SQL PROJECT

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Project Problem Statement:

You are hired by a chain of online retail stores "Reliant retail limited". They provide you with "orders" database and seek answers to the following queries as the results from these queries will help the company in making data-driven decisions that will impact the overall growth of the online retail store.
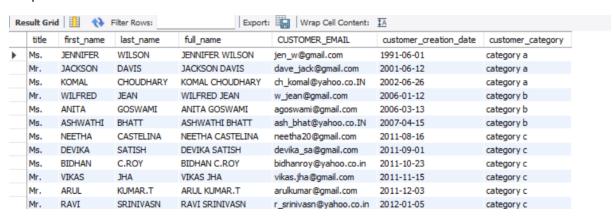
Questions to be answered:

Write a query to display customer full name with their title (mr/ms), both first name and last name are in upper case with customer email id, customer creation date and display customer's category after applying below categorization rules:

    i. If customer creation date year <2005 then category a

    ii. If customer creation date year >=2005 and <2011 then category b

    iii. If customer creation date year>= 2011 then category c

    Hint: Use case statement, no permanent change in table required. [note: tables to be used - online_customer table]

Output =

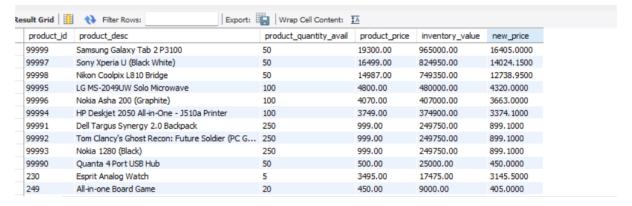|	title	first_name	last_name	full_name	CUSTOMER_EMAIL	customer_creation_date	customer_category
▶	Ms.	JENNIFER	WILSON	JENNIFER WILSON	jen_w@gmail.com	1991-06-01	category a
	Mr.	JACKSON	DAVIS	JACKSON DAVIS	dave_jack@gmail.com	2001-06-12	category a
	Ms.	KOMAL	CHOUDHARY	KOMAL CHOUDHARY	ch_komal@yahoo.co.IN	2002-06-26	category a
	Mr.	WILFRED	JEAN	WILFRED JEAN	w_jean@gmail.com	2006-01-12	category b
	Ms.	ANITA	GOSWAMI	ANITA GOSWAMI	agoswami@gmail.com	2006-03-13	category b
	Ms.	ASHWATHI	BHATT	ASHWATHI BHATT	ash_bhat@yahoo.co.IN	2007-04-15	category b
	Ms.	NEETHA	CASTELINA	NEETHA CASTELINA	neetha20@gmail.com	2011-08-16	category c
	Ms.	DEVIKA	SATISH	DEVIKA SATISH	devika_sa@gmail.com	2011-09-01	category c
	Ms.	BIDHAN	C.ROY	BIDHAN C.ROY	bidhanroy@yahoo.co.in	2011-10-23	category c
	Mr.	VIKAS	JHA	VIKAS JHA	vikas.jha@gmail.com	2011-11-15	category c
	Mr.	ARUL	KUMAR.T	ARUL KUMAR.T	arulkumar@gmail.com	2011-12-03	category c
	Mr.	RAVI	SRINIVASN	RAVI SRINIVASN	r_srinivasn@yahoo.co.in	2012-01-05	category c

Insights =

The customer data includes 12 individuals, with 6 titled "Ms." and 4 titled "Mr." They fall into three categories: Category A (3 customers), Category B (3 customers), and Category C (6 customers). Customer creation dates range from June 1, 1991, to January 5, 2012, with most added between 2001 and 2012. Email providers are predominantly Gmail and Yahoo .

