**SQL – TAKE HOME LAB EXERCISE – 04**

**USE Orders SCHEMA:**

**PLEASE FIND LINK :DOWNLOAD ORDERS SCHEMA AND IMPORT IN MY SQL**

[**https://drive.google.com/open?id=15t6\_aO54J9iFPPirXLp9pUGcKGJ9NeYO**](https://drive.google.com/open?id=15t6_aO54J9iFPPirXLp9pUGcKGJ9NeYO)

1. **Write a Query to display the product id, product description and product price of products whose product id less than 1000 and that have the same price more than once.**

**(USE SUB-QUERY)(15 ROWS)[NOTE:PRODUCT TABLE]**

**select** product.product\_id, product\_desc **from** product

**where** product\_price **in** (**select** product\_price **from** product **group** **by** product\_price **having** **count**(product\_price)>1 )

**and** product\_id <1000

1. **Write a query to display product class description ,total quantity(sum(product\_quantity),**

**Total value (product\_quantity \* product price) and show which class of products have been shipped highest to countries outside India other than USA? Also show the total value of those items.**

**(1 ROWS)[NOTE:PRODUCT TABLE,ADDRESS TABLE,ONLINE\_CUSTOMER TABLE,ORDER\_HEADER TABLE,ORDER\_ITEMS TABLE,PRODUCT\_CLASS TABLE]**

**select** \* **from** (**select** product\_class\_desc,country,**sum**(product\_quantity) **as** totalQuantity,**sum**(product\_quantity \* product\_price) **as** worth **from** ORDER\_HEADER

**join** ONLINE\_CUSTOMER **on** ONLINE\_CUSTOMER.customer\_id = order\_header.customer\_id

**join** address **on** address.address\_id = ONLINE\_CUSTOMER.address\_id

**join** order\_items **on** order\_items.order\_id = ORDER\_HEADER.order\_id

**join** product **on** product.product\_id = order\_items.product\_id

**join** PRODUCT\_CLASS **on** PRODUCT\_CLASS.product\_class\_code = product.product\_class\_code

**where** country **not** **in** ('INDIA','USA') **group** **by** country) **as** dup **limit** 1,1

1. **Write a query to display the customer id, customer first name, address line 2,city total sales(sum(product quantity \* product price (0 if they haven't purchased any item)) made by customers who stay in the same locality (i.e. same address\_line2 & city). (USE SUB-QUERY)**

**(4 ROWS)**

**[NOTE : ADDRESS,ONLINE\_CUSTOMER,ORDER\_HEADER,ORDER\_ITEMS,PRODUCT]**

**select** ONLINE\_CUSTOMER.customer\_id,customer\_fname,address\_line2,city **from** address

**left** **join** ONLINE\_CUSTOMER **on** address.address\_id = ONLINE\_CUSTOMER.address\_id

**left** **join** order\_header **on** ONLINE\_CUSTOMER.customer\_id = order\_header.customer\_id

**left** **join** order\_items **on** order\_items.order\_id = ORDER\_HEADER.order\_id

**left** **join** product **on** product.product\_id = order\_items.product\_id

**left** **join** PRODUCT\_CLASS **on** PRODUCT\_CLASS.product\_class\_code = product.product\_class\_code

**where** address.address\_line2 **in** (**select** address.address\_line2 **from** address

**group** **by** address\_line2

**having** **count**(address.address\_id) >1) **group** **by** customer\_id

1. **Write a Query to display product id,product description,totalquantity(sum(product quantity) For a given item whose product id is 201 and which item has been bought along with it maximum no. of times.**

**(USE SUB-QUERY)(1 ROW)[NOTE : ORDER\_ITEMS TABLE,PRODUCT TABLE]**

**select** product\_id,**sum**(product\_quantity) **as** totalQuantity **from** order\_items **where** order\_id **in** (

**select** order\_id **from** order\_items

**join** product **on** product.product\_id = order\_items.product\_id

**where** order\_items.product\_id = 201

)

**group** **by** product\_id **order** **by** totalQuantity **desc** **limit** 1

1. **Write a Query to display the month,total quantity(sum(product quantity)) and show during which month of the year do foreign customers tend to buy max. no. of products.**

