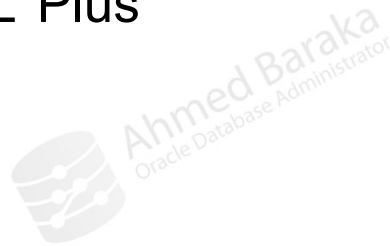# Oracle Database Management Tools

By Ahmed Baraka

Objectives

In this lecture, you will learn how to perform the following:

- List common Oracle database management tools

- Be familiar with using SQL*Plus

- Describe SQL Developer

- Describe EM Express

- Describe Oracle Enterprise Manager Cloud Control

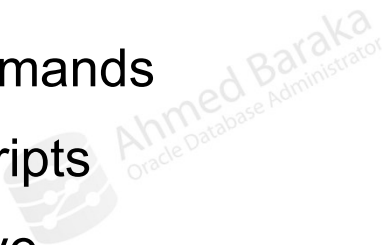- Describe Database Management Cloud Service

Most Common Oracle Database Management Tools

- **SQL*Plus**
  - Command line interface to submit commands and SQL statements

- **SQL Developer (and its SQLcl utility)**
  - Java-based GUI interface to submit commands and SQL statements

- **Oracle Enterprise Manager Database Express (EM Express)**
  - Web-based GUI interface to monitor and partially manage a local database

- **Oracle Enterprise Manager Cloud Control (OEM)**
  - Web-based GUI interface to monitor and fully manage multiple databases

- **Database Management Cloud Service**

- **Third-party tools**

About SQL*Plus

- A command-line tool that is shipped with Oracle database software

- Can be used to submit SQL statements and commands to control the database

- It provides formatting commands

- Used interactively or in scripts

- SQLcl is a better alternative

Starting SQL*Plus

- Starting SQL*Plus without logging on to any database

```
sqlplus /nolog
SQL> connect user/itsPassword
```

- Starting SQL*Plus with logging on to the local database:

```
sqlplus scott/itsPassword
```

- Starting SQL*Plus with logging on to the local database as `SYS`:

  - If the logged on OS user is a member of the dba group:

    ```
    sqlplus / as sysdba
    ```

  - Using the `SYS` password:

    ```
    sqlplus sys/itsPassword as sysdba
    ```

Starting SQL*Plus

- Starting SQL*Plus to run a script:

```
#cat list-dept.sql

SELECT * FROM DEPARTMENTS WHERE LOCATION_ID = 1400;
quit
```

```
#sqlplus hr/ABcd##1234 @list-dept

...

DEPARTMENT_ID DEPARTMENT_NAME                    MANAGER_ID LOCATION_ID
------------- ------------------------------ ---------- -----------
           60 IT                                    103        1400
```

Submitting Commands Interactively in SQL*Plus

```
SQL> SELECT EMPLOYEE_ID, FIRST_NAME FROM EMPLOYEES ORDER BY EMPLOYEE_ID;

EMPLOYEE_ID FIRST_NAME
----------- --------------------
        199 Douglas
        200 Jennifer
        201 Michael
...
```

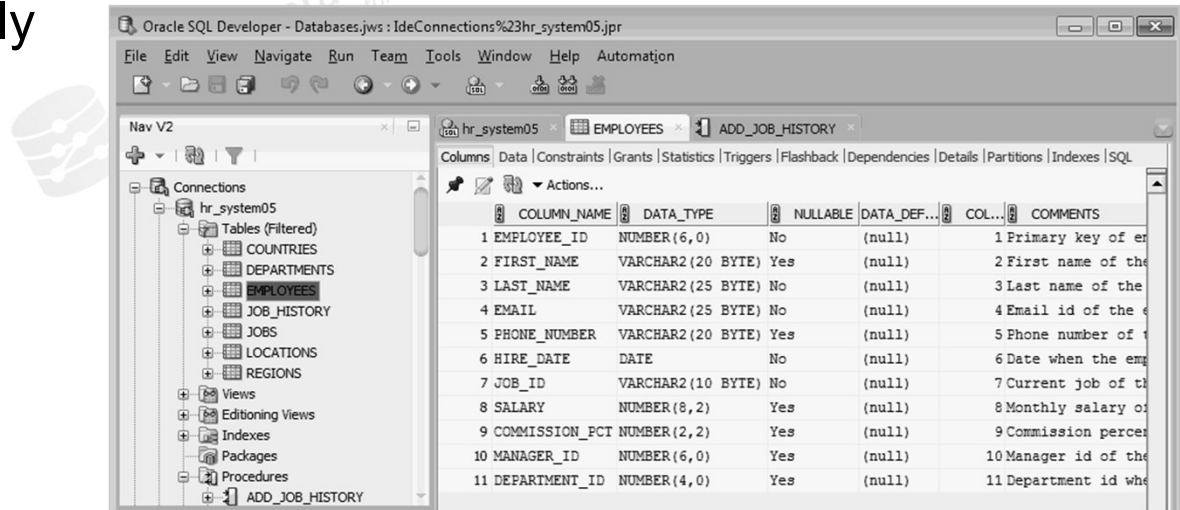# Running a SQL script from SQL*Plus Prompt

- Use the @ symbol or the Start command

- Writing the extension (.sql) in the command is optional.

```
SQL> @ list-dept
SQL> start list-dept.sql
```

About SQL Developer

- A Java-based GUI Interface to Oracle databases (and other non-Oracle databases)

- (Before 19c) Shipped with Oracle database software

- Can be installed separately

- Can be invoked from a client machine

About Oracle SQL Developer Command Line (SQLcl)

- A Java-based command-line utility that is shipped with SQL Developer

- Provides the same SQL*Plus capabilities in addition to SQL Developer functions

- For more information:

  https://docs.oracle.com/en/database/oracle/sql-developer-command-line/index.html

About Oracle Enterprise Manager Database Express (EM Express)

- A web-based GUI interface for monitoring local Oracle databases

- EM Express pages in Oracle 19c:

  - Performance Hub

  - Storage > Tablespaces

  - SQL Performance Analyzer

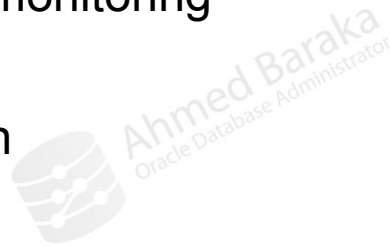- Required licenses: Diagnostics Pack and Tuning Pack

About Oracle Enterprise Manager Cloud Control

- System management software that delivers centralized monitoring, administration, and management on IT infrastructure, including systems running Oracle and non-Oracle technologies.

- An agent software must be installed on the host

- Separate license required

Database Management Cloud Service

- Cloud-based service

- Features:

  - Compartment and group monitoring

  - Root cause analysis

  - Database fleet automation

Summary

In this lecture, you should have learnt how to perform the following:

- List common Oracle database management tools

- Be familiar with using SQL*Plus

- Describe SQL Developer

- Describe EM Express

- Describe Oracle Enterprise Manager Cloud Control

- Describe Database Management Cloud Service