Q2. Write a query to display the following information for the products, which have not been sold: product_id, product_desc, product_quantity_avail, product_price, inventory values(product_quantity_avail*product_price), new_price after applying discount as per the below criteria. Sort the output concerning the decreasing value of inventory_value.

  i. If product price > 20,000 then apply 20% discount

  ii. If product price > 10,000 then apply 15% discount

  iii. If product price =< 10,000 then apply 10% discount

    Hint: use case statement, no permanent change in table required. [note: tables to be used - product, order_items table]

Output =

product_id	product_desc	product_quantity_avail	product_price	inventory_value	new_price
99999	Samsung Galaxy Tab 2 P3100	50	19300.00	965000.00	16405.0000
99997	Sony Xperia U (Black White)	50	16499.00	824950.00	14024.1500
99998	Nikon Coolpix L810 Bridge	50	14987.00	749350.00	12738.9500
99995	LG MS-2049UW Solo Microwave	100	4800.00	480000.00	4320.0000
99996	Nokia Asha 200 (Graphite)	100	4070.00	407000.00	3663.0000
99994	HP Deskjet 2050 All-in-One - J510a Printer	100	3749.00	374900.00	3374.1000
99991	Dell Targus Synergy 2.0 Backpack	250	999.00	249750.00	899.1000
99992	Tom Clancy's Ghost Recon: Future Soldier (PC G...	250	999.00	249750.00	899.1000
99993	Nokia 1280 (Black)	250	999.00	249750.00	899.1000
99990	Quanta 4 Port USB Hub	50	500.00	25000.00	450.0000
230	Esprit Analog Watch	5	3495.00	17475.00	3145.5000
249	All-in-one Board Game	20	450.00	9000.00	405.0000

Insights =

- The product data includes 12 items with varying inventory values and prices. The highest inventory value is for the Samsung Galaxy Tab 2 P3100 at 965,000.00, and the lowest is for the All-in-one Board Game at 9,000.00. Prices range from 19,300.00 (Samsung Galaxy Tab 2 P3100) to 450.00 (All-in-one Board Game).
- Discounts applied are 15% for products over 10,000 and 10% for products 10,000 or less.
- High inventory products include Tom Clancy's Ghost Recon (250 units) and Nokia 1280 (250 units), while low inventory items include Esprit Analog Watch (5 units) and All-in-one Board Game (20 units

Q3.Write a query to display product_class_code, product_class_description, count of product type in each product class, and inventory value (p.product_quantity_avail*p.product_price). Information should be displayed for only those product_class_code that have more than 1,00,000 inventory value. sort the output concerning the decreasing value of inventory_value.

[note: tables to be used -product, product_class]

Output =

PRODUCT_CLASS_CODE	PRODUCT_CLASS_DESC	COUNT_PRODUCT_TYPES	INVENTORY_VALUE
3000	Promotion-High Value	4	2564300.00
2050	Electronics	4	1665600.00
3001	Promotion-Medium Value	3	1261900.00
2055	Mobiles	2	1092500.00
3002	Promotion-Low Value	3	749250.00
2052	Clothes	4	410000.00
2051	Toys	5	194100.00
2057	Watches	4	178820.00
2059	Bags	5	115170.00

Insights =

- The data includes 8 product classes with their respective codes, descriptions, product type counts, and inventory values.

- The highest inventory value is for "Promotion-High Value" (product_class_code: 3000) at 2,564,300.00, followed by "Electronics" (product_class_code: 2050) at 1,665,600.00.
- Other notable classes are "Promotion-Medium Value" (product_class_code: 3001) with 1,261,900.00 and "Mobiles" (product_class_code: 2055) with 1,092,500.00.
- The "Bags" class (product_class_code: 2059) has the lowest inventory value at 115,170.00.

