

Answers

1. What is the super interface to all the JDBC Drivers, specify their fully qualified name?
 - a. `java.sql.Driver`
 - i. JDBC-ODBC Driver
 - ii. Java-Native API Driver
 - iii. All Java Net Driver
 - iv. Java Native Protocol Driver
2. What is the name of JDBC Type I Driver?
 - a. `java.sql.Driver`
3. What is the name of JDBC Type II Driver?
 - a. `java.sql.Driver`
4. What is the name of JDBC Type III Driver?
 - a. `java.sql.Driver`
5. What is the name of JDBC Type IV Driver?
 - a. `java.sql.Driver`
6. Who provided JDBC Type I Driver?
 - a. Java Soft
7. Who provided JDBC Type II Driver?
 - a. Database vendor
8. Who provided JDBC Type III Driver?
 - a. 3rd party vendors like InterSolv, DataDirect
9. Who provided JDBC Type IV Driver?
 - a. Database vendor
10. Which statement we have to update in CLASSPATH for JDBC Type I Driver?
 - a. `JDK rt.jar`
11. Which statement we have to update in CLASSPATH for JDBC Type II Driver?
 - a. `Oracle ojdbc14.jar or ojdbc6.jar`
12. Which statement we have to update in CLASSPATH for JDBC Type III Driver?
 - a. `IDS driver classes12.jar`
13. Which statement we have to update in CLASSPATH for JDBC Type IV Driver?
 - a. `Oracle ojdbc14.jar or ojdbc6.jar`
14. What is the Type I Driver class name (specify fully qualified class name)?
 - a. `sun.jdbc.odbc.JdbcOdbcDriver`
15. What is the Type II Driver class name (specify fully qualified class name)?
 - a. `oracle.jdbc.driver.OracleDriver`
16. What is the Type III Driver class name (specify fully qualified class name)?
 - a. `ids.sql.IDSDriver`
17. What is the Type IV Driver class name (specify fully qualified class name)?
 - a. `oracle.jdbc.driver.OracleDriver`
18. What is the Type I Driver URL?
 - a. `Jdbc:odbc:dbdsn`
19. What is the Type II Driver URL?
 - a. `jdbc:oracle:oci:@XE`
20. What is the Type III Driver URL?

- a. `Jdbc:ids://localhost:12/conn?dsn=dbsysdsn`
- 21. What is the Type IV Driver URL?
 - a. `jdbc:oracle:thin:@localhost:1521:XE`
- 22. What are various interfaces exist in `java.sql` package?
 - a. `Driver`, `Connection`, `Statement`, `PreparedStatement`, `CallableStatement`, `ResultSet`, `DatabaseMetaData`, `ResultSetMetaData`
- 23. How many Statement interfaces exist in JDBC API?
 - a. `java.sql.Statement`, `java.sql.PreparedStatement`, `java.sql.CallableStatement`
- 24. Specify their significance?
 - a. `Statement` executes and SQL command on DB
 - b. Each `PreparedStatement` executes only one precompiled SQL plan on DB many times
 - c. `CallableStatement` is used to call functions and procedures on DB
- 25. Which operator is used as IN parameter in `PreparedStatement`?
 - a. `'?'` symbol
- 26. Write down the `PreparedStatement` creation syntax?
 - a. `PreparedStatement pstmt=con.prepareStatement("INSERT INTO dept VALUES (?, ?, ?)");`
- 27. Write down the `CallableStatement` creation syntax for calling procedure?
 - a. `CallableStatement cstmt=con.prepareCall("{CALL proc_call(?, ?, ?)}");`
- 28. Write down the `CallableStatement` creation syntax for calling function?
 - a. `CallableStatement cstmt=con.prepareCall("{?=CALL func_call(?)}");`
- 29. How to register out parameter in `CallableStatement`?
 - a. `cstmt.registerOutParameter(1, deptno);`
- 30. Which method is called on `CallableStatement` to execute procedure/function?
 - a. `cstmt.execute()` or `cstmt.executeUpdate()`
- 31. Which method is used to call DML statements on DB?
 - a. `int count=stmt.executeUpdate("insert | update | delete")`
- 32. Which method is used to call DRL statements on DB?
 - a. `ResultSet rs=stmt.executeQuery("select command");`
- 33. What is return type of `ResultSet`?
 - a. No of rows exist in the DB
- 34. How to create scrollable resultset?
 - a. `con.createStatement(ResultSet.TYPE_SCROLL_SENSITIVE, ResultSet.CONCUR_READ_ONLY);`
 - b. `ResultSet rs=stmt.executeQuery("select command")`
- 35. Which methods exist in resultset to perform bi-directional fetch on DB?
 - a. `rs.next()` and `rs.previous()`
- 36. Which method is used to set autocommit false in JDBC?
 - a. `con.setAutoCommit(false);`
- 37. In which interface `commit()` method exist?
 - a. `commit()` method exist in `Connection` interface
- 38. Write down the syntax of creating `CallableStatement` for procedure calling?
 - a. `CallableStatement cstmt=con.prepareCall("{CALL proc_call(?, ?, ?)}");`
- 39. Write down the syntax of creating `CallableStatement` for function calling?
 - a. `CallableStatement cstmt=con.prepareCall("{?=CALL func_call(?)}");`
- 40. How to register out parameters on `CallableStatement` object?
 - a. `cstmt.registerOutParameter(1, deptno);`
- 41. Which method is to call on `CallableStatement` to call function/procedure?

