*DBS211 Assignment 1 - (10 Marks)*

*Physical Design and Implementation of Air Engineers Inc.*

Due Date: Thursday Feb 13 in Lab class

Your group consists of 3 people**.** Students were given an opportunity to from groups and after a deadline, groups were randomly assigned. Each group will be given a new Oracle account and password that all group members can work from.

The assignment will be presented as a live demonstration with only the group members and the instructor present. This will be done in an breakout rooms in A3058 which is across from the Tim Hortons. Each group will be assigned a time.

Group members not present during the demonstration do not get a mark.

1. Have your signed student submission form (on paper)
2. Have your physical design sheets for each table (on paper)
3. The SQL worksheet with the properly formatted SQL that produces all the database objects properly as outlined in the assignment specifications will have been emailed to the instructor prior to or during the meeting. After the meeting is considered late.
4. Be prepared to show any table or view data (on your laptop or the teachers PC)
5. Be prepared to answer any questions about your database

You must hand in the Student Assignment Submission Form (below) with your assignment (one per group).

Student Assignment Submission Form

I/we declare that the attached assignment is my/our own work in accordance with the Seneca Academic Policy. No part of this assignment has been copied manually or electronically from any other source (including web sites) **or distributed to other students**

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Name(s) Student ID(s) Signature

1\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Oracle ACCOUNT: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

In this assignment you will:

A. Create a Physical Schema for the **6** tables shown below.

B. Create an ORACLE database to implement the **6** Tables.

C. Use the same data for your tables that shows in the weekly sales report and the customer list. Change the Sales Rep names that show in the weekly sales report to two of your group member names as the sales people. Change one of the Customer names to the third group member name.

D. Create **2** Views.

E. Allow access to instructor account dbs211\_251ncc60. This account should be able to read/add/change and delete data in the tables, but not perform any alterations on the table set up. It should also have access to the two views.

F. Prepare a Daily Sales Report for a particular day.

G. Prepare the two reports that result from “Select \* from *viewname”.*

**To be Submitted:**

# Part 1: Complete and Print the Physical Design (sometimes referred to as the Data Dictionary or Physical Schema)

Here is some information about Air Engineers Inc:

An engineering firm named  **AIR ENGINEERS INC** provides design and build services to government and private organizations. The weekly Sales Report and the Customer List Report are shown below. There are six tables required to support these two reports.

Note that one Statement can have more than one piece of equipment and that one particular piece of equipment can be sold on more than one Statement. For example: Statement number EAP-44720 has Equipment numbers P100 and CMT22. Also note that Equipment number P100 is sold on Statement EAP-44720 and EAP-44721.

The report shows the Customer number which relates to a CUSTOMER table with attributes given below. Any particular **Federal GST License Number** can occur only once in the CUSTOMER table as every customer must have a different GST License Number. The only attributes that can be skipped are **CustAddress, CustPhone and Statement Date.** The system will insert today’s date if the user skips StatementDate. The system inserts blanks into SalesPersonName when skipped. Federal\_GST\_LicenseNumber must be greater than or equal to 100000000 and less than 999999999.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| AIR ENGINEERS INC  Weekly Sales Report | | | | | | | | | |
| **Equip**  **Type** | **Type**  **Description** | **Equip**  **Num** | **Equipment**  **Description** | **Charge** | **Qty** | **Stm.**  **Num.** | **Stm.**  **Date** | **Sales-Person**  **Person** | **Cust**  **No** |
| OFF | Office Copier | P100 | Kodac Photocopier | $420.00 | 2 | EAP-44720 | 2024-11-17 | 29-Carey Wong | 771 |
| MIX | Concrete Mix | CMT2 | Concrete Mixer | $4000.00 | 20 | EAP-44720 | 2024-11-17 | 29-Carey Wong | 771 |
| TRU | Wood Trusses | A100 | 50’ x 16’ Roofing | $1200.00 | 48 | EAP-44721 | 2024-11-18 | 17-Rod Serling | 89 |
| FRM | Framing | A137 | 2 x 4 x 8 Poplar | $7500.00 | 1000 | EAP-44721 | 2024-11-18 | 17-Rod Serling | 89 |
| OFF | Office Copier | P100 | Kodac Photocopier | $840.00 | 4 | EAP-44721 | 2024-11-18 | 17-Rod Serling | 89 |
| STF | Steel Framing | STL10 | Front Steel Loader | $1500.00 | 3 | EAP-44721 | 2024-11-18 | 17-Rod Serling | 89 |
| MIX | Concrete Mix | ST22 | Stone Crusher | $950.00 | 1 | EAP-44722 | 2024-11-18 | 29-Carey Wong | 46 |
| FLD | Front Loader | FL660 | Front Loading Device | $450 | 1 | EAP-44722 | 2024-11-18 | 29-Carey Wong | 46 |
| CRA | Overhead  Lift | CRA-11 | 120’ Overhead Crane | $9000 | 3 | EAP-44723 | 2024-11-18 | 20-Joe Shoelly | 62 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| AIR ENGINEERS INC  Customer List | | | | |
| **Customer Number** | **First Name** | **LastName** | **Address** | **Phone** |
| 46 | Laurie | Wells | 112 Apple Rd, Toronto | (416) 289- 4417 |
| 62 | Ronald | MacDonn | 1 Big Mac Rd, Toronto | (800) 448- 9000 |
| 89 | Tom | Duley | 3 Hanghead Dr. Markham | (416) 229- 4104 |
| 771 | Jeanne | Jeanne | 2 Youngalive St. Toronto | (416) 664- 3121 |

