B. Sc. Engg. 3rd year 1st Semester

DBMS LAB

DISCUSSION-2

Use the Pubs database and explore/perform the following topics/ tasks.

1. Joining Tables (Inner join]

   Discussion

   The following query shows author's last name and title id of books.

   SELECT au_lname, title_id FROM authors JOIN titleauthor ON authors.au_id=titleauthor.au_id

   Task 1:

   i)   Show the title of a book, the corresponding author name.

   ii) Show the title of a book, the corresponding author and publisher name.

2. The Cartesian product

   The following query shows author's last name and city along with publisher's name and city

   SELECT au_lname, pub_name FROM authors, publishers

   Task 2:

   iii) Show the author name, city, publisher name and city only for which the authors and the publishers live in the same city

3. Nested query

   SELECT * FROM   titles WHERE royalty = (SELECT avg(royalty) FROM titles)

   Task 3:

   iv) Show the author name(s) of the book which has the maximum royalty

        Hint: use IN in place of =

_____

4. Creating a table:

   A table called CustomerAndSuppliers is to be created on the following schema

Field name	Data type	Size	Requirement
cusl_id	Character	6	1. Primary key 2. Starting with C or S and then 5 digits i.e. C00001 or S0001.
cusl_fname	character	15	NULL not allowed
cusl_lname	character	15	Use variable character size
cusl_address	text		
cusl_telno	character	12	Must follow the format like 012-34567890
cusl_city	character	12	Default value is Rajshahi
sales_amnt	money		Negative values not allowed
proc_amnt	money		Negative values not allowed

The corresponding SQL statement is as follows

```
CREATE TABLE CustomerAndSuppliers
(
        cusl_id CHAR (6) PRIMARY KEY CHECK (cusl_id LIKE '[CS][0-9][0-9][0-9][0-9][0-9]'),
        cusl_fname CHAR(15) NOT NULL,
        cusl_lname VARCHAR (15),
        cusl_address TEXT,
        cusl_telno CHAR (12) CHECK (cusl_telno LIKE '[0-9][0-9][0-9]-[0-9][0-9][0-9][0-9][0-9][0-9][0-9][0-9]'),
        cusl_city CHAR (12) DEFAULT 'Rajshahi',
        sales_amnt         MONEY CHECK (sales_amnt>=0),
        proc_amnt          MONEY CHECK (proc_amnt>=0)
    )
```

5. Inserting data into a table:

Exampl e:

```
INSERT CustomerAndSuppliers
(cusl_id,cusl_fname,cusl_lname,cusl_address,cusl_telno,cusl_city,sales_amnt,proc_amnt) VALUES
('C00001','Iqbal','Hossain','221/B Dhanmondi','017-00000000','Dhaka',0,0)
```

Task 4:   Create tables on the following schema

Table name: Item

Field name	Data type	Size	Requirement
item_id	Character	6	1. Primary key 2. Starting with P and then 5 numbers i.e. A0001.
item _name	character	12	
item_category	character	10	Example: Electrical, Mechanical, Software, Books etc.
item _price	float	12	Negative values not allowed
item_qoh	integer		Negative values not allowed
item_last_sold	date		Default value is current date

Table: Transactions

Field name	Data type	Size	Requirement
tran_id	Character	10	1. Primary key 2. Starting with T and then 9 numbers i.e. T000000001.
item _id	character	6	Foreign key with reference to item table
cust _id	character	5	Foreign key with reference to customer table
tran_type	character	1	Either S or O, (S for sales Order to supplier)
tran_quantity	integer	12	Only positive values.
tran_date	date and time		Default is current date