PROG2220: S.Q.L. (MySQL)
Assignment 5

Assignment Type: INDIVIDUAL

Due Date: Week 13 (*15 minutes before end of class*; no late submissions)

Note: Review the output files in **A5output.zip**. Display the question headers in your output files.

Topic: Data Types, Functions and Views

Warm Up: Textbook Exercises

Do all the **Chapter 8** textbook exercises (page 239), **Chapter 9** textbook exercises (pages 272-273), and **Chapter 12** textbook exercises (page 370). Compare your solution to the textbook exercise solutions under G:\mysql\ex_solutions. Do not submit your textbook exercise solution.

Task 1. My Guitar Shop (MGS) Database

Save your solution to **XXA05Task1.sql**. Redirect your output to **XXA05Task1.out**.

Assumption: You have MGS database created from G:\mysql\mgs_ex_starts\create_my_guitar_shop.sql (part of Lab 2).

Q1. MGS Exercise 8-1 [4 points]

Write a SELECT statement that returns these columns from the Products table:

- A column that uses the FORMAT function to return the list_price column with 2 digits to the right of the decimal point
- A column that uses the CAST function to return the discount_percent column as an integer
- A column named discount_amount that uses the list_price and discount_percent columns to calculate the discount amount and uses the ROUND function to round the result so it has 2 decimal digits
- A column named month_day_added that uses the DATE_FORMAT function (as part of your solution) to return the date_added column in this format: MM-DD.

Hint: Refer to the Textbook Exercises 8-01 and 8-02 (page 239).

Q2. MGS Exercise 9-2 [4 points]

Write a SELECT statement that returns these columns from the Orders table:

- The order_date column
- A column that uses the DATE_FORMAT function to return the four-digit year that's stored in the order_date column
- A column that uses the DATE_FORMAT function to return the order_date column in this format: Mon-DD-YYYY.
- A column that uses the DATE_FORMAT function to return the order_date column with only the hours and minutes on a 12-hour clock with an am/pm indicator.
- A column that uses the DATE_FORMAT function to return the order_date column in this format: MM/DD/YY HH:MI.

Q3. MGS Exercise 9-3 [5 points]

Write a SELECT statement that returns these columns from the Orders table:

- The card_number column
- The length of the card_number column
- The last four digits of the card_number column

When you get that working right, add a column that displays the last four digits of the card_number column in this format: XXXX-XXXX-XXXX-1234. In other words, use Xs for the first 12 digits of the card number and actual numbers for the last four digits of the number.

Q4. MGS Exercise 9-4 [5 points]

Write a SELECT statement that returns these columns from the Orders table:

- The order_id column
- The order_date column
- A column named est_ship_date that's calculated by adding 2 days to the order_date column
- The ship_date column, substituting 'Not Shipped' for NULL ship_date values
- A column named days_to_ship that shows the number of days between the order date and the ship date

When you have this working, add a WHERE clause that retrieves just the orders for April 2015. Do not use the UNION operator.

Task 2. Software Expert (SWE) Database

Save your solution to **XXA05Task2.sql**. Redirect your output to **XXA05Task2.out**.

Important: Your output must be formatted and aligned properly.

Assumption: You have SWE database created from G:\mysql\swexpert\swexpert.sql (part of Lab 3).

Q1. SWE Exercise 1 [4 points]

Display the average evaluation score for consultant 'Janet Park'. You must use 'Janet Park' name in your solution (Hint: Use the CONCAT_WS function). Round the retrieved value to two decimal places.

Q2. SWE Exercise 2 [4 points]

Write a SELECT statement that returns these columns from the Project Consultant table:

- project id: Pad spaces to align the output values with the column heading
- consultant id: Pad spaces to align the output values with the column heading
- months: Number of months between ROLL_OFF date and ROLL_ON date. Use 30.4 days in a month to convert number of days to number of months. Truncate the total months. Align to the right (Hint: use LPAD function).

Q3. SWE Exercise 3 [5 points]

Write a SELECT statement that returns the consultant, skill and certification status by displaying these columns:

- c_id
- consultant full name (include the last name and first name separated by a comma)
- skill_id
- certification: Use CASE function to display 'Certified' for 'Y', 'Not Certified' for 'N', otherwise 'Unknown'.

Important: ***For all columns, pad spaces to align the output values with the column heading***

Task 3. Chapter 12 (Views) My Guitar Shop (MGS) Database

Save your solution to **XXA05Task3.sql**. Redirect your output to **XXA05Task3.out**.

Assumption: You have MGS database created from G:\mysql\mgs_ex_starts\create_my_guitar_shop.sql (part of Lab 2).

Q1. MGS Exercise 12-3 [5 points]

Create a view named **XX_order_item_products** (where XX is your initials in upper case) that returns columns from the Orders, Order_Items, and Products tables. This view should return these columns from the Orders table: order_id, order_date, tax_amount, and ship_date. This view should return these columns from the Order_Items table: item_price, discount_amount, final_price (the discount amount subtracted from the item price), quantity, and item_total (the

calculated total for the item). This view should return the product_name column from the Products table.

Q2. MGS Exercise 12-4 [2 points]

Write a SELECT statement that returns the order_id, product_name and item_total columns from the **XX_order_item_products** view with item_total displayed in descending order.

Q3. MGS Exercise 12-5 [4 points]

Create a view named **XX_product_summary** that uses the **XX_order_item_products** view. This view should return summary information about each product. Each row should include product_name, order_count (the number of times the product has been ordered) and order_total (the total sales for the product).

Q4. MGS Exercise 12-6 [2 points]

Write a SELECT statement that uses the **XX_product_summary** view to get total sales for the five best selling products.

Task 4. Zip all your original A1 to A5 electronic solution and output files into XXAssignments.zip (where XX is your initials).

Assignment Submissions

Reminder: All printouts must be stapled and submitted **in the correct sequence**!

1. A printout of **CoverPage.pdf** (CP/CPA Assignment Cover Page and Standards Marking Sheet) posted in eConestoga. **All the sections** of the Cover page must be filled.
2. A printout of **A5Marking.pdf**
3. A printout of **XXA05Task1.sql**, where XX is your initials in upper case letters
4. A printout of **XXA05Task1.out**
5. A printout of **XXA05Task2.sql**
6. A printout of **XXA05Task2.out**
7. A printout of **XXA05Task3.sql**
8. A printout of **XXA05Task3.out**
9. Submit **XXAssignments.zip** to the **eConestoga** drop box.