# B.Sc. Engg. 1st Batch 4th Year 1st Semester 2019

# 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:

* 1. Show the title of a book, the corresponding author name.
  2. Show the title of a book, the corresponding author and publisher name.

1. 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:

1. Show the author name, city, publisher name and city only for which the authors and the publishers live in the same city
2. Nested query

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

# Task 3:

1. Show the author name(s) of the book which has the maximum royalty Hint: use IN in place of =
2. 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)

)

1. Inserting data into a table:

Example:

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 |