

---

---

## Theory

---

---

Q1: What is ORS?

A1: ORS:ORS is online web application that manage Student and Marksheet record.

---

---

Q2: What are the Types of Logic?

A2:

- a. Presentation Logic: This is set of control statement that decide look of user interface.
  - b. Control Logic: This is set of control statement that decide Navigation of user interface.
  - c. Business Logic: This is set of control statement that perform business operation.
  - d. Data Access Logic: This is set of control statement that make changes of database with the help of JDBC.
  - e. Integration Logic: This is set of control statement that integrate application with another application or server.
- 
- 

Q3: Which class we make singleton class ? And how to make ?

A3: JDBC Data source class.

There are four steps to make singleton class:-

- a. Make a class Final so child can not be created for single class.
  - b. Make a default constructor Private so that no one another class can instantiate single class.
  - c. Declare a Static Variable of self type in single class static variable has only one copy in their lifetime.
  - d. Make a get Instance() Static method in singleton class that will return instance of same single class.
- 
- 

Q4: What is pom.xml?

A4: It is a XML file that contain information about the project and contain configuration detail used by maven to build project.

---

---

Q5: What is web.xml?

A5: It is a XML file that contain application configuration and it is also called Deployment Descriptor.

---

---

Q6: What is utility classes?

A6: Utility classes is used to reusability and reusable services.

---

---

Q7: What are the utility classes you have in your project?

A7: Nine Utility classes we have used in our project:-

- a. DataUtility: Data Utility class is used to format data form one format to another.
- b. DataValidator: Data Validator class is used to validate input data.
- c. HTMLUtility:
- d. ServletUtility: This class provides utility operation for servlet container like forward, redirect,

manage success and error message, handle generic exception, manage default bean and list, manage pagination parameters.

- e. EmailMessage: Email Message contain email message.
  - f. EmailBuilder: EmailBuilder class that build Application Email Messages.
  - g. EmailUtility: Email Utility provide Email Services.
  - h. PropertyReader: Read the property values from application properties file using Resource Bundle.
  - i. JDBCDataSource: It is a DATA CONNECTION POOL.
- 

Q8: DCP (Data Connection Pool)

A8: It Provide connection reusability and limit of maximum connection.

- a. Add c3p0 (0.9.1.2) dependency
  - b. JDBC Datasource class ko singleton bnai ComboPoolDataSource ka object banaya (cpds)
  - c. cpds = null kiya
  - d. cpds me sare parameter ko set kiya
  - e. And connection provide kiya (return getInstance().cpds.getConnection();)  
System.properties pr parameter liye hai:-  
url = jdbc:mysql://localhost:3306/project4  
driver = com.mysql.cj.jdbc.Driver  
username = root  
password = root  
acquireIncrement = 10  
initialPoolSize = 10  
maxPoolSize = 100  
minPoolSize = 10  
timeout = 10
- 

Q9: What is Advantage DCP?

A9:

- a. High performance.
  - b. It controls number of connection create.
  - c. It allow application to handle more concurrent user.
- 

Q10: What is Non Business Primary Key?

A10: It dose not contain business information and it related with database.

---

Q11: What is Business Primary Key?

A11: It contain business information and it is related with database communication.

---

Q12: What is customize exception?

A12: Custom exception is created by developer. We have created own exception classes by extends Exception class.

---

Q13: What is transaction handling?

A13: Transaction is a atomic unit to be commit or rolled-back in a single attempt.

---

---

Q14: What is servlet lifecycle?

A14:

- a. init()
  - b. service()
  - c. destroy()
- 
- 

Q15: Full Form?

A15:

- URL -> Unified Resource Locator
  - URI -> Unified Resource Identifier
  - XML -> Extensible Markup Language
  - SMTP -> Simple Mail Transfer Protocol
  - POP -> Post Office Protocol
  - IMAP -> Internet Mail Access Protocol
  - HTTP -> Hyper Text Transfer Protocol
  - WAR -> Web Archive
  - DDL -> Data Definition Language
  - DML -> Data Manipulation Language
  - DCL -> Data Control Language
- 
- 

Q16: What is JSP lifecycle?

A16:

- a. jspinit()
  - b. jspservice()
  - c. jspdestroy()
- 
- 

Q17: What is BaseBean?

A17: BaseBean is parent class of all beans and it contain generic attribute.

---

---

Q18: What is BaseCtl?

A18: BaseCtl is parent controller of all controller and it contain generic work flow, generic operation, generic constant.

---

---

Q19: Why we create custom exception?

