of file  IT knowledge profile showcase to recruiter  Easy to contribute to open-source projects | |
| 2 | Provide 5 benefits of using Microservices? |
| Answer:  promote scalability  promote ease of performance handling  improved fault isolation  independently deployable which enable continuous improvement and faster app updates  cross-cutting business functionality | |
| 3 | Provide 3 disadvantages of using Microservices? |
| Answer  complex to handle and develop  expensive architecture  not suitable for small company | |

**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/pcyuen98/covidAPI>  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/:?]  at jdk.internal.reflect.NativeMethodAccessorImpl.invoke0(Native Method) ~[?:?] | |
| 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/pcyuen98/covidAPI/blob/main/covid-web/src/main/java/com/app/controller/CovidController.java> |
| 4 | Creating your add and delete Service  Refer to the TODO: Practical 4 on  <https://github.com/pcyuen98/covidAPI/blob/main/covid-web/src/main/java/com/app/controller/CovidController.java> |
| 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. |