

## SS-Enterprise Software Development-Dec 2019 Subjective Questions

Q1. We discussed four elements that are part of any Enterprise Application. Input and Output are two of those. Explain in one sentence what the other two elements are.

Q2. Mysql RDBMS can be used in the data tier in a typical full-stack enterprise application. Similarly what other tools and technologies can be used in full-stack software development for each of the other tiers of the full-stack

Q3. What is the role of JDBC in an Enterprise Application?

Q4. Write one sentence each about the two ways discussed in class for implementing SOA.

Q5. What is the meaning of "stateless processing" in web application development?

Q6. Consider the following two tables.

### TABLE A

#### **A\_ID A\_Col\_1**

A\_01 A\_Col\_11

A\_02 A\_Col\_12

A\_03 A\_Col\_13

### TABLE B

#### **B\_ID BA\_ID**

B\_01 A\_01

B\_02 A\_01

B\_03 A\_04

B\_04 A\_04

- (4 marks) Write the SQL query and show the OUTPUT for inner join between Table A and Table B (use join condition as A.A\_ID = B.A\_ID and display values of all four columns).
- (4 marks) Write the SQL query and show the OUTPUT for left outer join between TABLE\_A and TABLE\_B (use join condition as A.A\_ID = B.BA\_ID and display values of all four columns).
- (4 marks) Write the SQL query and show the OUTPUT for right outer join between TABLE\_A and TABLE\_B (use join condition as A.A\_ID = B.BA\_ID and display values of all four columns).
- (4 marks) Write the SQL query and show the OUTPUT for full outer join between TABLE\_A and TABLE\_B (use join condition as A.A\_ID = B.BA\_ID and display values of all four columns).
- (4 marks) Write nested SQL query and show the OUPUT for displaying the A\_Col\_1 values of those rows in Table A whose A\_ID are present in B.BA\_ID.

Answer all parts correctly and clearly

Q7. Answer the following questions pertaining to UML class diagram:

a) (2 marks) Draw the class diagram for many-to-many association between two classes named CLASS\_A with A1 and A1 as attributes and CLASS\_B with B1 and B2 as attributes

b) (3 marks) Create the relational schema using OR mapping rules for the above class diagram.  
Answer both parts correctly and clearly

Q8. Answer the following questions pertaining to N-Tier architecture:

a) (3 marks) What is horizontal scalability?

b) (7 marks) How does the number of tiers in N-Tier architecture impact horizontal scalability of the architecture? Answer both parts correctly and clearly