

Cs311 introduction to web services

Final term file

Question with Answer

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Q #1: JAXP stands for?

Answer: Java API for XML Processing.

Q #2: XSLT stands for?

Answer: Extensible Stylesheet Language Transformations.

Q #3: Working of plugability layer?

Answer: Plugability layer enables components to be replaced or extended without modifying the system's core functionality.

Q #4: SAX stands for?

Answer: Simple API for XML.

Q #5: Name of libraries used by API?

Answer: DOM (Document Object Model) and SAX (Simple API for XML) are commonly used libraries

Q #6: Why is SAX preferred over DOM?

Answer: SAX is preferred over DOM for large XML documents or memory-constrained environments due to its event-driven parsing approach.

Q #7: Difference between SAX and DOM?

Answer: SAX is event-driven and reads XML sequentially without building a full in-memory representation, while DOM builds a complete in-memory representation of the XML document.

Q #8: Marshaling or Unmarshaling?

Answer: Marshaling refers to converting Java objects into XML data, while unmarshaling refers to converting XML data into Java objects.

Q#1: Why do we use Java JDBC?

Answer: We use Java JDBC (Java Database Connectivity) to connect and interact with relational databases from Java programs. It provides a standard API for database access, allowing Java applications to execute SQL queries, retrieve and manipulate data.

Q#2: What is the connection interface?

Answer: The Connection interface in JDBC represents a connection to a database. It allows Java programs to establish a connection to a specific database and provides methods for executing SQL statements and managing transactions.

Q#3: Types of JDBC drivers and advantages/disadvantages of them?

Answer: There are four types of JDBC drivers:

Type 1: JDBC-ODBC Bridge Driver

Type 2: Native-API Driver

Type 3: Network Protocol Driver

Type 4: Thin Driver

Advantages and disadvantages vary based on factors like performance, portability, and dependency on external libraries.

Q#4: What is an API?

Answer: An API (Application Programming Interface) is a set of rules, protocols, and tools that allows different software applications to communicate with each other. It defines the methods and data formats that programs can use to request and exchange information.

Q#5: Describe the DriverManager class.

Answer: The DriverManager class in JDBC is responsible for managing a list of database drivers. It provides methods to register and deregister drivers, establish database connections, and obtain instances of Connection objects.

Q#1: What are web services?

Answer: Web services are software systems designed to allow interoperable communication between different applications over a network. They are typically implemented using standard web protocols such as HTTP and XML-based messaging formats.

Q#2: What does WSDL stand for?

Answer: WSDL stands for Web Services Description Language. It is an XML-based language used to describe the functionality offered by a web service, including the operations it supports, the data types it uses, and the message formats.

Q#3: What does SOAP stand for?

Answer: SOAP stands for Simple Object Access Protocol. It is a protocol used for exchanging structured information in the implementation of web services over a network. SOAP messages are typically XML-based and can be sent over various transport protocols like HTTP, SMTP, etc.

Q#4: What does RDF stand for?

Answer: RDF stands for Resource Description Framework. It is a model for representing metadata or information about resources on the web in a machine-readable format. RDF uses triples to represent relationships between resources.

Q#: What does RSS stand for?

Answer: RSS stands for Really Simple Syndication. It is a web feed format used to publish frequently updated content such as blog posts, news

headlines, audio, and video. RSS allows users to subscribe to content feeds and receive updates automatically.

Q#: Write names of the characteristics of web services.

Answer: Some characteristics of web services include interoperability, platform independence, language neutrality, and standardization of communication protocols and data formats.

Q#: How many ways can we view web service architecture?

Answer: Web service architecture can be viewed in multiple ways, including from a technical perspective focusing on protocols and standards, from a functional perspective focusing on service components and interactions, and from an architectural perspective focusing on system design and integration.

Q#: What are the four layers of the stack?

Answer: The four layers of the web service stack typically include:

Service Transport

XML Messaging

Service Description

Service Discovery

Q#: What does BEEP stand for?

Answer: BEEP stands for Blocks Extensible Exchange Protocol. It is a framework for building network protocols using a simple message-oriented architecture.

Q#: Difference between REST and SOAP?

Answer: REST (Representational State Transfer) is an architectural style that uses standard HTTP methods (GET, POST, PUT, DELETE) for communication and typically relies on lightweight data formats like JSON or XML. SOAP (Simple Object Access Protocol) is a protocol that uses XML-based messaging and can be transported over different protocols such as HTTP, SMTP, etc. REST is generally considered simpler, more lightweight, and easier to use, while SOAP offers more features such as security and transaction support.

Q#: What is a service?

Answer: In the context of web services, a service is a software component or application that provides specific functionality or performs a particular task. It can be accessed and invoked remotely over a network using standard communication protocols.

Q#: Describe JAX-WS?

