**Lab 8 – Advance Topics of Database Management**

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**STEP – 3**

Query – 1

Graphical user interface, text, application

Description automatically generated

Query – 2

Graphical user interface, text, application

Description automatically generated

Query – 3

Graphical user interface, text, application, email

Description automatically generated

**PROJECT – 2**

View – 1

Graphical user interface, text, application

Description automatically generated

View – 2

Graphical user interface, text, application, email

Description automatically generated

View – 3

Graphical user interface, text, application, Word

Description automatically generated

View – 4

Graphical user interface, text, application, email

Description automatically generated

View – 5

Graphical user interface, text, application, email

Description automatically generated

View for Region New England –

Graphical user interface, application

Description automatically generated

View for Region Mid Atlantic –

Table

Description automatically generated

View for Region East North Central –

Graphical user interface, text, application, email

Description automatically generated

View for Region West North Central –

Graphical user interface, application

Description automatically generated

View for Region South Atlantic –

Table

Description automatically generated

View for Region East South Central –

Graphical user interface, application

Description automatically generated with medium confidence

View for Region West South Central –

Table

Description automatically generated

View for Region Mountain –

Table

Description automatically generated

View for Region Pacific –

Graphical user interface, application

Description automatically generated

**SELECT QUERIES FOR ABOVE VIEWS –**

Query 1 FROM Toys Deluxe –

Graphical user interface, text, application, email

Description automatically generated

Query 2 FROM Artiste –

Graphical user interface, application

Description automatically generated

Query 3 FROM Dollie’s –

Graphical user interface, text, application

Description automatically generated

Query 4 FROM Yarn Shop –

Graphical user interface, text, application

Description automatically generated

Query 5 FROM Crafts for Kids –

Graphical user interface, text

Description automatically generated

Query for Region 1 –

Graphical user interface, text, application

Description automatically generated

Query for Region 2 –

Graphical user interface, text, application

Description automatically generated

Query for Region 3 –

Graphical user interface

Description automatically generated with medium confidence

Query for Region 4 –

Graphical user interface, application, Word

Description automatically generated

Query for Region 5 –

Graphical user interface, application

Description automatically generated

Query for Region 6 –

Graphical user interface, application

Description automatically generated

Query for Region 7 –

Graphical user interface, application

Description automatically generated

Query for Region 8 –

Graphical user interface

Description automatically generated

Query for Region 9 –

Graphical user interface, text, application, email

Description automatically generated

**PROJECT THREE: SEQUENCE**

STEP 1 – CREATE A SEQUENCE

Graphical user interface, text, application, email

Description automatically generated

STEP 2 – USE THE SEQUENCE

Graphical user interface, table

Description automatically generated

STEP 3 – DETERMING THE CURRENT VALUE OF SEQUENCE

Graphical user interface, text, application, email

Description automatically generated

**PROJECT 4 – TO CREATE AN INDEX**

STEP 1 – CREATING INDEX ON ONE COLUMN

Graphical user interface, text, application, email

Description automatically generated

It shows the error because the column is already indexed and doesn’t need anymore indexing.

STEP 2 – Index for 2 Columns

Graphical user interface, text, application, email

Description automatically generated

**PROJECT 5 – CREATION OF SYNONYM**

STEP 1 – Create the Synonym

Graphical user interface, text, application, email

Description automatically generated

STEP 2 – QUERY ON SYNONYM

Graphical user interface, application

Description automatically generated

**PROJECT 6 – TO CREATE A TRIGGER.**

STEP 1 – CREATE THE TRIGGER

Graphical user interface, text, application

Description automatically generated

Trigger for both tables created.

Graphical user interface, text, application

Description automatically generated

STEP 2 – USING THE TRIGGER

Graphical user interface, text, application, email

Description automatically generated

RECORDS AFTER INSERTING

Graphical user interface, text, application

Description automatically generated

**PROJECT SEVEN – Q&A**

**Question 1. As tables get added to a database and become populated with many records, explain the advantage(s) of creating the other four database objects, namely, a view, a sequence, an index, and a synonym.**

**Answer.** Objects are used to simplify and reduce the human effort for the database and has various advantages accordingly.

Talking about Views, there are multiple advantages of creating and using views like security, query simplicity, structural simplicity, Data Integrity, performance etc. It can perform various operations by creating subsets from the table and creates a virtual table so that won’t affect the original schema of database, won’t be compromised on performance, security and data integrity, in a way it hides or reduces the complexity of the table.

Sequences are highly scalable, the values can be cached, It solves concurrency issues, it insures the data integrity and unique identifier. This object too reduces the human effort and can generate the numbers for us.

Index is preferably used to enhance the performance or make the current performance better, it quickly retrieves the data, Index can be used for sorting. Also, Unique index is best for inserting unique values in the database.

Synonym is kind of a additional layer over base objects, It can be used to keep short nick names of long and lengthy names, it allows backwards compatibility for the existing database when you change the names.

**Question 2. Why and when are profiles important to create for database users?**

**Answer.** We should and prefer to create profiles when we regulate specific number of resources to the users of different databases by assigning the profile to them, they would be then able to use a set of authorized functions and won’t need any other permission then. Example, If we create a profile of database architect and assign that profile to our user so it would be having all the necessary permissions to work with the task. When we have to restrict our employees to access certain parts of database only because the database can have sensitive information too.

**Question 3. Can inserted records for a view update the table from which the view was created? Support your answer. How many data manipulation statements may use with a view (provide a citation to support your answer)?**

**Answer.** Yes, Views are the mirror of original tables when we play with the records in the view it does updates the original table from which the view was created.

UPDATE, DELETE and INSERT statements can be used with a view and the citation for this answer is (<https://community.oracle.com/tech/developers/discussion/3902149/dml-on-view>)

**Question 4. How can a DBA override the record value generated by a sequence? Support your answer with an example.**

**Answer.** In my thoughts, it can take 2 ways to override the value generated by a sequence, first is to SET IDENTITY TO INSERT and then insert the value and it can work as update as well. Second way would be to the drop the specific value and add a new value at that index, as DBA has all the privileges so they can drop the value or record generated by a sequence and then insert a new value there.

**Question 5. Running a trigger does take computation time. However, under what circumstances should a trigger be created BEFORE a DML, and or AFTER a DML?**

**Answer.** Before and after DML triggers are also called as before and after triggers.

Before triggers are the one in which the trigger action runs before the trigger statement which can contain the DML Statement and, after triggers are the one in which trigger action runs after trigger statements.

Before updating each row affected by the triggering statement and before checking appropriate integrity constraints, the trigger action is run if the trigger restriction was not violated.

After updating each row affected by the triggering statement and applying appropriate integrity constraints, the trigger action is run for the current row provided the trigger restriction was not violated. Unlike BEFORE row triggers, AFTER row triggers locks the rows.