**Consolidated Walmart questions-Advanced**

**SprigBoot**

**1.Difference between Spring and Spring boot / which one you prefer spring or spring boot?**

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| --- | --- |
| **Spring** | **Spring Boot** |
| **Spring Framework is a widely used Java EE framework for building applications.** | **Spring Boot Framework is widely used to**  **develop REST APIs.** |
| **It aims to simplify Java EE development that makes developers more productive.** | **It aims to shorten the code length and provide the easiest way to develop Web Applications.** |
| **The primary feature of the Spring Framework is dependency injection.** | **The primary feature of Spring Boot is Autoconfiguration. It automatically configures the classes based on the requirement.** |
| **It helps to make things simpler by allowing us to develop loosely coupl ed applications.** | **It helps to create a stand-alone application with less configuration.** |
| **The developer writes a lot of code (boilerplate code) to do the minimal task.** | **It reduces boilerplate code.** |
| **To test the Spring project, we need to set up the sever explicitly.** | **Spring Boot offers embedded server such as Jetty and Tomcat, etc.** |
| **It does not provide support for an in-memory database.** | **It offers several plugins for working with an embedded and in-memory database such as H2.** |
| **Developers manually define dependencies for the Spring project in pom.xml.** | **Spring Boot comes with the concept of starter in pom.xml file that internally takes care of downloading the dependencies JARs based on Spring Boot Requirement.** |

**2. How to create Spring Boot Application**

1. **From scratch by adding dependencies manually**
2. **Using spring initializer**
3. **Using STS - > file -> new -> spring starter project will create a new project.**
4. **Using Spring boot CLI**

**What type of developing methodologies?**

**1.Agile** –

The Agile methodology is a project management approach that involves breaking the project into phases and emphasizes continuous collaboration and improvement. Teams follow a cycle of planning, executing, and evaluating.

**2.waterfall model**

**T**he Waterfall methodology — also known as the Waterfall model — is a sequential development process that flows like a waterfall through all phases of a project (analysis, design, development, and testing, for example), with each phase completely wrapping up before the next phase begins.

**DataBase/sql**

1. **Truncate Vs Delete**

| **S.NO** | **Delete** | **Truncate** |
| --- | --- | --- |
| **1.** | **The DELETE command is used to delete specified rows(one or more).** | **While this command is used to delete all the rows from a table.** |
| **2.** | **It is a DML(Data Manipulation Language) command.** | **While it is a DDL(Data Definition Language) command.** |
| **3.** | **There may be a WHERE clause in the DELETE command in order to filter the records.** | **While there may not be WHERE clause in the TRUNCATE command.** |
| **4.** | **In the DELETE command, a tuple is locked before removing it.** | **While in this command, the data page is locked before removing the table data.** |
| **5.** | **The DELETE statement removes rows one at a time and records an entry in the transaction log for each deleted row.** | **TRUNCATE TABLE removes the data by deallocating the data pages used to store the table data and records only the page deallocations in the transaction log.** |
| **6.** | **DELETE command is slower than TRUNCATE command.** | **While the TRUNCATE command is faster than the DELETE command.** |
| **7.** | **To use Delete you need DELETE permission on the table.** | **To use Truncate on a table we need at least ALTER permission on the table.** |
| **8.** | **Identity of column retains the identity after using DELETE Statement on the table.** | **Identity the column is reset to its seed value if the table contains an identity column.** |
| **9.** | **The delete can be used with indexed views.** | **Truncate cannot be used with indexed views.** |

1. **Delete Vs Drop**

| **S.NO** | **DROP** | **TRUNCATE** |
| --- | --- | --- |
| **1.** | **The DROP command is used to remove table definition and its contents.** | **Whereas the TRUNCATE command is used to delete all the rows from the table.** |
| **2.** | **In the DROP command, table space is freed from memory.** | **While the TRUNCATE command does not free the table space from memory.** |
| **3.** | **DROP is a DDL(Data Definition Language) command.** | **Whereas the TRUNCATE is also a DDL(Data Definition Language) command.** |
| **4.** | **In the DROP command, view of table does not exist.** | **While in this command, view of table exist.** |
| **5.** | **In the DROP command, integrity constraints will be removed.** | **While in this command, integrity constraints will not be removed.** |
| **6.** | **In the DROP command, undo space is not used.** | **While in this command, undo space is used but less than DELETE.** |
| **7.** | **The DROP command is quick to perform but gives rise to complications.** | **While this command is faster than DRO** |

1. **what is inner and outer join**

**Join –**

**A JOIN clause is used to combine rows from two or more tables, based on a related column between them.**

**Here are the different types of the JOINs in SQL:**

* **(INNER) JOIN: Returns records that have matching values in both tables**
* **LEFT (OUTER) JOIN: Returns all records from the left table, and the matched records from the right table**
* **RIGHT (OUTER) JOIN: Returns all records from the right table, and the matched records from the left table**
* **FULL (OUTER) JOIN: Returns all records from the both tables where un matched records also included**

**SELECT Orders.OrderID, Customers.CustomerName, Orders.OrderDate  
FROM Orders  
INNER JOIN Customers ON Orders.CustomerID=Customers.CustomerID;**

**SELECT emp.emp\_id,emp.emp\_name,dept.department\_name from Employee emp inner Join Department dept ON emp.dept\_id=dept.dept\_id;**

1. **what is index**

* An index is a database structure that you can use to improve the performance of database activity. A database table can have one or more indexes associated with it.

**Ref:** <https://www.guru99.com/indexing-in-database.html>

**what is normalization/de normalization**

**what Is procedure & function**