AUT UNIVERSITY COMPUTER + MATHEMATICAL SCIENCES

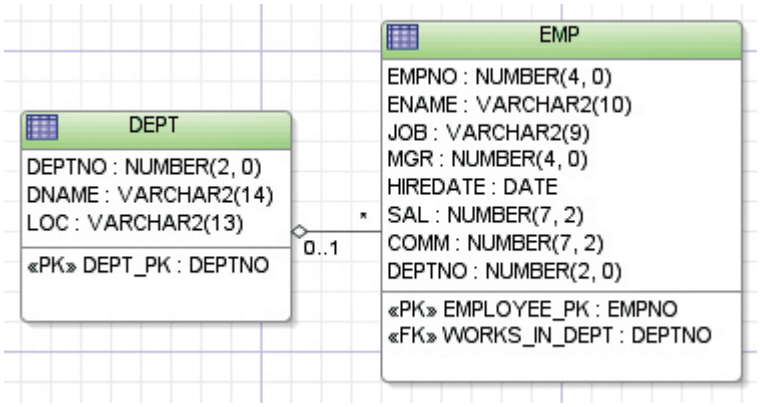
COMP810 – Data Warehousing and Big Data

Lab 1: Writing Basic SQL Statements

Objectives: Introduce the SQL SELECT command:

1) Execution of a basic SELECT statement: Arithmetic Operator precedence
2) Nulls
3) Aliases
4) Concatenation
5) Literal strings
6) Limiting outputs

Employee Database: The relationship between the 'EMP' and 'DEPT' tables of the Employee database is shown below (**Note:** These tables are already created and are available for you to use. You **do not** need to create them at this stage):



☞ **Task 1**:

Use the above tables (i.e., **EMP** and **DEPT**) to construct SQL statements to answer the following queries. Save your queries in a file (.sql) in a folder on your home drive.

1. Show the structure of the DEPT table. Select all data from the DEPT table.

2. Show the structure of the EMP table. Create a query to display the name, job, hire date, and employee number for each employee, with employee number appearing first. Name the column headings Emp#, Employee, Job and HireDate, respectively.

3. Create a query to display unique jobs from the EMP table.

4. Display the employee name concatenated with the job separated by a comma and space; name the column 'Employee and Title'. (Example of output**)**

```
Employee and Title
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SMITH, CLERK
ALLEN, SALESMAN
```

☞ **Task 2**:

1. Download script Hotel_createDB2.sql from AUTOnline - Course Notes\Week1\Labs\ Hotel_createDB2.sql to a folder in your Home drive.

2. Type the following command on SQL prompt .

   SQL>@path-of-the-folder-on-your-home-drive\ Hotel_createDB2.sql; press ENTER

3. This will create the following tables for the Hotel Schema.

	Hotel	(hotelNo, hotelName, city)
	Room	(roomNo, hotelNo, type, price)
	Booking	(hotelNo, guestNo, dateFrom, dateTo, roomNo)
	Guest	(guestNo, guestName, guestAddress)

where

Hotel contains hotel details and hotelNo is the primary key;

Room contains room details for each hotel and (roomNo, hotelNo) forms the primary key;

Booking contains details of the bookings and (hotelNo, guestNo, dateFrom) forms the primary key;

and **Guest** contains guest details and guestNo is the primary key.

Use the Hotel Database Schema to construct an SQL statement to answer the following queries. Save your queries in a file (.sql) in a folder on your home drive:

1. List full details of all hotels.
2. List full details of all guests.
3. List the names and addresses of all guests.
4. List the hotel and room numbers for all family rooms.
5. List the bookings for which no dateTo has been specified.
6. List all bookings for room number 2.