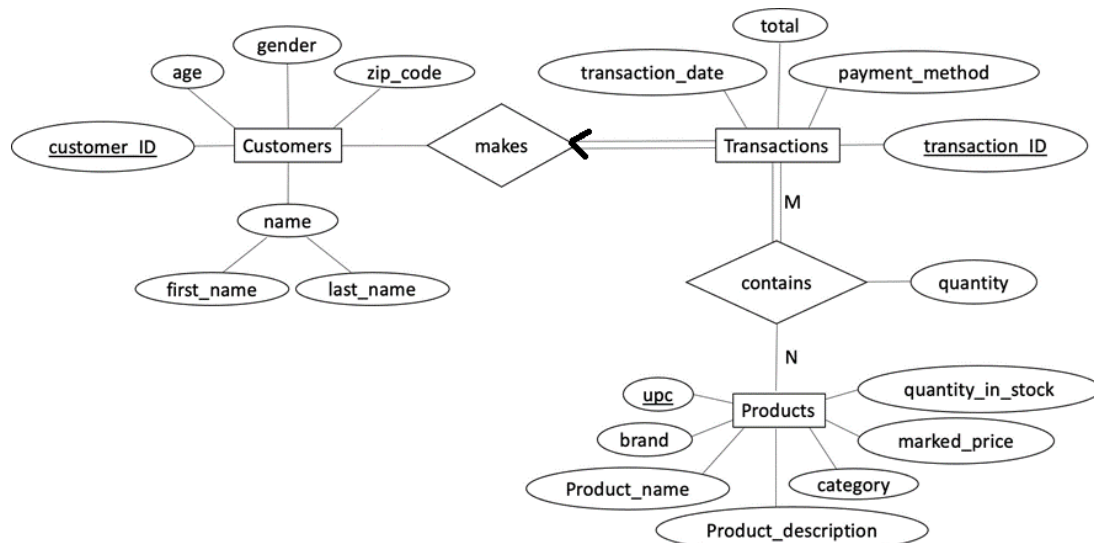# CS550 Fall 2024 Project 1 Part 2

DUE: 10/9/2024 by 11:59PM

Project Description

The goal of this assignment is to map the following ER diagram into relational schemas and create a relational database. (35 points total)

a) Convert the above ER diagram into relational schemas. In a PDF file, specify the followings for each relation: (15 points)
(i) the name of the relation,
(ii) the names of its attributes,
(iii) the domain of each attribute,
(iv) the primary key, and
(v) the foreign key(s), if any.

b) Write SQL commands to create tables and all other structures from part a. For each table in your database, specify primary key and indicate all reasonable foreign key constraints, if any. Use check clause to add the following constraints:
1) gender can only have 'M' or 'F' as values
2) payment_method can only have '1' or '2' or '3' as values

Include your SQL commands (create statements) in one script file. Please make sure that your script runs on sqlplus or SQL developer by connecting to Oracle server on Zeus. Submit your script file and a log file showing the output of running the script. (20 points)

Some Tips:

1) At the beginning of your script, drop all tables that you are about to create. For example:

   drop table products cascade constraints;

2) If you have trouble creating a particular table, try a different name. A name (like order, group, user, etc.) may be a **reserved word**.
3) When creating tables that contain foreign keys, make sure the tables that are referenced have already been created.
4) In order to run your script and capture the output of your script, you will need to use **@** command and *spool* command in sqlplus. For example:

   spool logname.txt
   @scriptname.sql

5) In order to run your script on Zeus, you can transfer files to Zeus. For example:

   scp scriptname.sql netid@zeus.vse.gmu.edu:.
   Transfer files back to your local machine:
   scp netid@zeus.vse.gmu.edu:filename .

   More information: https://labs.vse.gmu.edu/index.php/FAQ/SSH

Instructions for connecting to Oracle

https://labs.vse.gmu.edu/index.php/Services/Oracle
Follow the link on the instructions page to activate your account to gain access.

Three ways to access Oracle on-campus:
1) Access Oracle on VSE LAB machines.
2) SSH to zeus.vse.gmu.edu by **ssh netid@zeus.vse.gmu.edu**
   Run the command **sqlplus** once you are connected and enter your Oracle username and password when prompted.
3) Install SQL Developer and make a connection.
   More information:
   https://labs.vse.gmu.edu/index.php/Services/Oracle#sqldeveloper

Two ways to access Oracle off-campus:
1) Connect to VPN and then SSH to zeus.vse.gmu.edu by following the steps above.
2) Connect to VPN and then create a connection from SQL Developer GUI.