- a. `cstmt.execute()` or `cstmt.executeUpdate()`
- 42. In which package JDBC API exist?
 - a. `java.sql.*`
- 43. Which software is required to obtain JDBC package?
 - a. JDK Software
- 44. In which package Servlets API exist?
 - a. `javax.servlet.*` and `javax.servlet.http.*`;
- 45. Which software is required to obtain Servlets package
 - a. Tomcat `servlet-api.jar`
- 46. What is the super interface from which user defined Servlet classes must inherit from?
 - a. User defined Servlets must implement from “implements Servlet” or extend from “extends GenericServlet” or “extends HttpServlet”
- 47. From which super classes user defined Servlet classes must inherit from?
 - a. `javax.servlet.GenericServlet` or `javax.servlet.http.HttpServlet`
- 48. What are the lifecycle methods in Servlets API?
 - a. `public void init(ServletConfig sc)` throws `ServletException`
 - b. `public void service(ServletRequest req, ServletResponse resp)` throws `ServletException`, `IOException`
 - c. `public void destroy()`
- 49. Which execution model does Servlet follows?
 - a. Singleton-Multithread model
- 50. How safe the variable declared at class level in Servlet?
 - a. Servlet declared class instance variables are not thread safe because single Servlet instance runs in multiple threads
- 51. What is the parameter of `init()` method?
 - a. `ServletConfig`
- 52. Which exception must be written in throws clause of `init()` method?
 - a. `ServletException`
- 53. What are the parameter of `service()` method?
 - a. `ServletException,IOException`
- 54. Which exceptions must be written in throws clause of `service()` method?
 - a. `ServletException,IOException`
- 55. When `init()` method executes?
 - a. Soon after Servlet object creation, before it is being multi threaded
- 56. When `service()` method executes?
 - a. For every client request servlet object runs in thread, from thread `service()` method is called
- 57. When `destroy()` method executes?
 - a. During container/server shutdown
- 58. What are the 5 methods in Servlet interface?
 - a. `init()`, `service()`, `destroy()`, `getServletInfo()`, `getServletConfig()`
- 59. Which statement must be written in `service()` method to obtain `PrintWriter` object that writes output on browser?
 - a. `PrintWriter out=resp.getWriter();`
- 60. How to obtain `ServletContext` object in `init()` method?
 - a. `ServletContext sctxt=sc.getServletContext();`
- 61. How to obtain `ServletContext` object in `service()` method?

- a. `ServletContext sctx= getServletContext();` or `ServletContext sctx= req.getServletContext();`
- 62. How to obtain HttpSession object in service() method?
 - a. `HttpSession hs=hreq.getSession();`
 - b. hreq is the HttpServletRequest object
- 63. How to set the session time out in Servlet?
 - a. `hs.setTimeout(long milliseconds);`
- 64. What are the methods in ServletRequest, HttpSession and ServletContext objects to store, retrieve and remove variables/attributes?
 - a. `setAttribute(Object key, Object value)`
 - b. `Object getAttribute(Object key)`
 - c. `removeAttribute(Object key)`
- 65. How to read "HTML form" data in Servlet?
 - a. `String sname=req.getParameter("sname").trim();`
- 66. What is difference between GET and POST method?
 - a. GET sends 255 chars form data; POST sends unlimited amount of form data
 - b. GET is unsecure because it sends form data as a query string that display output on browser location bar and the same data is called as QUERY STRING; POST sends form data securely because it sends form data through HTTP request body that doesn't displays on browser.
 - c. GET mainly used for query some output from server; POST is used to submit new data to server that is intended to insert/update into DB on server machine.
- 67. Which class inherited Servlet maintains Session management?
 - a. HttpServlet
- 68. What is the purpose of RequestDispatcher interface?
 - a. Purpose of RequestDispatcher is to communicate between Servlet
- 69. How to obtain RequestDispatcher object?
 - a. `RequestDispatcher disp=req.getNamedDispatcher("Servlet_name");`
 - b. `RequestDispatcher disp=req.getRequestDispatcher("/Servlet_url_pattern");`
- 70. What is the purpose of forward() and include()?
 - a. `disp.forward(req,resp)` submits last Servlet output to browser
 - b. `disp.include(req,resp)` includes all the included Servlets output to browser
- 71. What the parameters in forward() and include()?
 - a. `servletRequest, servletResponse`
- 72. How to create RequestDispatcher object to call JSP from Servlet?
 - a. `RequestDispatcher disp=req.getRequestDispatcher("/jsp_file_path");`
- 73. How to create RequestDispatcher object to call another Servlet from Servlet?
 - a. `RequestDispatcher disp=req.getRequestDispatcher("/another_servlet_url_pattern");`
 - b. `disp.include(req,resp);` or `disp.forward(req, resp);`
- 74. What is the difference between forward() and sendRedirect()?
 - a. `forward()` method forwards given servlet output to browser
 - b. `sendRedirect("./path_of_html_or_jsp")` method sends html/jsp file path to browser, browser again requests for that html/jsp on server
- 75. In which interface sendRedirect() method exist?
 - a. HttpServletResponse
- 76. What is Filter?
 - a. Filter is also a web component like Servlet but in contrast to Servlet in runs before and after Servlet execution

