

ADV. JAVA

JDBC:

1. Introduction to JAVA editions and its advantages.
2. Types of applications.
3. Is java language or technology or platform.
4. Types of languages.
5. Types of technologies.
6. Types of jar files.
7. Types of projects.
8. Types of archive files and its creation.
 - a) Jar
 - b) War
 - c) Ear
9. Types of environment variables settings
 - a) Path
 - b) Classpath
 - c) JAVA_HOME
10. Introduction to JVM memory locations.
11. Reflection API.
 - a) Java.lang.Class
 - b) Java.lang.Method
 - c) Java.lang.Constructor
 - d) Java.lang.annotation.Annotation
 - e) Java.lang.Field.
12. Web architecture using jdbc, Servlet, jsp.
13. Types of logics.
 - a) Persistence logic
 - b) Data gathering logic
 - c) Conversion logic
 - d) Validation logic
 - e) Integration logic
 - f) Session logic.
 - g) Middleware logic
 - h) Business logic
 - i) View logic
14. Introduction to persistence stores
15. Types of persistence stores
16. Drawbacks of file management system.
17. Advantages of RDBMS.
18. Terminology related persistency.
 - a) Persistence store.
 - b) Persistence data.
 - c) Persistence logic.
 - d) Persistence technology.
 - e) Persistence operations.
19. Introduction to specification and implementation.
20. Introduction to new keyword, forName(-), newInstance(-).
21. Difference between block and method and constructor.
22. Introduction to factory methods.
23. Introduction to loosely coupling related to JEE technologies.
24. Introduction to ODBC and its disadvantages.
25. Introduction to JDBC and its advantages.
26. Introduction to JDBC architecture.

27. Types of JDBC drivers and its advantages

and disadvantages.

- a) Type-1 driver.
- b) Type-2 driver.
- c) Type-3 driver.
- d) Type-4 driver.

28. Introduction to JDBC API.

29. Sample application on JDBC API.

30. Introduction to executeQuery(-), executeUpdate(-), execute(-).

31. How to create ConnectionFactory in Jdbc?

32. Introduction to statement object and its types.

- a) Statement
- b) PreparedStatement
- c) CallableStatement

33. Working with stored procedure by using CallableStatement.

34. Working with functions by using CallableStatement

35. Introduction to ResultSet object and its types.

a) Forward ResultSet

b) Scrollable ResultSet

- Sensitive Scrollable ResultSet
- Insensitive Scrollable ResultSet

c) Updateable ResultSet

- Inserting records in table
- Updating records in table
- Delete records in table

36. Information about following methods

- a) Last(), first(), next(), beforeFirst(), afterLast(), moveToInsertRow(), insertRow(), updateXxx(), deleteRow().

37. Introduction to Metadata objects.

- a) ResultSet MetaData.
- b) Database MetaData.

38. Introduction to SQL99 datatypes.

a) BLOB

- Inserting single image into database
- Inserting multiple images into database
- Reading single image from database
- Reading multiple images from database

b) CLOB

- Inserting single text file into database
 - Inserting multiple text file into database
 - Reading single text file from database
 - Reading multiple text file s from database
- c) Object
 - d) Array

39. Batch Updates.

- a) Batch updations with Statement object.
- b) Batch updations with PreparedStatement object.

40. Transaction Management.

41. Connection Pooling.

42. How to upload video into db.

43. Introduction to RowSets.

a) Connected rowsets.

- JdbcRowSet

b) Disconnected rowsets.

- CachedRowSet
- WebRowSet
- FilteredRowSet
- JoinRowSet

44. How to working both the database(oracle, mysql) from same application.

45. Working with java.sql.Date for inserting and reading from table.

46. ResourceBundle usage in JDBC

47. Java.util.Prperties usage in JDBC

SERVLETS:

1. Introduction to application.
2. Types of applications.
3. Introduction to web application and web server and advantages.
4. Web server architecture.
5. Introduction to singleton design pattern.
6. Introduction Servlet
7. Servlet execution models.
 - a) Single instance multi thread model.
 - b) Multiple instance multi thread model.
8. Introduction to how many can we develop web component.
9. Introduction to web project structure.
10. Servlet life cycle phases and methods.
11. Drawbacks javax.servlet.Servlet interface.
12. Introduction to javax.servlet.GenericServlet.
13. Introduction to Eclipse IDE tool.
14. Html to Servlet communication.
15. Introduction to implicit objects.
16. Introduction to ServletRequest and ServletResponse objects.
17. Form validations in Servlet.
 - a) Client side validations.
 - b) Server side validations.
18. Working with MIME types.
19. Different types of tags related web.xml file
20. Difference between default Servlet and welcome Servlet.
21. Introduction related ServletConfig and ServletContext objects.
22. Working with initialization parameters.
23. Introduction to RequestDispatcher object.
 - a) Forward(-,-)

- b) Include(-,-)

24. Programs on getInitParameters(-), getInitParameterValues(-), getParameterNames(), getParameterMap(), setAttribute(-,-), getAttribute(-), removeAttribute(-), getAttributedNames(), getHeader(-), getHeaders(-), getHeaderNames(-)
25. URL and URL types
 - a) Absolute url.
 - b) Relative url.
26. Introduction to javax.servlet.http.HttpServlet.
27. Difference between GenericServlet and HttpServlet.
28. Difference between doGet() and doPost().
29. Fileuploading and FileDownloading.
30. Communication between Servlet and database.
31. Connection pooling at server side.
32. Front Control design pattern.
33. Introduction to sendRedirect process.
34. Session Tracking.
 - a. Cookies.
 - b. URL rewriting.
 - c. Hidden Form Fields.
 - d. Http Session.
35. Introduction to Filters.
36. Introduction to Listeners.
37. Introduction to Wrappers.
38. Security in Servlets.

JSP:

1. Introduction to JSP.
2. How many ways can we develop web applications.
3. Drawbacks of Servlet technology.
4. Advantages of JSP technology.
5. Life cycle phases and methods of JSP.
6. Introduction tag.
7. Introduction to jsp implicit objects.
 - a) Page
 - b) Request
 - c) Response
 - d) Application
 - e) Config
 - f) Exception
 - g) pageContext.
 - h) Out
 - i) Session
8. Introduction to jsp scope objects
 - a) Request
 - b) Response
 - c) Application
 - d) Session.
9. Introduction to pageContext object.
10. How to configure jsp file in web.xml
11. Jsp program in eclipse
12. Page implementation class introduction.
13. Types of elements.
 - a) Scripting tags.
 - Scriptlet tag.
 - Declaration tag.
 - Expression tag.
 - b) Directive elements.
 - @include
 - @page
 - @taglib
 - c) Action elements.
 - Standard Action Tags.
 - <jsp: include>

<jsp:forward>
<jsp: useBean>
<jsp:param>
<jsp:setProperty>
<jsp:getProperty>
<jsp:plugin>
<jsp:fallback>

Custom Action Tags.

Tag without body.

Tag with body.

Tag with body and attributes.

d) JSTL

- a) Core tags
- b) Formatting tags
- c) Functional tags
- d) Xml tags
- e) SQL tags

14. Html to jsp communication. 15. Servlet to jsp communication. 16. Jsp to Servlet communication. 17. Jsp to database communication. 18. Jsp to txt file communication. 19. Expression Language. 20. MVC in jsp