A19: To generate self Exception. It can be understand by developer.

---

---

Q20: What is Maven?

A20: Maven is powerful build automation tool.

---

---

Q21: Types of Validation in the project?

A21: There are two types of Validation in the Project:-

- a. Server Side Validation
    - |-Input Validation
    - |-Business Validation
  - b. Client Side Validation
- 
-

Q22: How you are performing Business Validation?

A22: We have propagate exception on model and we have checked and set on controller and get on view.

---

Q23: How many types of servlet?

A23: There are three types of servlet:-

- a. Servlet Interface
  - b. GenericServlet Class
  - c. HttpServlet Class
- 

Q24: What is Abstract Factory?

A25: It is pattern work around a super factory which create other factories.

---

Q25: How your are sending email?

A25: By using some custom classes like:-

- a. EmailMessage
  - b. EmailBuilde
  - c. EmailUtility
- 

Q26: What are the classes you have used to sending emails?

A26: We have used six classes for email those are used in Email Utility Class which are following:-

- a. Message      b. Session
  - c. MimeMessage   d. PassportAuthentication
  - e. Transport      f. InternetAddress
- 

Q27: Why override service method?

A27: We create custom ctl in which we Override service method to provide generic operation flow.

---

Q28: How many Dependency in pom.xml?

A28: There are six dependency in pom.xml:-

- a. junit (3.8.1)   b. MySQL (8.0.29)
  - c. log4j (1.2.17)   d. javax.mail (1.4.7)
  - e. c3p0 (0.9.1.2)   f. javax.servlet (3.0.1)
- 

Q29: Difference between JBoss and Tomcat server?

A29:

JBoss is an Application Server -> Tomcat is a Web Server

JBoss supports distributed transactions like EJB -> Tomcat supports JSP and Servlets

JBoss is heavyweight compared to Tomcat -> Tomcat is lightweight

JBoss works slower compared to Tomcat -> Tomcat is faster in execution

---

Q30: Difference between static polymorphism and dynamic polymorphism?

A30: Static Polymorphism is done by overloading and Dynamic Polymorphism is done method overriding.

---

Q31: Difference between string buffer and string builder?

A31:

StringBuffer-> Synchronized and thread-safe  
StringBuilder-> Not synchronized and not thread-safe

StringBuffer-> Suitable for multi-user environments  
StringBuilder-> Suitable for single-user environments

---

Q32: Tools you used in your application?

A32:

- a. Eclipse Mars 1    b. SQLYog 9.0
  - c. ArgoUML          d. ER Win
- 

Q33: What are the differences between Statement and PreparedStatement?

A33: PreparedStatement preserves passed queries and reuses the same queries with different parameters where as Statement queries are passed every database call.

---

Q34: What are the MVC Guidelines?

A34:

- a. One screen will have one view.
  - b. One view will have one controller.
  - c. User cannot directly access a view; it is always accessed via a controller.
  - d. View always submits requests to its own controller.
  - e. For navigation to the next view, the request is forwarded to the controller of the next view.
- 

Q35: What is the difference between DoGet and DoPost?

A35:

DoGet -> Performs view logic  
DoPost -> Performs submit logic

DoGet -> Can be cached  
DoPost -> Cannot be cached

DoGet -> Can be bookmarked  
DoPost -> Cannot be bookmarked

DoGet -> Can send only text and numbers  
DoPost -> Can send binary data

DoGet -> Can be saved in browser history (part of URL)  
DoPost -> Cannot be saved in browser history

---

Q36: View kisko dekh kar banaya hai?

A36: Wireframe diagram ko dekh kar.

---

Q37: Controller kisko dekh kar banaya hai?

A37: Controller view ko dekh kar banaya hai.

---

Q38: Model kisko dekh kar banaya hai?

A38: Model database ko dekh kar banaya hai.

---

Q39: Database kisko dekh kar banaya hai?

A39: Database ER diagram ko dekh kar banaya hai.

---

---

Q40: Bean kisko dekh kar banaya hai?

A40: Bean UML diagram ko dekh kar banaya hai.

---

---

Q41: How to map Javadoc?

A41: /doc/index.html

---

---

Q42: What is a filter?

A42: A filter performs pre-processing and post-processing on client requests and responses.

---

---

Q43: What is DML, DDL, and DCL?

A43:

DML (Data Manipulation Language): Used for CRUD operations.

DDL (Data Definition Language): Used to create, alter, and drop tables.

DCL (Data Control Language): Used to perform commit and rollback operations.

---

---