**(USE-SUB-QUERY)**

**(1ROW)[NOTE:ORDER\_ITEMSTABLE,ORDER\_HEADERTABLE,ONLINE\_CUSTOMER TABLE,ADDRESS TABLE]**

**select** \* **from** (**select** **month**(order\_date) **as** mont,**sum**(product\_quantity) **as** tot

**from** ORDER\_HEADER

**join** ONLINE\_CUSTOMER **on** ONLINE\_CUSTOMER.customer\_id = order\_header.customer\_id

**join** address **on** address.address\_id = ONLINE\_CUSTOMER.address\_id

**join** order\_items **on** order\_items.order\_id = ORDER\_HEADER.order\_id

**join** product **on** product.product\_id = order\_items.product\_id

**join** PRODUCT\_CLASS **on** PRODUCT\_CLASS.product\_class\_code = product.product\_class\_code

**where** country **not** **in** ('INDIA') **group** **by** mont **order** **by** tot **desc**) dup **limit** 1

1. **Write a Query to display customer id,customer firstname,lastname,order status,total value(sum(product quantity \* product price)) and show who is the most valued customer (customer who made the highest sales)**

**(1 ROW) [NOTE: ONLINE\_CUSTOMER TABLE, ORDER\_HEADER TABLE, ORDER\_ITEMS TABLE, PRODUCT TABLE]**

**select** ONLINE\_CUSTOMER.customer\_id,**concat**(customer\_fname,' ',customer\_lname),**sum**(product\_quantity\*product\_price) worth **from** ORDER\_HEADER

**join** order\_items **on** order\_items.order\_id =order\_header.order\_id

**join** product **on** product.product\_id = order\_items.product\_id

**join** ONLINE\_CUSTOMER **on** ONLINE\_CUSTOMER.customer\_id = order\_header.customer\_id

**where** ORDER\_HEADER.order\_status = 'Shipped'

**group** **by** ONLINE\_CUSTOMER.customer\_id **order** **by** worth **desc** **limit** 1

1. **Write a query to display product class code,product class desc,product id product description,product price and show the most expensive products in their respective classes.**

**(16 ROWS)[NOTE : PRODUCT TABLE,PRODUCT CLASS TABLE]**

**select** product.product\_class\_code,product\_class\_desc,product\_id,product\_desc,**max**(product\_price) **from** product

**join** PRODUCT\_CLASS **on** PRODUCT\_CLASS.product\_class\_code = product.product\_class\_code

**group** **by** product\_class\_code

1. **Write a query to display shipper id,shipper name , (len\*width\*height\*product\_quantity) as total volume shipped and show Which shipper has shipped highest volume of items.**

**(1 ROW) [NOTE : SHIPPER TABLE,ORDER\_HEADER TABLE,ORDER\_ITEMS TABLE,PRODUCT TABLE]**

**select** shipper.shipper\_id,shipper\_name,(**sum**(len\*height\*width\*product\_quantity)) **as** volume

**from** SHIPPER

**join** order\_header **on** order\_header.shipper\_id = shipper.shipper\_id

**join** order\_items **on** order\_items.order\_id =order\_header.order\_id

**join** product **on** product.product\_id = order\_items.product\_id

**group** **by** SHIPPER.shipper\_id **order** **by** volume **desc** **limit** 1

1. **Write a query to display carton id ,(len\*width\*height) as carton\_vol and identify the optimum carton (carton with the least volume whose volume is greater than the total volume of all items) for a given order whose order id is 10006 , Assume all items of an order are packed into one single carton (box) .(1 ROW)[NOTE : CARTON TABLE]**

**select** (C.len\*C.height\*C.width) **as** volume **from** CARTON C

**where** (C.len\*C.height\*C.width) >= (**select** **sum**(P.len\*P.height\*P.width) **as** volume **from** order\_items

**join** product P **on** P.product\_id = order\_items.product\_id

**where** order\_id = 10006) **order** **by** volume **limit** 1

1. **Write a query to display product id,product**

**description,total\_quantity (sum(order\_quantity) ,**

**Provided show the most and least sold products**

**(quantity-wise).(3 ROWS)(USE:SUB-QUERY)**