Here are the six tables required to support these two reports.

Table Name Attributes

1. STATEMENT [Stm#(PK) , StatementDate, SalesPerson#(FK), Cust#(FK)]

2. STATEMENT\_EQUIPMENT [Stm#(PK)(FK), Eqp#(PK)(FK), Qty, Charge]

3. EQUIP\_TYPE [EqpTYPE#(PK), EqpTypeDesc]

4. SALESPERSON [SalesPerson#(PK), SalesPersonName]

5. EQUIPMENT [Eqp#(PK), EqpDesc, EqpType#(FK)]

6. CUSTOMER [Cust#(PK), CLName, CFName, CustAddress, CustPhone, Federal\_GST\_LicenseNumber]

For **Part 1**, you are to complete and **PRINT in MS WORD format** the physical design for each table. Complete one form for each table.

#### **Physical Design -- Data Dictionary**

**TABLE NAME**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Column**  **Name……………….** |  | **Data**  **Type** | **Length** | **PK** | **FK** | **NOT NULL** | **Unique** | **Check** | **Default** | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |

The submission must be business-like. That includes readability, organization, and naming conventions.

# Part 2: Provide Printed Syntax for Table Creation Commands for the 6 Tables:

Make sure your SQL syntax is properly formatted(indented). Column and table names must be the same

as those provided. Use the same constraint naming convention demonstrated in class.

# Part 3: Provide Printed Syntax to Create 2 “Views”

# i) SALESINFO which will contain all the attributes shown on the Weekly Sales Report for all sales.

# ii) SALESGT1000 which will contain the all rows in the Weekly Sales Report that have a Charge greater than 1000 dollars . Use proper formatting(indenting).

**Part 4: Solve a simple SQL request.**

**Your teacher will ask you to provide the Required SQL for a certain result. All group members can work together to provide a solution for this ad hoc request.**

**Part 5: Insert Rows based on the data that shows in the Reports**

You should use data from the two reports and use all group member names where indicated, you may also need to invent some data.

**Part 6: Provide Printouts for each Table (all Rows)**

**Part 7 : Provide Printouts from BOTH Views created in Part 3 above (all rows)**

The submission must be business-like. That includes readability, organization, and naming conventions.

**Be prepared to show a System Report on Constraints using SQL.**

**Show constraints as follows. Set the font size so everything is readable. Use the class recommended naming convention:**

**Agent Constraints (sample for format info – Agent is not part of the assignment)**

A screenshot of a computer

AI-generated content may be incorrect.

The demonstration must be on time. Being late impacts the other groups. If your group is late, marks will be deducted from the total. If the group is not prepared to demonstrate the assignment, they can send an email instead of attending and provide a time when they will be able to show the assignment via zoom. Tuesday evening is available for a one day late submission with 10% deducted. Wednesday is available for for a late submission with 20% deducted. Thursday would be late with a 30% deduction with 10% deducted each additional day.

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| --- | --- |
| Group appointment | Group 53C 2:20 – 2:28 |
| Group 48C 1:30 – 1:38 | Group 54C 2:30 – 2:38 |
| Group 49C 1:40 – 1:48 | Group 55C 2:40 – 2:48 |
| Group 50C 1:50 – 1:58 | Group 56C 2:50 – 2:57 |
| Group 51C 2:00 – 2:08 | Group 57C 2:59 – 3:06 |
| Group 52C 2:10 – 2:18 | Group 58C 3:08 – 3:15 |