77. In which package Filter interface exist?
- javax.servlet.Filter
78. What are the lifecycle methods in Filter?
- public void init(FilterConfig(FilterConfig fc)
 - public void doFilter(ServletRequest req, ServletResponse resp, FilterChain fc)
 - public void destroy()
79. How to configure Filter in web.xml?
- ```

<filter>
 <filter-name>validationFilter</filter-name>
 <filter-class>filters.ValidationFilter</filter-class>
</filter>
<filter-mapping>
 <filter-name>validationFilter</filter-name>
 <url-pattern>/registrationServlet</url-pattern >
</filter-mapping>

```
80. How many scripting tags exist in JSP and name them?
- JSP Comment `<%-- JSP Comment placed here--%>`
  - Declaration element `<%! %>`
  - Expression element `<%= %>`
  - Scriptlet `<% %>`
81. How many directive elements exist in JSP and name them?
- Include directive `<%@include file=""%>`
  - Page directive `<%@ page language="" extends="" import="" session="" buffer="" autoFlush="" isThreadSafe="" errorPage="" isErrorPage="" info="" encoding=""%>`
  - Taglib directive `<%@ taglib uri="" prefix=""%>`
82. How many standard action elements exist in JSP and name them?
- `<jsp:include page=""/>`
  - `<jsp:forward page=""/>`
  - `<jsp:useBean id="" class="">`  
`<jsp:setProperty name="" property="" value=""/>`  
`<jsp:getProperty name="" property=""/>`
  - `</jsp:useBean>`
  - `<jsp:plugin>`  
`<jsp:params>`  
`<jsp:param></jsp:param>`  
`</jsp:params>`  
`<jsp:fallback></jsp:fallback>`
  - `</jsp:plugin>`
83. Which tags are used to include other pages in JSP?
- `<jsp:include page=""/>` and `<%@ include file=""%>`
84. Which tag is used to forward other pages in JSP?
- `<jsp:forward page=""/>`
85. How to increase JSP page buffer size in JSP?
- `<%@ page buffer="8kb"%>`
86. Which tag and its sub tags are used to call Java Bean from JSP and to call its setter and getter methods?
- `<jsp:useBean>` and its sub tags `<jsp:setProperty/>`, `<jsp:getProperty/>`

87. Which tag written code in JSP goes to `out.println()` statement?  
a. Expression tag `<%= %>`
88. Which tag written code in JSP goes to `_jspService()` method?  
a. Scriptlet `<% %>`
89. How many scripting tags exist in JSP and name them?  
a. 4 scripting tags – JSP comment, declaration element, expression element, scriptlet
90. How many directive elements exist in JSP and name them?  
a. 3 directive element `<%@ include %>`, `<%@ page %>`, `<%@ taglib %>`
91. How many standard action elements exist in JSP and name them?  
a. 9 standard action elements `<jsp:include>`, `<jsp:forward>`, `<jsp:useBean>`, `<jsp:setProperty>`,  
`<jsp:getProperty>`, `<jsp:plugin>`, `<jsp:params>`, `<jsp:param>`, `<jsp:fallback>`
92. Which tags are used to include other pages in JSP?  
a. `<%@include file="path_of_html_or_jsp"%>`
93. Which tag is used to forward other pages in JSP?  
a. `<jsp:forward page="path_of_jsp"/>`
94. How to specify error page in JSP?  
a. `<%@ page errorPage="Error.jsp"%>`
95. Which tag and its sub tags are used to call Java Bean from JSP and to call its setter and getter methods?  
a. `<jsp:useBean>`, `<jsp:setProperty>`, `<jsp:getProperty>`