

Q1) Given an Order Table with the schema (id, user_id, total, created). Write a SQL Query to create a retention plot. The format for the raw data and output are given.

Week Start Date is the 1st Week in which the User_Id Placed the order, Week 0 is Unique User ids who placed their 1st Order in this week. Out of those ids, Week 1 is unique users who placed an order in 1st Week + 1, Then Week 2 is 1st Week + 2 and so on till Week 10.

Q2) Given the tables Order_Timeline(schema id,order_id, message, created) & Order_Shipment Table(schema id, order_id,actual_dispatch_date,created) , write a SQL Query to find

- a. % orders shipped before first message date(OTIF)
- b. % orders shipped on first message date=((OTIF+1)
- c. % orders shipped on first message date+2(OTIF+2)
- d. %orders shipped after that(OTIF+2)

Order_Timeline contains the message for expected dispatch date, Order_shipment gives you the real dispatch date. They are combined using order_id.

Q3) A company record its employees movement In and Out of office in a table with 3 columns (Employee id, Action (In/Out), Created)

There is NO sample data for this question. You only need to submit the queries

Employee id	Action	Created
1	In	2019-04-01 12:00:00
1	Out	2019-04-01 15:00:00
1	In	2019-04-01 17:00:00
1	Out	2019-04-01 21:00:00

- First entry for each employee is "In"
- Every "In" is succeeded by an "Out"
- No date gaps and, employee can work across days

1. Find number of employees inside the Office at current time
2. Find number of employees inside the Office at "2019-05-01 19:05:00"
3. Measure amount of hours spent by each employee inside the office since the day they started (Account for current shift if she/he is working)
4. Measure amount of hours spent by each employee inside the office between "2019-04-01 14:00:00" and "2019-04-02 10:00:00"

- Please find the format of raw data and output for question 1 and 2. : Raw format and output sample is available in the attached sheets
- Is "created" is created at date : in timestamp : Yes
 - Meaning of total in question 1: Total is of no use for the question asked. It can be skipped.

Q4) An Ecommerce company has following tables

table: T1
(order_id,amount,quantity,date,used ID)

Table: T2
(user ID,name,state,city)

Please write sql queries for below points

1. MoM (month over month) growth of order from state of Gujarat
2. which month of 2019 attributes Highest % change in total amount
3. Write query of Point 1 with different logic and compare the performance

Note: You are allowed to make any assumption