

SQL Proficiency

A. Given the below schema for a hotel management system, write appropriate query to answer the following :-

1. For every user in the system, get the user_id and last booked room_no
2. Get booking_id and total billing amount of every booking created in November, 2021
3. Get bill_id and bill amount of all the bills raised in October, 2021 having bill amount >1000
4. Determine the most ordered and least ordered item of each month of year 2021
5. Find the customers with the second highest bill value of each month of year 2021

users

user_id	name	phone_number	mail_id	billing_address
21wrcxuy-67erfn	John Doe	97XXXXXXXX	john.doe@example.co	
...

bookings

booking_id	booking_date	room_no	user_id
bk-09f3e-95hj	2021-09-23 7:36:48	rm-bhf9-aerjn	21wrcxuy-67erfn
...

booking_commercials

id	booking_id	bill_id	bill_date	item_id	item_quantity
q34r-3q4o8-q34u	bk-09f3e-95hj	bl-0a87y-q340	2021-09-23 12:03:22	itm-a9e8-q8fu	3
q3o4-ahf32-o2u4	bk-09f3e-95hj	bl-0a87y-q340	2021-09-23 12:03:22	itm-a9e8-q8fu	1
134lr-oyfo8-3qk4	bk-q034-q4o	bl-34qhd-r7h8	2021-09-23 12:05:37	itm-a9e8-q8fu	0.5
34qj-k3q4h-q34k

items

item_id	item_name	item_rate
...

itm-a9e8-q8fu	Tawa Paratha	18
itm-a07vh-aer8	Mix Veg	89
...

B. For the below schema for a clinic management system, provide queries that solve for below questions :-

1. Find the revenue we got from each sales channel in a given year
2. Find top 10 the most valuable customers for a given year
3. Find month wise revenue, expense, profit , status (profitable / not-profitable) for a given year
4. For each city find the most profitable clinic for a given month
5. For each state find the second least profitable clinic for a given month

clinics

cid	clinic_name	city	state	country
cnc-0100001	XYZ clinic	lorem	ipsum	dolor
...

customer

uid	name	mobile
bk-09f3e-95hj	Jon Doe	97XXXXXX X
...

clinic_sales

oid	uid	cid	amount	datetime	sales_channel
ord-00100-00100	bk-09f3e-95hj	cnc-0100001	24999	2021-09-23 12:03:22	sodat
...

expenses

eid	cid	description	amount	datetime
exp-0100-0010 0	cnc-0100001	first-aid supplies	557	2021-09-23 7:36:48
...

Spreadsheet Proficiency

A. Given the below data structure (assume data in separate worksheets of the same workbook), describe/discuss the solution in detail for the following :-

1. populate '*ticket_created_at*' column in feedbacks table with '*created_at*' column of corresponding ticket
2. fetch outlet-wise count of tickets created AND closed in -
 - a. the same day
 - b. same hour of the same day

ticket

ticket_id	created_at	closed_at	outlet_id	cms_id
isu-sjd-457	2021-08-19 16:45:43	2021-08-22 12:33:32	wrqy-juv-978	vew-iuvd-12
qer-fal-092	2021-08-21 11:09:22	2021-08-21 17:13:45	8woh-k3u-23 b	
...

feedbacks

cms_id	feedback_at	feedback_rating	ticket_created_at
vew-iuvd-12	2021-08-21 13:26:48	3	(to be filled)
...	(to be filled)

Python Proficiency

1) Given number of minutes, convert it into human readable form.

Example :

130 becomes “2 hrs 10 minutes”

110 becomes “1hr 50minutes”

2) You are given a string, remove all the duplicates and print the unique string. Use loop in the python.