CSC 453 Exam II 7 points each

All results must be SQL generated. Use formatting/landscape for output readability.

For submission, include **both the SQL statement and the output rows** in a Word document (include the problem number with each statement) and submit it to D2L.  
Simply highlight the output and copy & paste it. Only submit **one** Word document.

The SQL is required. **No credit will be given for the output alone.**

1. Use UNION to list the vendors supplying a line item containing 'CICS' or a line item containing 'MVS'. Include the vendor ID and name.

2. Use INTERSECT to list the vendors supplying a line item containing 'VSAM' and a line item containing 'MVS'. Include the vendor ID and name.

3. Using MINUS give a count of the number of vendors that either have no invoices or the invoice has been paid in full (zero balance due).

4. Using USING, list the vendors who have supplied a line item where the description contains 'Card' or COBOL (both case insensitive). Include the vendor name and description, with no duplicate lines in the output. Order the listing by the description.

5. List the vendors who have more invoices than the average number of invoices per vendor. List the vendor name and the number of invoices.  
Order the listing by the number of invoices descending.

The next four problems use BOXOFFICEMOJO.

6. List the movie(s) where the US box office is more than twice the (non-zero) non-US box office. List both box office values, the release year and the title.

7. List the movie(s) where the US box office is more than triple the average US box office. Do not include movies with a zero US box office in computing the average.

List the year and the title.

8. List the mean [average] and standard deviation for the non-US box office. Do not include movies with a zero non-US box office. Format both values as currency, including cents.

9. List the movie with the highest non-US box office value in the current decade (2010 - 2015), only considering the odd numbered years.  
List the title, year and non-US box office.

10. Create a function Percentage accepting two numbers, and returning the ratio of the first number to the second one as a percentage.

Passing 20 and 80 would return 25 (not .25). Return zero if the denominator is zero.

11. Use CREATE TABLE ... AS ... **and** NATURAL JOIN to create a table named VendorInvoices containing all of the attributes from both vendors and invoices (other than eliminating the duplicate vendor id).

Use VendorInvoices for the remaining exam problems.

12. Use ALTER to add a column to VendorInvoices containing the average invoice amount for all invoices in the VendorInvoices table for that vendor.

Use UPDATE to populate the column.

13. Create a PL/SQL (must have BEGIN ... END) block listing all invoices where the total is more than twice the average amount for that vendor. Format and align the output.

Invoke the function to obtain the percentage. Order the output by the vendor name.

Include the vendor name, total amount, percentage, average amount, and due date (**full** month name, no extra spaces).

The output **must** be generated from within the PL/SQL block.

14. Recreate Problem 13 only listing vendors that have more than 5 invoices. PL/SQL is optional.

15. List the vendors that are not in California or Michigan, with more than 2 invoices dated within the same week of the year. (Within the same one of the 52 weeks in a year, not just within 7 days of each other.)

List the vendor name and state, and each vendor should only appear once.

Drop all added objects.