4. **Write a query to display customer_id, full name, customer_email, customer_phone and country of customers who have cancelled all the orders placed by them(use sub-query)**

[note: tables to be used - online_customer, addresss, order_header]

Output =

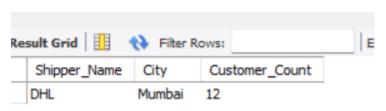| customer_id	Full_Name	customer_email	customer_phone	country
8	NEETHA CASTELINA	neetha20@gmail.com	8196236362	India
33	NISEEMA ZIMMER	niseemaz@yahoo.com	8179413840	USA
51	AHMAD BIN GH AZALI	ahmad_bingh@yahoo.co.my	7348292313	Malaysia
34	HANS ZIMMER	hans_zimmer@gmail.com	9477272235	USA
41	THARMAN SHANMUGARATNAM	tharshan@yahoo.co.sg	8572898929	Singapore

Insights =

The table displays customer data, including IDs, names, emails, phone numbers, and countries. It lists five customers: NEETHA CASTELINA from India, NISEEMA ZIMMER and HANS ZIMMER from the USA, AHMAD BIN GH AZALI from Malaysia, and THARMAN SHANMUGARATNAM from Singapore.

5. **Write a query to display shipper name, city to which it is catering, number of customer catered by the shipper in the city and number of consignments delivered to that city for shipper dhl**

[note: tables to be used -shipper, online_customer, addresss, order_header]

Output =

Shipper_Name	City	Customer_Count
DHL	Mumbai	12

6. **Write a query to display customer id, customer full name, total quantity and total value (quantity*price) shipped where mode of payment is cash and customer last name starts with 'g'**

[note: tables to be used -online_customer, order_items, product, order_header]

Output =

Insights =

The table displays purchase data for two customers. Anita Goswami (ID: 6) has a total purchase quantity of 25 with a total value of 93,237.00, while Brian Grazer (ID: 24) has a total purchase quantity of 4 with a total value of 4,010.00.

7. **Write a query to display order_id and volume of biggest order (in terms of volume) that can fit in carton id 10**

-- [note: tables to be used -carton, order_items, product]

Output =

Insights =

The image displays a table with two columns: Order ID and Product Volume. It contains a single entry where Order ID 10001 corresponds to a Product Volume of 1,788,000.

8. **Write a query to display product_id, product_desc, product_quantity_avail, quantity sold, and show inventory status of products as below as per below condition:**

a. For electronics and computer categories,

i. If sales till date is zero then show 'no sales in past, give discount to reduce inventory',

ii. If inventory quantity is less than 10% of quantity sold, show 'low inventory, need to add inventory',

iii. If inventory quantity is less than 50% of quantity sold, show 'medium inventory, need to add some inventory',

iv. If inventory quantity is more or equal to 50% of quantity sold, show 'sufficient inventory'

b. For mobiles and watches categories,

i. If sales till date is zero then show 'no sales in past, give discount to reduce inventory',

ii. If inventory quantity is less than 20% of quantity sold, show 'low inventory, need to add inventory',

iii. If inventory quantity is less than 60% of quantity sold, show 'medium inventory, need to add some inventory',

iv. If inventory quantity is more or equal to 60% of quantity sold, show 'sufficient inventory'

 c. Rest of the categories,

i. If sales till date is zero then show 'no sales in past, give discount to reduce inventory',

ii. If inventory quantity is less than 30% of quantity sold, show 'low inventory, need to add inventory',

iii. If inventory quantity is less than 70% of quantity sold, show 'medium inventory, need to add some inventory',

iv. If inventory quantity is more or equal to 70% of quantity sold, show 'sufficient inventory'

[note: tables to be used -product, product_class, order_items] (use sub-query)