Answer: JAX-WS (Java API for XML Web Services) is a Java API used to build and deploy SOAP-based web services. It provides annotations and APIs for creating web services using Java classes and methods, and it handles the generation of WSDL (Web Services Description Language) files.

Q#: Ways to develop JAX-WS?

Answer: JAX-WS can be developed using two main approaches:

Bottom-up approach: Starting with existing Java classes and generating WSDL and service endpoints from them.

Top-down approach: Starting with a WSDL document and generating Java classes and service endpoints from it.

Q#: Difference between RPC or document web services?

Answer: RPC (Remote Procedure Call) web services focus on invoking remote methods or functions over a network using a request-response mechanism, while document web services treat the entire XML document as a message exchanged between clients and servers, allowing more flexibility in message structure and data representation.

Q#: Write the type of cookies (2)

Answer: The two types of cookies are:

Session cookies: These cookies are temporary and are stored in the client's browser only until the browser is closed.

Persistent cookies: These cookies are stored on the client's device for a specified duration or until deleted manually.

Q#: Write 5 steps to connect any Java application with the database in Java using JDBC (5)

Answer:

Load the JDBC driver class using `Class.forName()`.

Establish a connection to the database using `DriverManager.getConnection()`.

Create a statement object using the connection's createStatement() method.

Execute SQL queries using the statement object's executeQuery() or executeUpdate() methods.

Close the connection, statement, and result set objects using the close() method to release resources.

Q#: Difference between RPC and Document web services. (5)

Answer: RPC web services focus on invoking remote methods or functions directly, while document web services treat the entire XML document as a message exchanged between clients and servers, providing more flexibility in message structure and data representation.

Q#: In which cases should we use a SAX parser? (3)

Answer: SAX parsers are suitable when dealing with large XML documents or when memory efficiency is critical, as they parse XML documents sequentially without loading the entire document into memory.

Q#: Write the server name in which these JAR files are to be used (5)

servlet-api.jar: This JAR file is typically used in Apache Tomcat, Jetty, or any other servlet container to provide the Servlet API.

weblogic.jar: This JAR file is used in Oracle WebLogic Server for deploying Java EE applications.

javaee.jar: This JAR file is part of the Java EE (Enterprise Edition) platform and can be used in any Java EE application server such as GlassFish, JBoss, or WildFly.

Question: Database se connect krne or ak table ko print krane ka code likhna tha (page no. 334)

Answer: Unfortunately, I don't have access to page 334 of your material. Could you provide more details or context so I can assist you better?

Question: WSDL stands for.....(mcq) answer at page no 338

Answer: WSDL stands for Web Services Description Language.

Question: Which is not the characteristic of web service.....(mcq)

Answer: The characteristic that is not typically associated with web services is tightly coupled architecture.

Question: Write the basic functionality of WSDL, SOAP, and UDDI(3 marks) at page no 343 also in 351

Answer:

WSDL: Defines the interface and operations offered by a web service.

SOAP: Protocol for exchanging structured information in web services.

UDDI: Registry for publishing and discovering web services.

Question: Write the name of the three major web service architecture roles and define them(5 marks). page no 345

Answer:

Service Provider: Entity that offers a web service.

Service Consumer: Entity that consumes or uses the web service.

Service Registry: Repository where service descriptions are published and can be discovered by consumers.

Q #: Empty text node is problem full? Which type of problem raised in this case?

Answer: An empty text node can lead to issues such as extra white space being rendered on a webpage or unexpected behavior when processing XML data.

Q #: Write code in an XML file to correct empty text nodes?

Answer: To correct empty text nodes in XML, you can use the CDATA section or remove the empty text nodes altogether.

Q #: J-Dom steps?

Answer: The steps for using JDOM (Java-based Document Object Model) typically include creating a Document object, parsing an XML file into the Document object, navigating the XML structure, and performing read/write operations.

Q #: Steps to connect JDBC with a database?

Answer: The steps typically include loading the JDBC driver, establishing a connection, creating a statement, executing SQL queries, and handling the results.

Q #: Write 2 differences between RPC and document style?

Answer: RPC web services focus on invoking remote methods or functions directly, while document-style web services treat the entire XML document as a message exchanged between clients and servers, allowing more flexibility in message structure and data representation.

Q #: Steps in JAXB?

Answer: JAXB (Java Architecture for XML Binding) involves generating Java classes from XML schema (XSD), marshalling Java objects to XML, and unmarshalling XML to Java objects.

Q #: Init method code

Answer: The init method is typically overridden in servlets to perform initialization tasks such as setting up resources or loading configuration parameters. The code will vary depending on the specific requirements of the servlet.

Q #: Two ways of viewed in architecture

Answer: Two common ways to view architecture are from a technical perspective focusing on protocols and standards, and from a functional perspective focusing on service components and interactions.

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