DBMSL-GROUP A
Assignments A1-A4

Assignment No 1

Please find below references for MySql Architecture and also refer Korth book for Relational database architecture. Also you can added some more reference.

1. http://www.datadisk.co.uk/html

2. https://s2.smu.edu/~rkotamarti

Comparative study of Mysql and Oracle (Added as per FDP discussion)

Assignment No 2
Create following tables in MYSQL

Customer(cust_no,cust_fname,cust_lname,cust_company,cust_addr,city,cust_phone)
order(order_no,cust_no,ISBN,qty,odate);
book(ISBN,title,unit_price,author_no,publisher_no,pub_year);
author(author_no,author_name,country)
publisher(publisher_no,publisher_name,publisher_addr,year);

Note:Use referential integrity constraints while creating tables with on delete cascade options.

Create view, index, sequence and synonym based on above tables.

Assignment No 3

Use the tables created in assignment no 2 and execute the following queries:

1. Insert at least 10 records in customer table and insert other tables accordingly.
2. Display all customer details with city pune and mumbai and customer first name starting with 'p' or 'h'.
3. lists the number of different customer cities.(use of distinct)
4. Give 5% increase in price of the books with publishing year 2015. (use of update)
5. Delete customer details living in pune.
6. Find the names of authors living in India or Australia (use of UNION)
7. Find the publishers who are established in year 2015 as well as in 2016 (use of INTERSECT)
8. Find the book having maximum price and find titles of book having price between 300 and 400. (use of max and between)
9. Display all titles of books with price and published year in decreasing order of publishing year.
10. Display title,author_no and publisher_no of all books published in 2000,2004,2006. (use of IN)

OR

Assignment No 2

Consider the following relational Schema.

Departments (dept_id , dept_name)
Professors (prof_id ,prof_fname , prof_lname, dept_id,designation,salary,doj,email,phone,city)
works(prof_id,dept_id,duration)
Shift (prof_id,shift,working_hours)

Note:Use referential integrity constraints while creating tables with on delete cascade options.

Create view, index, sequence and synonym based on above tables.

Assignment No 3

Use the tables created in assignment no 2 and execute the following queries:

1. Insert atleast 10 records in professors table and insert other tables accordingly.
2. Display all professors details with city pune and mumbai and professor first name starting with 'a' or 'd'.
3. list the number of different cities of professors.(use of distinct)
4. Give 5% increase in salary of the professors with date of joining 1-1-2015. (use of update)
5. Delete professor details living in pune.
6. Find the names of professors belonging to pune or mumbai(use of UNION)
7. Find the professors who joined on date 1-1-2015 as well as in 1-1-2016 (use of INTERSECT)
8. Find the professor having maximum salary and names of professors having salary between 10,000 and 20,000. (use of max and between)
9. Display all professors name with salary and date of joining with decreasing order of salary.
10. Display professors name, date of joining and dept_id with salary 30000, 40000 and 50000 (use of IN).

A2: Guidelines

- Synonym not supported in MySql. Required to include example from oracle in write-up.
- Sequence should be implemented with AUTO_INCREMENT. Concept of sequence from oracle must be included in write-up.
- Take JDBC connectivity for A2. (Front-end : Java, Back-End: MySql)
- Simple view, Index(simple,unique,composite and text – show index after creation) and sequence implementation can be shown using JDBC with any sample table.

Assignment No 4 (based on Book schema)

Use the tables created in assignment no 2 and execute the following queries:

1. Find Customer details and order details using NATURAL JOIN.
2. Find the book_ title, author_name, country. (INNER JOIN)
3. Find the customer ID, name and order_no of customers who have never placed an order. (LEFT/RIGHT)
4. Find the Title, ISBN, order_no of the books for which order is not placed. (LEFT/RIGHT)
5. Display cust_fname, title,author_no,publisher_year where ISBN=1234. (JOINING more than 2 tables)
6. Display the total number of books and customer name.(USE OF COUNT, ANY JOIN)
7. List the cust_id, order_no and ISBN with books having title 'mysql'. (sub query- IN)
8. Find the names of all the companies that ordered books in the year 2015. (sub query, Between)
9. Create view showing the author and book details. (COMPLEX VIEW)
10. Perform Manipulation on simple view-Insert, update, delete, drop view.

OR

Assignment No 4(based on professor schema)

Use the tables created in assignment no 2 and execute the following queries:

1. Find the professor details and department details using NATURAL JOIN.
2. Find the prof_id, prof_name and shift. (INNER JOIN)
3. List all the department details and the corresponding names of professors in the same department.(left outer join)
4. List all the professors and the corresponding names of department.(right outer join)
5. Display professor name, dept_name, shift, salary where prof_id = 101;(multitable join)
6. list the total number of professor in each department.(count and any join,groupby)
7. List the prof_id associated department and the dept_name having name ‘computer’;(subquery)
8. Find the names of all departments where the professors joined in year 2015 (or date of joining is 1-1-2015).(subquery)
9. Create view showing the professor and shift details. (COMPLEX VIEW)
10. Perform Manipulation on simple view-Insert, update, delete, drop view.

A4: Guidelines

Natural Join, Inner Join/Equi Join, Left Outer Join, Right Outer Join, Count+Join, 2 queries on Subquery, complex view and manipulation on simple view must be covered.