

Mid-2 Important Questions

Unit-3

1. What is a cursor, and what are its operations? What are the attributes of a cursor explain with an example?
2. Explain different types of joins in SQL with examples?
3. What are nested and correlated queries? How would you use the operators ALL, ANY in writing nested queries? Explain with examples.
4. Write following queries in SQL for following Schema.
Sailors (sid: integer, sname: string, rating: integer, age: real)
Boats (bid: integer, bname: string, color: string)
Reserves (sid: integer, bid: integer, day: date)
 - i) Find the names of sailors who have reserved a red or a green boat? (union)
 - ii) Find the names of sailors who have reserved a red and a green boat? (intersect)
 - iii) Find the names of sailors who have reserved a red or a green boat? (union all)
5. PL/SQL code using triggers for updating and deleting data on any database?
6. Explain the following operators in SQL with examples
(i) Any (ii) Exists (iii) All
7. Write following queries in SQL using aggregate operators for following Schema.
Sailors (sid: integer, sname: string, rating: integer, age: real)
Boats (bid: integer, bname: string, color: string)
Reserves (sid: integer, bid: integer, day: date)
 - i) Find the average age of sailors?
 - ii) Find the average age of sailors for each rating level that has at least two sailors?
 - iii) Find the age of the youngest sailors for each rating level?

Unit-4

1. Explain about insertion, updation, deletion anomalies in relational database with an example?
2. Explain 1NF, 2NF and 3NF with suitable example.
3. Define multivalued dependencies and join dependencies. Discuss the use of such dependencies in database design.
4. Given $R = (A, B, C, D, E)$. We decompose it into $R_1 = (A, B, C)$, $R_2 = (A, D, E)$. The set of functional dependencies is $A \rightarrow BC$, $CD \rightarrow E$, $B \rightarrow D$, $E \rightarrow A$. Show that this decomposition is lossless-join decomposition.
5. Explain about the lossless join decomposition with examples?
6. What is Functional Dependency? Explain types and properties of FD's?
7. $R = (A, B, C, D, E)$. We decompose it into $R_1 = \{ABC\}$, $R_2 = \{CD\}$, $R_3 = \{DE\}$
The set of functional dependencies is: $AB \rightarrow CD$, $C \rightarrow D$, $D \rightarrow E$
Show that this decomposition is Dependency preserving or not.

Unit-5

1. Explain about ACID properties of Transaction?
2. Explain about conflict serializability with example?
3. Explain about remote backup system with neat diagram.
4. What is the purpose of growing and shrinking phase in two-phase locking protocol?
5. Explain about shared lock and Exclusive lock with example?
6. Explain about Two phase locking Protocol and its types?
7. Explain about Timestamp-ordering protocol in detail?