## Problem Statement

1. 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. Refer to Q1.xlsx file

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.

2. 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

* % orders shipped before first message date(OTIF)
* % orders shipped on first message date+1(OTIF+1)
* % orders shipped on first message date+2(OTIF+2)
* %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. Refer to Q2.xlsx file

3. 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 data 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.