1.What is JSON?

JavaScript Object Notation (JSON) is a standard text-based format for representing structured data based on JavaScript object syntax. It is commonly used for transmitting data in web applications (e.g., sending some data from the server to the client, so it can be displayed on a web page, or vice versa).

2.What is JSON array?

A JSON array contains zero, one, or more ordered elements, separated by a comma. The JSON array is surrounded by square brackets [ ] . A JSON array is zero terminated, the first index of the array is zero (0). Therefore, the last index of the array is length - 1

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3.Soap and Restful Webservices?

SOAP (Simple Object Access Protocol) is a standards-basedweb services access protocol that has been around for a long time. …

REST (Representational State Transfer) is another standard, made in response to SOAP's shortcomings. It seeks to fix the problems with SOAP and provide a simpler method of accessing web services.

****4. Web Application:****

An application that the users access over the internet is called a web application. Generally, any software that is accessed through a web browser could be called a web application. When using web applications, users do not have to worry about installing and maintaining the application. Furthermore, web applications provide support for different platforms. Also, it is very easy to use web applications since the only requirement is a web browser. Due to these reasons, web applications have gained an immense popularity. Popular web applications include web mail applications, online auctions, wikis, etc. Generally, web applications are organized in to tiers, where each tier is responsible for a specific task. In the early days, web applications were made up of a single tier, while today, most web applications are built on the three-tier architecture and some complex applications use n-tier architecture (n>3). In the three-tier architecture, the three tiers are dedicated for presentation, application (or logic) and storage from top tier to bottom tier.

****Web Service:****

A web service is a system of software that allows different machines to interact with each other through a network. Web services use XML, SOAP, WSDL and UDDI open standards to achieve this task. XML is a language that can be used to send messages with different platforms and different programming languages and it is used to tag data in web services. SOAP is a protocol that is based on XML that would allow applications to communicate over HTTP and it is used for accessing a web service. WSDL is used to describe and locate a web service. Web services are mainly used to achieve reusability of application components. Application components such as weather reports, currency converters, etc. are widely used. Therefore, without developing them again and again, they are offered as web services, which can be easily used. We services can also be used to exchange data between different applications running on different platforms.

****difference between a Web Application and a Web Service:****

A web application is an application that is accessed through a web browser running on client’s machine whereas a web service is a system of software that allows different machines to interact with each other through a network. Most of the times, web services do not necessarily have a user interface since it is used as a component in an application, while a web application is a complete application with a GUI. Furthermore, web services can be used to communicate or transfer data between web applications running on different platforms.

5.What is a response entity?

ResponseEntity represents the whole HTTP response: status code, headers, and body. As a result, we can use it to fully configure the HTTP response. If we want to use it, we have to return it from the endpoint; Spring takes care of the rest. ResponseEntity is a generic type.

Response Body

The REST API sends a response header and response body in JSON format with information about the success or failure of the REST API call.

The response header can contain the following information:

server

content-type

content-language

content-length

date

connection

transfer-encoding

severity

errorCode

description

logFile

The response body can contain information about the output and additional output ports. If the output type was file, the response body contains a path to the output. If the output type was buffer, the response body contains the buffer contents. The response body can also contain a success or failure code and message

The response body consists of the resource data requested by the client. In our example, we requested the book's data, and the response body consists of the different books present in the database along with their information.

6.Whats is DDL?

A data definition language (DDL) is a computer language used to create and modify the structure of database objects in a database. These database objects include views, schemas, tables, indexes.

ddl. auto is a hibernate configuration property. It is used to validate and exports schema DDL to the database when the SessionFactory is created. If we want to make use of it, we should have to pass the appropriate values to the hibernate.

7. JPARepository, PagingAndSortingRepository and CRUDRepositoy?

CrudRepository mainly provides CRUD functions. PagingAndSortingRepository provides methods to do pagination and sorting records.

JpaRepository provides some JPA-related methods such as flushing the persistence context and deleting records in a batch.

Because of the inheritance mentioned above, JpaRepository will have all the functions of CrudRepository and PagingAndSortingRepository. So if you don't need the repository to have the functions provided by JpaRepository and PagingAndSortingRepository , use CrudRepository

8. what are mappings one-to-one, one-to-many, many-to-one, many-to-many?

One-to-one relationships associate one record in one table with a single record in the other table.

One-to-many relationships associate one record in one table with many records in the other table. ... It is not possible to have two foreign keys for each table as it will be impossible to create records.

**Many-to-many**: Multiple records in one table are related to multiple records in another table.

Many to one:multiple record in one table are related to single records in another table.

1. what are relations in parent child table is-a, uses-a, has-a

[10:04 pm, 10/11/2021] +91 95813 11214: Is-A Relationship in Java

In Java, an Is-A relationship depends on inheritance. Further inheritance is of two types, class inheritance and interface inheritance. It is used for code reusability in Java. For example, a Potato is a vegetable, a Bus is a vehicle, a Bulb is an electronic device and so on. One of the properties of inheritance is that inheritance is unidirectional in nature. Like we can say that a house is a building. But not all buildings are houses. We can easily determine an Is-A relationship in Java. When there is an extends or implement keyword in the class declaration in Java, then the specific class is said to be following the Is-A relationship.

Has-A Relationship in Java

In Java, a Has-A relationship is also known as composition. It is also used for code reusability in Java. In Java, a Has-A relationship simply means that an instance of one class has a reference to an instance of another class or an other instance of the same class. For example, a car has an engine, a dog has a tail and so on. In Java, there is no such keyword that implements a Has-A relationship. But we mostly use new keywords to implement a Has-A relationship in Java.

1. what is transient in jpa

@Transient annotation in JPA or Hibernate is used to indicate that a field is not to be persisted or ignore fields to save in the database. ... It is used to annotate a property or field of an entity class, mapped superclass, or embeddable class.

transient is a variables modifier used in serialization. At the time of serialization, if we don't want to save value of a particular variable in a file, then we use transient keyword. When JVM comes across transient keyword, it ignores original value of the variable and save default value of that variable data type.

1. Controller and RestController

[9:48 pm, 10/11/2021] +91 95813 11214: The @Controller is a common annotation which is used to mark a class as Spring MVC Controller while the @RestController is a special controller used in RESTFul web services and the equivalent of @Controller + @ResponseBody.

The @RestController is relatively new, added only on Spring 4.0 but @Controller is an old annotation, exists since Spring started supporting annotation, and officially it was added on Spring 2.5 version.

The @Controller annotation indicates that the class is a “Controller” e.g. a web controller while the @RestController annotation indicates that the class is a controller where @RequestMapping methods assume @ResponseBody semantics by default i.e. servicing REST API.

The @Controller is a specialization of @Component annotation while @RestController is a specialization of @Controller annotation. It is actually a convenience controller annotated with @Controller and @ResponseBody as shown below.