Output =

product_id	product_desc	product_quantity_avail	quantity_sold	inventory_status
99994	HP Deskjet 2050 All-in-One - J510a Printer	100	0	No Sales in past, give discount to reduce invent...
99995	LG MS-2049UW Solo Microwave	100	0	No Sales in past, give discount to reduce invent...
99996	Nokia Asha 200 (Graphite)	100	0	No Sales in past, give discount to reduce invent...
99991	Dell Targus Synergy 2.0 Backpack	250	0	No Sales in past, give discount to reduce invent...
99992	Tom Clancy's Ghost Recon: Future Soldier (PC G...	250	0	No Sales in past, give discount to reduce invent...
99993	Nokia 1280 (Black)	250	0	No Sales in past, give discount to reduce invent...
201	Sky LED 102 CM TV	180	6	Sufficient inventory
202	Sams 192 L4 Single-door Refrigerator	90	6	Sufficient inventory
203	Jocky Speaker Music System HT32	57	3	Sufficient inventory
221	Cybershot DWC-W325 Camera	20	4	Sufficient inventory
204	Cricket Set for Boys	70	10	Sufficient inventory
206	Barbie Fab Gown Doll	160	13	Sufficient inventory

Insights =

- The table lists product inventory details, including product ID, description, available quantity, quantity sold, and inventory status. Items like the HP Deskjet Printer, LG Microwave, and Nokia Asha 200 have 100 units available but no sales, prompting discounts.
- Other items, such as the Sky LED TV, Samsung Refrigerator, and Cricket Set for Boys, show sufficient inventory with varying quantities sold.

 9. **Write a query to display product_id, product_desc and total quantity of products which are sold together with product id 201 and are not shipped to city bangalore and new delhi. Display the output in descending order concerning tot_qty.(use sub-query)**

 [note: tables to be used -order_items,product,order_header, online_customer, address]

Output =

PRODUCT_ID	PRODUCT_DESC	total_quantity
218	Shell Fingertip Ball Pen	25
235	Cindy HMPOC Pencil Box (Multicolor)	22
240	4M Post It Pad 3.5	19
236	Solo Exam SB-01 Writing Pad	18
244	Foldable Premium Chair	14
242	GreenWud CT-NO-PR Coffee Table	7
219	Ruf-n-Tuf Black PU Leather Belt	7
241	PK Copier A4 75 GSM White Paper Ream	6
207	Remote Control Car	6
216	External Hard Disk 500 GB	6
239	TRANS 2D A4 Size Box File	5
228	Adidas Analog Watch	5

Insights =

- The image displays a table listing various products along with their product IDs, descriptions, and total quantities.
- The table includes items such as "Shell Fingertip Ball Pen" with a quantity of 25, "Cindy HMPOC Pencil Box (Multicolor)" with 22 units, and "4M Post It Pad 3.5" with 19 units. Other notable products include "Solo Exam SB-01 Writing Pad," "Foldable Premium Chair," and "GreenWud CT-NO-PR Coffee Table," with quantities ranging from 18 to 7.
- Additionally, the table lists items like "Remote Control Car," "External Hard Disk 500 GB," and "Adidas Analog Watch," each having a total quantity of 6 or 5 units.
- This inventory summary provides a snapshot of the product stock, highlighting a variety of items from office supplies to electronics and furniture.

 10. **Write a query to display the order_id,customer_id and customer fullname and total quantity of products shipped for order ids which are even and shipped to address where pincode is not starting with "5"**

  [note: tables to be used - online_customer,order_header, order_items, address]

Output =

ORDER_ID	CUSTOMER_ID	Name	Total_quantity
10008	7	Ashwathi Bhatt	25
10022	23	Anna Pinnock	2
10024	32	Hans Zimmer	2
10028	23	Anna Pinnock	2
10030	52	Suchirithaa Ekanayake	2
10032	7	Ashwathi Bhatt	7
10034	19	Bharti Subhash	2
10036	24	Brian Grazer	4
10040	3	Komal Choudhary	2
10042	26	Stephen E. Rivkin	2
10044	39	Liz Mullane	3
10046	3	Komal Choudhary	1

Insights =

- The table displays customer order details, including Order ID, Customer ID, Name, and Total Quantity. Ashwathi Bhatt placed the largest order with 25 items.
- Other customers like Anna Pinnock, Hans Zimmer, and Komal Choudhary each placed multiple smaller orders, ranging from 1 to 4 items.