

Home Work 3

70-455

a) DECISION SUPPORT

(15 points)

OMEGA is looking forward to support its decision processes using the centralized database. Operations manager, Steve, wants to extract the following information on a regular basis.

1. DSS1: Total discounted orders placed on a daily basis. This includes all types of orders from all customers. Results should include the order date and the total **dollar** amount for each day. (5 points)
2. DSS2: Total orders (without discounts) placed by each customer with the order status 'ON ORDER'. Results should include customer number and the total order (**dollar**) amount. (5 points)
3. DSS3: Total quantity (zero or more) ordered by all business customers ordered for each product. Results include all types of orders. (5 points)

Design the appropriate queries either using the Design view or SQL view. These queries will be validated using the table data provided in the Omega database.

b) PROCUREMENT ORDERS

(30 points)

Procurement manager, Bob, wants to generate procurement orders for the suppliers. These procurement orders will be based on the available data and the business rules. Upon further investigations, we have found out the complete set of business rules:

Business Rules

- Only those products need to be ordered where the PROD_QOH (quantity on hand) will fall below the PROD_MIN_QOH (minimum quantity on hand) after providing for the orders with the 'ON ORDER' status.
- Procurement order quantity should be such that the final stock is equal to the PROD_MAX_QOH (maximum quantity on hand)
- Products should be ordered from the supplier with the lowest price for any product not on promotion.
- If the lowest price supplier cannot provide the required quantity for a product on promotion, the remaining amount should be ordered from the next best supplier.
- Requested Date should exceed the order date by 10 days

Here are the required steps

1. SM1: Write a query to determine the products which need to be procured and the corresponding procurement quantity for each product. Results should

include the Product Code, Required Quantity for each product (zero or more) and whether the product is a promotional product. (7 points)

2. SM2: Write a query to determine the lowest procurement cost for each product. Results should include the Product Code, Lowest Cost for each product. (5 points)
3. SM3: For each of the products to be procured, find the procurement order details: product code, supplier(s) code, order quantity and unit cost. (You can split this in multiple queries) (12 points)
4. PO: Update SM3 to add columns for OrderCode, order date and the requested date where OrderCode is the concatenated value of the Product code, Manufacturer Code and the number of days past since 1/31/2011 till the current date, order date is the current date and the requested date is 30 days from the order date. Note in MS Access, Format(number) returns a text string. For example, Format(300) converts the number 300 into a text string '300'.(6 points)

*** If you use a correlated sub-query instead of SM2, you can get 2 bonus points for SM3, assuming your results are accurate. ***

c) CUSTOMER LOYALTY PROGRAM

(15 points)

OMEGA wants to introduce a customer loyalty program where they can provide appropriate services to their customers. As a first step, sales manager, Carolyn wants to track the purchases made by the consumers and award one point for every dollar spent. Based on the actual total spending of the customers so far (includes items already shipped or on order), Carolyn wants to classify them as 'SILVER', 'GOLD' and 'PLATINUM'. The following table provides the criteria.

