

ADVANCE JAVA

Learn, Practice, Test and Achieve

JDBC

1. Introduction to JDBC
2. JDBC API and JDBC Architecture
3. JDBC Drivers and it's various types - Type I, II, III, IV
4. Basics steps to work with any relational database
5. Statement, PreparedStatement and CallableStatement interfaces
6. DDL(Data Definition Language) - Create operations
7. DQL(Data Query Language) - Select operations
8. DML(Data Modification Language) - Insert, Update and Delete operations
9. Batch processing
 - Batch processing using Statement
 - Batch processing using PreparedStatement
10. ResultSet - Processing result returned from database
11. Metadata
 - DatabaseMetaData and
 - ResultSetMetaData
12. Transaction processing

ANNOTATIONS

1. Introduction to Annotations
2. Format of the Annotations
3. How to use Annotation
4. Declaring Annotation types
5. Processing the Annotations
6. Predefined Annotations
7. Annotations that apply to Another Annotations
8. Repeating Annotations

SERVLET

1. Introduction to Servlet
2. Technologies before servlet and their disadvantages
3. Servlet API
4. Typical request response processing in Servlet
5. GenericServlet and HttpServlet
6. Servlet life cycle
7. Application Server, Web Container and Web Component
8. Introduction to Static Web Applications
9. Introduction to Dynamic Web Applications
10. HttpServletRequest and HttpServletResponse
11. RequestDispatcher - forward and include
12. Send redirect
13. Difference between forward and sendRedirect
14. ServletConfig and ServletContext
15. Cookies and Session tracking
16. Filters
17. Listeners
18. Chaining
 - Servlet Chaining
 - Filter Chaining
 - Difference between Servlet and Filter chaining
19. Login, Registration example using Servlet and JDBC

JSP

1. Introduction to JSP
2. JSP life cycle and architecture
3. Typical request response processing in JSP
4. JSP implicit objects
5. JSP scripting elements(syntax, example and internal processing)
 - Scriptlets

- Expressions
- Declarations
- 6. JSP Directives
 - Include directive
 - Page directive
 - Taglib directive
- 7. JSP Standard Actions
 - `<jsp:include>`, `<jsp:forward>` and `<jsp:param>`
 - `<jsp:useBean>`, `<jsp:setProperty>` and `<jsp:getProperty>`
- 8. Difference between include directive and include action
- 9. Scopes
 - Servlet Scopes
 - JSP Scopes
- 10. MVC Architecture
- 11. Dynamic Web Application on Servlet, JSP and JDBC

EXPRESSION LANGUAGE - EL

1. Introduction to EL
2. EL implicit objects
3. EL - String, Wrappers and Date
4. EL - Collection of String, Wrappers and Date
5. EL - User defined objects
6. EL - Collection of user defined objects
7. EL - Map objects
8. EL - Collection of Map objects

PROJECT DEVELOPMENT

1. Three tier architecture
2. MVC architecture in presentation layer
3. HTML, CSS, JavaScript, JSP and Servlet to develop presentation layer
4. JDBC for Data access layer
5. Data validation and exception handling
6. Eclipse Neon.2 IDE for project development

7. Apache Tomcat and/or JBoss as Application Server
8. Oracle and MySQL/H2 database