**IVY TECH COMMUNITY COLLEGE**

**DBMS130 – M01 Hands-On Lab Assignment**

**Connecting to a Database**

Follow the steps below to learn how to navigate the database environment you will use for all the hands-on lab assignments in the course.

# **Environment Login and Setup (30 points)**

1. Follow the instructions provided by your instructor for setting up and using the database environment.
2. Run the M01\_HOL\_Script.sql in your database environment to create the tables in your database.
3. Take a screenshot once you have successfully logged in and paste it below.

A screenshot of a computer

Description automatically generated

# **Environment Navigation Questions (30 points)**

1. Navigate the database environment to answer the questions listed below.

|  |  |
| --- | --- |
| **Answer questions a-h about the EMPLOYEES table. (10 points)** | |
| 1. How many columns are contained in the table? | 14 |
| 1. What are the three (3) data types used in the table? | Number, Varchar2 , date |
| 1. Which column is set as the primary key for the table? | Employees table is the employee\_id |
| 1. Why is the primary key constraint necessary? | The primary key constraint is necessary to uniquely identify each record in the table. I |
| 1. Which columns have a check constraint of NOT NULL? | LAST\_NAME  EMAIL  HIRE\_DATE  JOB\_ID |
| 1. How does this constraint impact the data that can be entered into this column? | The NOT NULL constraint ensures that these columns must have a value for every record entered into the table. |
| 1. Which columns have a foreign key constraint? | DEPARTMENT\_ID  JOB\_ID  MANAGER\_ID |
| 1. Which columns have a unique constraint? | The EMPLOYEES table has a unique constraint on the EMAIL column. |
| **Answer questions i-m about the schema objects. (10 points)** | |
| 1. How many sequences exist in the database? | 3 sequences in the database. |
| 1. What is Min Value for the EMPLOYEES\_SEQ sequence? | EMPLOYEES\_SEQ sequence is 1. |
| 1. What is the Max Value for the DEPARTMENTS\_SEQ sequence? | the DEPARTMENTS\_SEQ sequence is 9990. |
| 1. How many indexes have been created in the database? | There are several indexes created in the database. |
| 1. What is the name of the only view that has been created in the database? | EMP\_DETAILS\_VIEW |
| **Answer questions n-t about database constraints. (10 points)** | |
| 1. Which table has unique constraint? On which column is the unique constraint? | The EMPLOYEES table has a unique constraint on the EMAIL column. |
| 1. How does this constraint impact the data that can be entered into this column? | he EMAIL column ensures that each email address in the EMPLOYEES table must be unique |
| 1. Which table and column does the foreign key constraint with the name FK\_EMP\_DEPT reference that is contained in the EMPLOYEES table? | The foreign key constraint FK\_EMP\_DEPT in the EMPLOYEES table references the DEPARTMENTS table's DEPARTMENT\_ID column. |
| 1. Which table and column does the foreign key constraint with the name FK\_EMP\_JOB reference that is contained in the EMPLOYEES table? | The foreign key constraint FK\_EMP\_JOB in the EMPLOYEES table references the JOBS table's JOB\_ID column. |
| 1. Which table and column does the foreign key constraint with the name FK\_JOB\_HIST\_DEPT reference that is contained in the JOB\_HISTORY table? | The foreign key constraint FK\_JOB\_HIST\_DEPT in the JOB\_HISTORY table references the DEPARTMENTS table's DEPARTMENT\_ID column |
| 1. Which table and column does the foreign key constraint with the name FK\_EMP\_MGR reference that is contained in the EMPLOYEES table? | The foreign key constraint FK\_EMP\_MGR in the EMPLOYEES table references the EMPLOYEES table's EMPLOYEE\_ID column. |
| 1. Why is the foreign key constraint necessary? | The foreign key constraint is necessary to enforce referential integrity, ensuring that the values in the referencing column (in the child table) match values in the referenced column (in the parent table). |