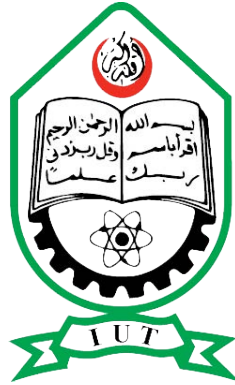# Islamic University of Technology

(CSE 4508: Relational Database Management Systems)

CSE 4508

Lab Report 3

Advanced Data Manipulation

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1 Task 1: Display the Name, Customer ID, and Lifetime Usage of the top 5 highest users.

```sql
SELECT * FROM (SELECT Customer_Name, Customer_ID ,
    Lifetime_Usage
FROM Customers C , Subscriptions S
WHERE C.Subscription_ID = S.Subscription_ID
ORDER BY Lifetime_Usage DESC) WHERE ROWNUM <=5;
```

2 Task 2: Display the name, date of birth, district, and division of all customers whose lifetime usage exceeds the average usage of Prepaid users with Silver status.

```sql
SELECT C.Customer_Name, C.Date_of_Birth, A.District, A.
    Division
FROM Customers C,  Subscriptions S , Addresses A
WHERE C.Subscription_ID = S.Subscription_ID
AND C.Address_ID = A.Address_ID AND
S.Lifetime_Usage > (
    SELECT AVG(Lifetime_Usage)
    FROM Subscriptions
    WHERE Subscriber_Type = 'Prepaid' AND Subscriber_Level =
    'Silver');
```

3 Task 3: Count how many of the customers from the previous query are from Dhaka.

```
1 SELECT COUNT(*) FROM (SELECT C.Customer_Name, C.Date_of_Birth
     , A.District, A.Division
2 FROM Customers C,  Subscriptions S , Addresses A
3 WHERE C.Subscription_ID = S.Subscription_ID
4 AND C.Address_ID = A.Address_ID AND
5 S.Lifetime_Usage > (
6     SELECT AVG(Lifetime_Usage)
7     FROM Subscriptions
8     WHERE Subscriber_Type = 'Prepaid' AND Subscriber_Level =
     'Silver'
9 ) AND A. Division = 'Dhaka');
```

4 Task 4: Write a query to display the full name of each customer, with the prefix "Mr./Ms." concatenated.

```sql
SELECT CONCAT('Mr./Ms. ', Customer_Name) AS Full_Name
FROM Customers;
```

5 Task 5: Write a query to display customer names with the first letter of each word capitalized.

```sql
SELECT INITCAP(Customer_Name) AS Capitalized_Name
FROM Customers;
```

6 Task 6: Write a query to find customers whose names contain the substring "an". Return the position where this substring appears.

```sql
1 SELECT Customer_Name, INSTR(Customer_Name, 'an')
2 FROM Customers
3 WHERE INSTR(Customer_Name, 'an') > 0;
```

7 Task 7: Write a query to display all customer names in lowercase.

```sql
SELECT LOWER(Customer_Name) AS Lowercase_Name
FROM Customers;
```

8 Task 8: Write a query to display all customer names in uppercase.

```sql
SELECT UPPER(Customer_Name) AS Uppercase_Name
FROM Customers;
```

9 Task 9: Write a query to display the length of each customer's name.

```sql
1 SELECT Customer_Name, LENGTH(Customer_Name) AS Name_Length
2 FROM Customers;
```

10 Task 10: Write a query to display the customer names padded to the left with asterisks (*) to make the total length 15 characters.

```sql
SELECT LPAD(Customer_Name, 15, '*') AS Padded_Name
FROM Customers;
```

11 Task 11: Write a query to display the customer names after trimming any leading whitespace.

```sql
SELECT LTRIM(Customer_Name) AS Trimmed_Name
FROM Customers;
```

12   Task 12: Write a query to display the first 5 characters of each customer's name.

```
1  SELECT SUBSTR(Customer_Name, 1, 5) AS First_5_Characters
2  FROM Customers;
```

13 Task 13: Write a query to count the number of customers from each division.

```sql
SELECT A.Division, COUNT(C.Customer_ID) AS Customer_Count
FROM Customers C, Addresses A
WHERE C.Address_ID = A.Address_ID
GROUP BY A.Division;
```