Team Project – CIS4/542

Phase1:

* Draft phase one deliverable for the team project
  + You can run the script to develop the database in SQL Server or Oracle (optional)
  + Based on your project, using the [Zeota](#Zeota) data model, list all use-cases that you can identify.
  + List your tables and identify how many records exist in each table (optional)
* Final deliverables for Phase 1
  1. 5 use cases per team member. Documentation of each use cases should match [Use\_Case template](#Use_Case)
  2. Based on Zeota Data Model, develop a list of tables and their levels (order) of creating and populating Zeota database
  3. Analyze Meta Data Gathering (MDG) Document and provide the following stats
     1. Develop count of various data present in MDG document
  4. Instructor Use\_Cases will be added later

**Phase2: DBMSs catalog and DGDB SQL programming**

Desc: Querying DGDB, MSSQL SYSTEM Catalog, Oracle SYSTEM Catalog, and comparing them with each other

Part 1: SQL QUERIES

List of DGDB queries: Develop SQL code

1. How many tables each database has?

2. For every table in your newly added database, identify number of tables, number of attributes,

number of PK\_ attributes, number of FK\_ attributes, number of NN\_attributes, number of IDX\_attributes,

number of CC\_attributes, number of UQ\_attributes, and number of PGM\_attributes?

3. For every table in your newly added database, list the following: Table\_ID, Table\_Name,

attribute\_id, attribute\_Name, PK\_ID, FK\_ID, NN\_IDconstraint\_type, and constraint\_Name

4. For every database in DGDB, identify number of tables, number of attributes, number of PK\_ attributes,

number of FK\_ attributes, number of NN\_attributes, number of IDX\_attributes, number of CC\_attributes,

number of UQ\_attributes, and number of PGM\_attributes?

5. For every database, list tables with PK but without FK and IDX

6. For every database, rank them according to number of NN (Not Null) have created

7. How many databases do we have?

8. For every table in every database, identify number of attributes?

9. list number of columns in DGDB Database

10. list table number, table name, and number of attributes in each table

11. list database id, database name, table number, table name, column id, and column name

12. List the following: Table\_ID, Table\_Name, column\_id, PK\_ID, constraint\_type, and constraint\_Name

13. For every database, list tables without PK

14. For every database, list tables without IDX

15. For every database, list tables with PK but without FK

16. For every database, list tables with PK but without IDX

17. For every database, list tables with PK, FK, NN

18. List the followings: database\_Name, number\_PKs, number\_FKs, number\_NNs, number\_CCs, number\_IDXs, number\_PGMs

19. Develop a list to show how data type id used in every database

Database name, Data\_Type, Count\_Data\_Type

20. For every database, rank them according to number of indexes have created

21. Develop a report

DB\_Name #Tables #Attribute #PK\_Attr #FK\_Attr #NN\_Attr #IDX\_Attr #CC\_Attr #PGM\_Attr #UQ\_Attr

22. Develop additional queries as you see it is needed

Part 2: DBMSs system catalogs

Address all queries in Part 1 with MSSQL system catalog

Address all queries in Part 1 with Oracle System catalog

Part 3: Comparison Reports

1. Develop a report to clearly identify similarity and differences
2. What action should be taken to match both DBMSs with DGDB.
3. Document every action

Deliverable

Your report should have query number, description, SQL code, and result for each part

Your actions result in several scripts

1. Script1 called “phase2 Verification Script-DGDB” (ALTER, INSERT, and/or UPDATE statements)
2. Script2 called “phase2 Verification Script-ZEOTA” (ALTER, INSERT, and/or UPDATE statements)
3. Script3 called “phase2 Verification Script-SP” (ALTER, INSERT, and/or UPDATE statements)
4. Script4 called “phase2 Verification Script-PROP” (ALTER, INSERT, and/or UPDATE statements)

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Phase 3: Developing stored procedures, UDFs, and triggers for Phase2

P2.1. Create a list of what has already been developed by Lalitha

P2.2. Create a UDF to pass database name and get the following: #tables, #attributes, #PK\_attributes, #FK\_attributes,... , and #PGM\_attributes?

P2.3. Create a UDF to pass database name to Oracle system catalog and get the following: #tables, #attributes, #PK\_attributes, #FK\_attributes,... , and #PGM\_attributes?

P2.4. Create a UDF to pass database name to MSSQL system catalog and get the following: #tables, #attributes, #PK\_attributes, #FK\_attributes,... , and #PGM\_attributes?

P2.5. Create a stored procedure that compare P2.2 and P2.3 and provides a discrepancy report

Several more will be posted later

Zeota Data Model ([Back](#Phase1))

A picture containing diagram

Description automatically generated

Use\_Case template

Use\_Case ID:

Use\_Case description:

Use\_Case implementation plan in SQL:

Prepared by:

Verified by:

Date Created:

Date of last Update:

Sample of use-case template

Use\_Case ID:1

Use\_Case description: List of customers from every branch that have not ordered any product

Use\_Case implementation plan in SQL:

select b.branch\_no, c.Customer\_no, c.lname

from Branch B join Customer c on b.branch\_no=C.branch\_no

left join orders o on c.customer\_no=o.customer\_no

where o.customer\_no is null

Prepared by: John Black

Verified by: Adam Jones

Date Created: 9/13/21

Date of last Update:

Xxx

Graphical user interface, application, table, Excel

Description automatically generated