**DBMS Lab**

**Assignment No. 4 (All types of Join, Sub-Query and View)**

Title: Design at least 10 SQL queries for suitable database application using SQL DML statements: all types of Join, Sub-Query and View

**Tables:**

Pack\_grades(grade\_id,grade\_name,min\_price,max\_price)

Packages(pack\_id,speed,strt\_date,monthly\_payment,sector\_id)

Customers(cust\_id,firstname,lastname,birthdate,joindate,city,state,street,main\_phone\_num,secondary\_phn\_no,fax,monthly\_discount,pack\_id)

Sectors(sector\_id,sector\_name)

**Foreign Key Syntax:**

## CREATE TABLE TABLENAME (

COLUMN\_LIST, PRIMARY KEY (COL NAME),  
 FOREIGN KEY (COL NAME FROM SAME TABLE) REFERENCES REF\_TABLE NAME(COL NAME FROM REF\_TABLE));

**Inner JOIN**

1. Customers and internet packages (*Customers* & *Packages* tables) –
   1. Write a query to display first name, last name, package number and internet speed for all customers.
   2. Write a query to display first name, last name, package number and internet speed for all customers whose package number equals 22 or 27. Order the query in ascending order by last name.
2. Internet packages and sectors –
   1. Display the package number, internet speed, monthly payment and sector name for all packages (*Packages* and *Sectors* tables).
   2. Display the customer name, package number, internet speed, monthly payment and sector name for all customers (*Customers*, *Packages* and *Sectors* tables).
   3. Display the customer name, package number, internet speed, monthly payment and sector name for all customers in the business sector (*Customers*, *Packages* and *Sectors* tables).
3. Display the last name, first name, join date, package number, internet speed and sector name for all customers in the private sector who joined the company in the year 2006.

**Non Equi Join**

1. Display the package number, internet speed, monthly payment and package grade for all packages whose monthly payment is between min\_price and max\_price(*Packages* and *Pack\_Grades* tables).

**Outer Join**

* 1. Customers and internet packages (*Customers* and *Packages* tables)
     1. Display the first name, last name, internet speed and monthly payment for all customers. Use INNER JOIN to solve this exercise.
     2. Modify last query to display all customers, including those without any internet package.
     3. Modify last query to display all packages, including those without any customers.
     4. Modify last query to display all packages and all customers.

**Self Join**

* + 1. Display the last name, first name and package number for all customers who have the same package number as customer named ‘A Taylor’ (*Customers* table).
    2. Display the last name, first name and monthly discount for all customers whose monthly discount is lower than the monthly discount of employee number 103 (*Customers* table).
    3. Display the package number and internet speed for all packages whose internet speed is equal to the internet speed of package number 10 (*Packages* table).