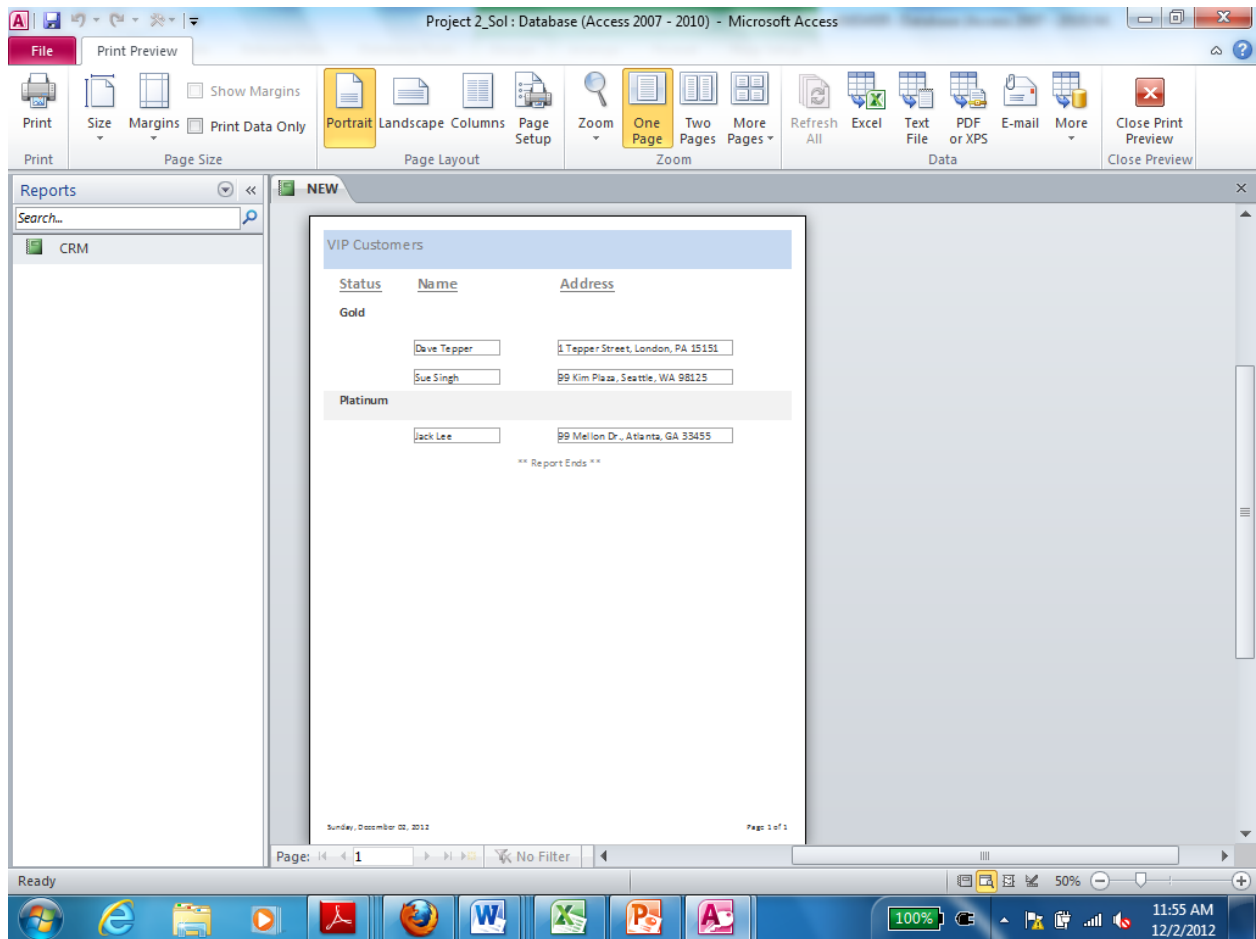
POINTS	STATUS
Up to 2500	SILVER
Above 2500 and Up to 5000	GOLD
Above 5000	PLATINUM

- CRM: Write a query to compile a list of customers with 'SILVER', 'GOLD' and 'PLATINUM' status (you can split the query into multiple queries). The query should include customer details such as customer number, customer name, points and status. (10 points)

Carolyn wants a report which provides her the names of the 'GOLD' and 'PLATINUM' customers so that she can send out promotion materials to these customers. Carolyn has

provided a template for the report. Please group them by status, and include Billing address.

Design a report to meet the requirements specified. Date of report generation should be indicated at the bottom of the report as shown in the template (5 points)



SUBMISSION PROCEDURE

1. For PART a), b) and c), use MS Access to create the queries and report. If you split a query into multiple queries, the query with final results should have the name of the query asked. For example, if the query asked is DSS1, the query with final results in this case should be called DSS1. Label the intermediate queries as DSS1A, DSS1B, etc.
2. Create a zip file from above two items and submit it before the Deadline.