UTM
UNIVERSITI TEKNOLOGI MALAYSIA

FACULTY OF COMPUTING
UTM Johor Bahru

SEMESTER 1, SESSION 2023/2024

LAB EXERCISE 1: DDL

SECD2523: DATABASE

SECTION 09

NAME	:	AHMAD NABIL BIN AHMAD NAZRIL (B23CS0020)
COURSE	:	2 SECRH – BACHELOR OF COMPUTER SCIENCE (COMPUTER NETWORKS & SECURITY) WITH HONOURS
SUBMITION DATE	:	09 - NOVEMBER - 2023
LECTURER'S NAME	:	DR. SHARIN HAZLIN BINTI HUSPI

Database Design Project

Oracle Baseball League Store Database

Project Scenario:

You are a small consulting company specializing in database development. You have just been awarded the contract to develop a data model for a database application system for a small retail store called Oracle Baseball League (OBL).

The Oracle Baseball League store serves the entire surrounding community selling baseball kit. The OBL has two types of customer, there are individuals who purchase items like balls, cleats, gloves, shirts, screen printed t-shirts, and shorts. Additionally customers can represent a team when they purchase uniforms and equipment on behalf of the team.

Teams and individual customers are free to purchase any item from the inventory list, but teams get a discount on the list price depending on the number of players. When a customer places an order we record the order items for that order in our database.

OBL has a team of three sales representatives that officially only call on teams but have been known to handle individual customer complaints.

Section 6 Lesson 3 Exercise : Data Definition Language

Use DDL to build and maintain database tables (S6L3 Objective 3)

Part 1: Reading information from a script

In this exercise you will use the "obl Sports.ddl" file to consolidate your knowledge of DDL.

Open the "obl Sports.ddl" in a text editor.

1. How many tables have been created using the CREATE TABLE statement?

   8 tables, these tables have been defined in the database schema:

   - `inventory_list`
   - `items`
   - `price_history`
   - `sales_representatives`
   - `sales_rep_addresses`
   - `teams`
   - `customers`
   - `customers_addresses`

2. How many columns are created for the price history table?

   6 columns, the `price_history` table has the following columns created:

   - `start_date`
   - `start_time`
   - `price`
   - `end_date`
   - `end_time`
   - `itm_number`

3. What statement is used to enforce the constraint that the category column of the items table must have a value?

```
category VARCHAR2(25) NOT NULL
```

4. What is the name of the foreign key constraint between the customers and customer addresses tables?

   `customer_address_customer_fk`

5. What are the lowest and highest values that can be stored in the commission_rate column for the sales_representatives table?

   The lowest and highest values that can be stored in this column depend on the precision and data type. In this case, since it's defined as `NUMBER(2)`, it can store values from -99 to 99.

6. What are the lowest and highest values that can be stored in the price column for the price_history table?

   The lowest value: -99999.99 (with 7 digits, 2 of which are decimal places)
   The highest value: 99999.99 (with 7 digits, 2 of which are decimal places)

7. What are the 3 columns that make up the primary key for the price_history table?

   - `itm_number`
   - `start_date`
   - `start_time`

   These three columns together form the composite primary key for the `price_history` table, ensuring that each combination of these values is unique within the table.