**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/nadizeq/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: b | |
| 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: c | |
| 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: c | |
| 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 java.util.ArrayList.<list> | |
| 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   1. Showcase the work case has been done to polish your CV 2. Keep track of changes of the code across version 3. Can easily contribute to open source project by using git command easily | |
| 2 | Provide 5 benefits of using Microservices? |
| Answer   1. Scalable 2. Independently deployable 3. Reduce downtime through fault isolation 4. Ease of understanding 5. Smaller codebase which led to smaller and faster deployments | |
| 3 | Provide 3 disadvantages of using Microservices? |
| Answer   1. Communication between service is complex 2. Hard to debug the problem as the service has it own set of logs 3. More service is equivalent to more resources | |

**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:  Paste your stacktrace here  2021-03-16 14:30:53.180 INFO 29516 --- [http-nio-8081-exec-3] c.a.c.CovidController : getLogging() started, requestParamvalue=testing  2021-03-16 14:30:53.193 ERROR 29516 --- [http-nio-8081-exec-3] 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.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. |